



# UNDERGRADUATE CATALOG

2022-2023

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# Undergraduate

**This catalog contains information on UAB's academic programs offered in the following schools:**

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- [Business](#) (p. 128)
- [Education](#) (p. 487)
- [Engineering](#) (p. 521)
- [Health Professions](#) (p. 584)
- [Honors](#) (p. 443)
- [Nursing](#) (p. 602)
- [Public Health](#) (p. 618)

## Catalog Disclaimer

Although this catalog intends to reflect any policies or rules of the Board of Trustees of the University of Alabama referred to or incorporated herein, students are cautioned that changes or additions to such policies or rules may have become effective since the publication of this material.

In the event of such a conflict, the current statements of the Board policy contained in the official minutes and manuals of rules, bylaws, and guidelines shall prevail. Thus, the provisions of this catalog are not to be regarded as a contract between the Board of Trustees of the University of Alabama, the University of Alabama at Birmingham (or any of its schools) and the student. The University reserves the right to make changes as required in course offerings, curricula, academic policies, and other rules and regulations affecting students, these changes to be effective when determined by the appropriate authority within the University. These changes will govern current and formerly enrolled students. Registration of all students is accepted subject to these conditions.

## About UAB

Over five decades, UAB has evolved from an academic extension center into an autonomous, comprehensive urban university and academic health center within the University of Alabama System. UAB has established wide-ranging programs in the College of Arts and Sciences, the Collat School of Business, the Heersink School of Medicine and the schools of Dentistry, Education, Engineering, Health Professions, Nursing, Optometry and Public Health, with graduate programs serving all major units. UAB has 16 graduate programs ranked in the top 25 of the U.S. News Best Graduate Schools 2022 rankings.

Fall 2021 enrollment surpassed 22,000 students for the third consecutive year, including the largest first-time freshman cohort in UAB history. The freshman class had an average ACT of 26.5, and a high school GPA of 3.82. UAB has a very diverse student body, with underrepresented students making up more than 45 percent of overall enrollment and first-generation students making up 28 percent of undergraduate enrollment.

UAB is situated near downtown Birmingham and the historic Five Points South district. The campus stretches across 100 square blocks and occupies more than 100 primary buildings. UAB is Alabama's largest single-site employer, with more than 26,000 employees and an economic impact exceeding \$7.15 billion annually on the state. In 2021, UAB was named America's No. 1 Best Large Employer by Forbes, topping a list of more than 500 public and private corporations, hospitals, university,

Fortune 500 companies and more. UAB also was named the Best Employer for Diversity among colleges and universities by Forbes in 2021.

## Accreditation

The University of Alabama at Birmingham is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award degrees at the baccalaureate, masters, specialist, and doctorate levels.

Questions related to the accreditation of The University of Alabama at Birmingham should be directed to the Commission on Colleges at:

### Commission on Colleges

#### Southern Association of Colleges and Schools

1866 Southern Lane  
Decatur, Georgia 30033  
Phone: (404) 679-4500  
Fax: (404) 679-4558

Many academic programs have additional accreditation from organizations appropriate to the academic discipline.

If you have questions related to issues such as admission requirements, educational programs, and financial aid that are not answered in this publication, please contact UAB at:

### University of Alabama at Birmingham

Office of the Registrar  
1300 University Boulevard, Campbell Hall 117A  
Birmingham, AL 35294

Mailing address:  
1720 2nd Ave S, CH 117A  
Birmingham, Alabama 35294-4300  
(205) 934-8228  
(205) 975-3700 fax  
Email: [catalog@uab.edu](mailto:catalog@uab.edu)

## General Information

### Role Statement

UAB's undergraduate instructional programs are broad-based and designed to serve the needs of a diverse student body without sacrificing a strong general education foundation. Programs range from the liberal arts and sciences to professionally oriented studies, including business, education, engineering, and the health disciplines. UAB's baccalaureate offerings are shaped by its location in the state's largest metropolitan area, by its mandate to serve a large and heterogeneous constituency, by its responsibility to contribute to the economic and professional development of Birmingham and the state, and by its role of providing support to a nationally recognized academic health sciences center.

At the graduate level, programs serve the career needs of educators and business leaders, as well as those involved in advancing the frontiers of the health sciences. UAB has the primary responsibility for meeting the state's health professional needs. It offers a comprehensive range of programs that encompass both basic preparation and sophisticated graduate and specialty training in medicine, dentistry, optometry, nursing, the health professions and public health.

UAB has a very diverse student body, with underrepresented students making up more than 45 percent of overall enrollment and first-generation

students making up 28 percent of undergraduate enrollment in fall 2021. The university has been recognized multiple times as a Diversity Champion by Insight Into Diversity magazine, one of only 14 institutions nationally to receive this designation.

As one of the nation's leading research institutions, UAB emphasizes both basic and applied research. UAB's urban setting has led to the development of numerous research programs that are responsive to the city's economic, social, and cultural needs. Much of the research conducted at UAB is interdisciplinary in nature and is organized through centers that bring together experts in a number of related fields to concentrate on a particular problem or issue. UAB's research grants and contracts totaled \$648 million in 2021 and the university currently ranks in the top 10 among public universities in funding from the National Institutes of Health.

As the senior public doctoral-level institution in the state's major urban area, UAB is also committed to providing comprehensive programs in continuing education consistent with the quality and diversity of its other offerings. The university's faculty, staff, and students also serve as resources to the area through activities related to professional, economic, and cultural growth and development.

## Cultural Opportunities

UAB's urban location offers students unique cultural opportunities. Located within walking distance of the campus is the Five Points South district, with several nationally recognized restaurants alongside shops, music clubs, and event spaces. Not far from campus are the Birmingham Museum of Art, the Birmingham Civil Rights Institute, the historic Alabama Theatre and Lyric Theatre, and the Birmingham-Jefferson Convention Complex. Sloss Furnaces, a post-Civil War iron foundry that has been converted into a museum and informal music hall, is nearby, and a short drive to the south is Oak Mountain Amphitheater, an outdoor facility that features music-industry headliners.

UAB also has a flourishing arts program. Dozens of major music events are produced each season at UAB, in addition to numerous theater productions and student and professional art exhibitions. The Alys Robinson Stephens Performing Arts Center is Birmingham's home for the performing arts and the anchor of UAB's burgeoning Cultural Arts Corridor. The Center features a concert hall, theater, and a recital hall, and regularly schedules nationally and internationally known artists and orchestras and features faculty and student productions and concerts. The Abrams-Engel Institute for the Visual Arts houses the Department of Art and Art History and hosts rotating exhibitions that focus on artists of regional, national, and international significance, works from the permanent collection and student work as well as cultural events.

## Student Life

UAB offers a rich variety of student life activities through its many academic organizations, honor clubs, fraternities and sororities, and volunteer groups. The university houses nearly 350 campus organizations, including numerous national honorary societies, professional clubs and interest groups, spirit teams, intramural and recreational sports, and an established student government organization.

The campus is rich in social activity and the arts and culture. The Campus Green is a vibrant hub of campus life, with serene outdoor spaces and state-of-the-art residence halls, dining facilities and academic buildings, along with the award-winning Campus Recreation Center. UAB's Hill Student Center is an architecturally striking facility that houses, among other amenities, a student welcome center, bookstore, and

meeting, conference, and auditorium space. A few blocks away, the UAB Cultural Arts Corridor offers a host of free activities for students, including exhibitions, lectures and performances.

UAB's athletic program is a Division I member of the NCAA and a founding member of Conference USA. UAB athletes participate in 18 intercollegiate sports and have earned championships in football, baseball, volleyball, mixed rifle, men's and women's tennis, men's and women's basketball, men's and women's soccer, and men's golf.

## The University of Alabama System

With more than 70,000 students, The University of Alabama System is Alabama's largest higher education enterprise, composed of three dynamic institutions striving to provide the people of Alabama with regionally and nationally prominent teaching, research, and service programs with a profound impact on our state.

The University of Alabama opened for admission of students on April 18, 1831, in Tuscaloosa. During the first half of the twentieth century and in addition to its regular educational programs at the Tuscaloosa campus, the university began to offer additional educational opportunities to residents in urban communities throughout Alabama. The Birmingham and Huntsville centers evolved into new university campuses. In September 1966, all university operations in Birmingham were designated as the University of Alabama in Birmingham by the University of Alabama Board of Trustees. This action established the University of Alabama in Birmingham as one of the three major campuses of the university. The University of Alabama in Huntsville had been initiated as a four-year school in 1964.

In June 1969, the campuses were given autonomy within the framework of the University of Alabama System, each having its own administrative structure with a president as the chief executive officer. A chancellor was appointed in June 1976 as chief administrative officer of the system. In 1984, the name of the University of Alabama in Birmingham was changed to the University of Alabama at Birmingham.

## Medicine, Dentistry, Optometry, or Law

Students wishing to pursue careers in medicine, dentistry, optometry, or law complete a program of undergraduate study (usually culminating in a baccalaureate degree) before entering the appropriate professional school. "Pre-medicine," "pre-dentistry," "pre-optometry" and "pre-law" are not majors.

## Individually Designed Majors

Students whose educational objectives are not well served by any of the regular majors may propose an individually designed major. Such program proposals require approval of the appropriate dean.

## ROTC

UAB has Army and Air Force ROTC (Reserve Officer Training Corps) units in which Birmingham-area college students may participate.

## Cooperative Education Program

UAB's Cooperative Education Program helps students identify work opportunities that combine practical experience with academic studies. Some academic departments give credit for carefully structured work experiences.

## Non-Academic Policies

### Student Conduct Code

The Student Conduct Code promotes honesty, integrity, accountability, rights and responsibilities expected of students consistent with the core missions of the University of Alabama at Birmingham. This Code describes the standards of behavior for all students, and outlines student's rights, responsibilities, and the campus processes for adjudicating alleged violations. Behavior that violates UAB standards of conduct listed within the Student Conduct Code and elsewhere will be subject to disciplinary action through the appropriate conduct process. Whether it is determined that an individual or group is responsible for the violation(s), either by direct involvement or by condoning, encouraging, or covering up the violation, appropriate response will occur with respect to the individual(s) and/or group involved.

### Equal Opportunity and Discriminatory Harassment Policy

UAB is committed to equal opportunity in education and employment, and the maintenance and promotion of nondiscrimination and prevention of discriminatory harassment in all aspects of education, recruitment and employment of individuals throughout the university.

### Immunization Policy

UAB requires that first-time entering students, international students and scholars, and students in health-related schools provide proof of immunization against certain diseases.

### Non-Resident Tuition Policy

This policy addresses non-resident tuition, certification of residency status by campus officials, and establishment of campus policies to administer an appeals process.

### Drug-Free Campus Policy for Students

Unlawful possession, use, manufacture, distribution, or dispensing of illicit drugs, controlled substances, or alcoholic beverages by any UAB student is prohibited.

<https://www.uab.edu/students/wellness/policies-resources/drug-free-schools-communities-act>

### UAB Annual Security & Fire Safety Report

The 2018 UAB Annual Security and Fire Safety Report is now available online. To access it, you can go to the UAB Police Department website at <http://www.uab.edu/police> and click on "Read the 2018 UAB Annual Security & Fire Safety (Clery) Report," or go directly to the report at:

For a print copy of the report, call (205) 934-4649. The report follows the guidelines mandated by the Federal Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act and contains the following information: reporting incidents; federal campus sex crimes prevention act; missing person procedures; distribution of timely warnings; emergency preparedness, response and evacuation procedures; criminal statistics; fire safety report, etc.

### Copyright Policy

The University of Alabama at Birmingham (the "University") is dedicated to instruction, research and service to benefit society and encourages its faculty, staff and students to carry out scholarly endeavors in an open and free atmosphere, and to publish the results of such work without restraint, consistent with applicable law and policy.

### Patent Policy

UAB encourages the development of procurement and licensing of patents for inventions in the interest of the public, the inventor, and the university.

### Data Protection and Security Policy

Data (electronic) created at UAB must be protected and maintained in accordance with all applicable federal and state laws and university policies.

### Student E-Mail Address Policy

November 10, 2003

#### **See also:**

*Electronic Data Processing Security Policy*

*Acceptable Use Policy*

*Network Usage Guidelines*

#### **Purpose**

UAB provides electronic mail resources in support of its instruction, research, and service activities. The purpose of this policy is to establish the use of electronic mail (e-mail) as one of the official methods for communicating with UAB students.

#### **Official Communications Using E-Mail Addresses**

In a similar manner as mail distribution of paper communiqués to a student's "permanent" address is considered an official method for distributions to students, so also are official e-mail messages sent by UAB to a student's "@UAB.EDU" e-mail address considered an official distribution method. For purposes of this policy, "official" communiqués or e-mails as used here are those established as "official" through other approval mechanisms in place at UAB.

#### **Student Requirements and Responsibilities**

Every student enrolled at UAB must have an e-mail address that ends with "@UAB.EDU". Such an e-mail address is required for a student to register for UAB credit courses. It is the student's responsibility to obtain an official UAB e-mail address in a timely manner from the UAB e-mail registering system (BlazerID World Wide Web site). This will require the student also to have a valid, current, and reliable electronic mailbox through an Internet Service Provider (ISP) or portal or on a server administered by the student's academic department, or on the central mail service provided by the Office of the Vice President for Information Technology. It is the student's responsibility to check his or her e-mail regularly for distribution of official UAB communiqués. UAB recommends that e-mail be checked at least once a day, when practicable. UAB

is not responsible for lost, rejected, or delayed e-mail forwarded by UAB from a student's "@UAB.EDU" address to off campus or unsupported e-mail services or providers. Such lost, rejected, or delayed e-mail does not absolve the student from responsibilities associated with an official UAB communiqué sent to the student's official UAB e-mail address ("@UAB.EDU"). If there is a change in a student's e-mail address to which the "@UAB.EDU" alias address is re-directed, it is the student's responsibility to make the changes in the UAB e-mail registering system.

## UAB Responsibilities

UAB will ensure that all students have access to an e-mail account and will provide means for students who do not otherwise have access to e-mail-capable computers to be able to check their e-mail through such mechanisms as computer labs, the UAB libraries, and public terminals. UAB will provide mechanisms to allow students to request that their e-mail addresses not be published in a similar way that other student directory information is not published. However, unpublished e-mail addresses will be used for sending official UAB communiqués to students including communications to a group of students such as a course e-mail list. Students also will be provided mechanisms for requesting that their e-mail addresses not be used for general UAB mailings that are not official communications with students. UAB is not responsible for the handling or mishandling of students' e-mail by non-UAB providers or by unofficial (non-@UAB.EDU) e-mail servers.

## Student Records Policy

The University of Alabama at Birmingham student records policy complies with the Family Educational Rights and Privacy Act of 1974, as amended. All students enrolled or previously enrolled at UAB have certain rights with regard to information included in their education records. These rights are the subject of this policy.

[Request to Withhold Directory Information PDF](#)

## Classroom Scheduling Policy

1. Departments will schedule all multiple lecture and laboratory sections so that student course enrollments will be distributed approximately equally between mornings and afternoons and between the different meeting patterns (TR vs. MWF). Departments will also limit classes taught during peak hours to 50%. Once departments reach the maximum of courses to be taught during peak hours, the remaining courses should be redistributed across non-peak hours.
2. Departments will have the ability to schedule in rooms they manage first. After this, the Registrar's Office will utilize all available classrooms to assist other departments in need of space.
3. Departments must strictly adhere to the approved standard set of time patterns when scheduling course offerings.
4. Because of the regular standard meeting lengths for three hour courses are in 50 and 75 minute time blocks, courses offered during non-standard times should be offered in multiples of these times to avoid end times that preclude the students from registering for courses that may follow the standard section. For example, one non-standard time on Tuesday and another at the same time on Thursday.
5. Classroom enrollment and capacities should be based on the actual enrollment trends over the past few years to ensure a realistic estimate of room needs and proper seat and room assignments. Room capacities will be reviewed each semester by the Office of the

Provost in collaboration with the colleges and departments to ensure the actual instructional capacities for each room are assessed.

6. Departments should strive for 80% occupancy. For example, the number of students enrolled in a class divided by the instructional seating capacity of the room that class is in should be greater than or equal to 80%.
7. Peak hours are between 9:00 am - 1:25 pm Monday through Friday. Departments should strive to provide students a variety of options of course offerings throughout the scheduling week by utilizing non-peak hours. The importance of maintaining the existing course schedule M-F is to allow for courses to be spread more evenly throughout the week. Not only will this be necessary to accommodate significant course demand in response to projected enrollment increases but it will also provide students with greater flexibility when building schedules and further optimize classroom utilization

## New Course Review Process

- Unit(s)/School(s) should complete their internal review and approval process for their new courses in September and again optionally in April. The courses need to be submitted as new courses to the registrar by October 1<sup>st</sup> or May 1<sup>st</sup>.
- The new course catalog submission deadlines are October 1<sup>st</sup> and May 1<sup>st</sup>.
- New course submissions for UCC/GCC review shall include: 1) course number, 2) course title, 3) course catalog description, 4) credit hours, 5) contact person(s), 6) a list of potential course conflicts, if any, and 7) a discussion of why the new course would not create a conflict. Syllabi may be requested by the UCC/GCC for more information and should be provided by the above listed contact person(s) within 7 days.
- Proposals for new Programs, Certificates, and/or Tracks that include new courses will include a 'new course form' for each new course, provided as addendums in the Proposal. These new course forms will facilitate review of new courses and prevent an unnecessary secondary review once the new course is listed. The new course forms will be removed by the Provost's office prior to sending a proposal to the Board of Trustees and Alabama Commission on Higher Education.
- New courses will be reviewed by GCC Liaisons (members), Alternates and by Units/Schools/Departments/Program Leadership during the month of October and June.
- If a conflict is noted for a new course, it will be the responsibility of the Unit/School noting the conflict to send an email with a detailed explanation about the course conflict to the submitting Unit/School's contact person(s) and copy (Cc) the Chair of the UCC/GCC.
- The leadership of those Units/Schools involved in a potential conflict, will discuss (and meet, if necessary) the conflicting course(s) during the month of November and July, independent of the UCC/GCC Chair and Senate committees.
- If the parties have come to a resolution before the end of November/ July, both units involved shall notify the UCC/GCC Chair of the resolution and its substance, copying the units and leadership that flagged the concern.
- If there is no resolution or a disputed resolution, or the Units/Schools were unable to meet during November, the leadership of both Units/ Schools will present at the next UAB Faculty Senate Curriculum Committee meeting (either December or January or August) for a vote that will determine the final outcome of the new course proposal.

## Use of UAB Facilities and Freedom of Expression Policy

The University has a significant interest in protecting the educational experience of its students, in ensuring health, safety, and order on its campus, in regulating competing uses of its facilities and grounds, and in protecting the safety and well-being of those with the right to use its facilities and grounds to engage in protected speech, among other significant interests. This policy applies to all individuals and groups that use UAB facilities. All students and registered student organizations are expected to comply with the Use of UAB Freedom of Expression and Use of UAB Facilities Policy. Any student or registered student organization who is found to have substantially interfered with the protected free expression rights of others shall be subject to a full range of disciplinary sanctions according to the appropriate disciplinary procedures for misconduct up to and including dismissal from the University.

## Trustees & Administration

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**Kelly K. Nichols, O.D., M.P.H., Ph.D., F.A.A.O.**, Dean, School of Optometry

**Kathy Nugent, Ph.D.**, Executive Director, Harbert Institute for Innovation and Entrepreneurship

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**Lisa Schwiebert, Ph.D.**, Interim Dean, Graduate School

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**Stephen A. Yoder, J.D.**, Associate Provost, Academic Administration

**Majd Zayzafoon, M.D., Ph.D.**, Associate Provost, International Education

## Faculty

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**Abrams, Marshall** College of Arts and Sciences

Department of Philosophy, Associate Professor of Philosophy, 2007, A.B. (California-Davis), Ph.D. (Chicago)

**Accetta, Valerie** College of Arts and Sciences

Department of Theatre, Associate Professor, Head of Musical Theatre, 2013, B.A. (Otterbein), M.F.A. (Virginia Commonwealth)

**Affuso, Olivia Thomas** School of Public Health  
Department of Epidemiology, Associate Professor, 2006, Ph.D. (North Carolina - Chapel Hill), Chronic Disease Epidemiology, Physical Activity and Chronic Disease Prevention

**Agresti, David G.** College of Arts and Sciences  
Department of Physics, Professor Emeritus of Physics, 1969, B.S. (Ohio State), M.S., Ph.D. (Caltech), Astrophysics; condensed matter physics

**Alexander, J. Iwan** School of Engineering  
Department of Engineering, Dean and Professor of Mechanical Engineering, 2013, B.Sc. (University College Swansea, Wales, U.K.); Ph.D. (United World College of the Atlantic, Wales, U.K.); Ph.D. (Washington State)

**Alford, Aaron** College of Arts and Sciences  
Department of Chemistry, Instructor, 2020, BS, MS, PhD (UAB)

**Allen, Shauntice** School of Public Health  
Department of Environmental Health Sciences, Assistant Professor, 2016, Ph.D., M.A. (UAB), Community resiliency and livability as well as environmental justice and health equity strategies

**Allgood, Ashleigh** School of Health Professions  
Department of Health Services Administration, Instructor, 2020, MPH, MBA (UAB)

**Allison, Kelly** College of Arts and Sciences  
Department of Theatre, Professor of Theatre; Chair, Department of Theatre, 1998, B.F.A. (Stephens), M.F.A. (Minnesota)

**Alspach, Jennie** School of Nursing  
Instructor of Nursing, 2014, B.S.N., M.S.N. (UAB)

**Amsbary, Jonathan H.** College of Arts and Sciences  
Department of Communication Studies, Professor of Communication Studies, 1988, B.A. (New Mexico), M.A., Ph.D. (Indiana)

**Amsler, Charles D. Jr.** College of Arts and Sciences  
Department of Biology, Professor of Biology, 1994, B.A (Duke), M.S. (North Carolina-Wilmington), Ph.D. (California-Santa Barbara), Marine Ecophysiology, Chemical Ecology, and Polar Biology

**Anderson de la Torre, M. Antonia,** College of Arts and Sciences  
Department of World Languages and Literatures, Assistant Professor of Spanish,, 2019,, B.A. (Universidad de Los Andes, Bogotá, Colombia), M.A. (CEU San Pablo, Madrid, Spain), Ph.D. (Nebraska)

**Andrews, J. Barry** School of Engineering  
Department of Materials Science and Engineering, Professor Emeritus of Materials Science and Engineering, 1976, B.S. (UAB), M.E., PhD. (Florida), P.E. (Alabama), Polymer and Metal Matrix Composites, Solidification, Physical Metallurgy

**Angus, Robert A.** College of Arts and Sciences

Department of Biology, Professor Emeritus of Biology, 1978, B.S. (Wisconsin), Ph.D. (Connecticut), Aquatic Toxicology

**Appavoo, Kannatassen "Krishen"** College of Arts and Sciences

Department of Physics, Assistant Professor of Physics, 2016, B.A. (Berea College), Ph.D. (Vanderbilt), Ultrafast optical microscopy; Dielectric metamaterials and plasmonics; Phase-change memory; Hybrid functional nanomaterials for energy-harvesting and sensing technologies; Nonlinear optics

**Arribas, Julian** College of Arts and Sciences

Department of World Languages and Literatures, Professor and Chair, 2015, BS (Universidad Pontificia - Spain), ABD (Universidad de Salamanca), M.A., Ph.D. (Michigan)

**Ashley, Kristin** School of Nursing  
Instructor, 2019, B.S.N. (Tuskegee), M.S.N. (UAB)

**Ashour, Samar** School of Business  
Department of Accounting and Finance, Assistant Professor of Finance 2020, 2017, BA, MBA (Tanta University, Egypt), PhD (University of Texas at Arlington)

**Athienitis, Maria** School of Business  
Department of Accounting and Finance, Instructor of Accounting, 2019, BA (University of the Witwatersrand, Johannesburg), MA (UAB)

**Austad, Steven** College of Arts and Sciences

Department of Biology, Protective Life Endowed Chair in Healthy Aging Research, Distinguished Professor and Chair of Biology, 2014, B.A. (UCLA), B.A. (California State-Northridge), Ph.D. (Purdue), Comparative Biogerontology, Assessment of Animal Healthspan, and Cellular and Molecular Mechanisms of Aging

**Austin, Erika** School of Public Health  
Department of Biostatistics, Associate Professor and Associate Dean for Academic Affairs, 2015, M.P.H. (Florida), Ph.D. (Virginia), Health disparities among stigmatized populations, barriers to health care access, LGBT health and well-being

**Ayers, Douglas J.** School of Business  
Department of Marketing, Industrial Distribution, Economics, Associate Professor of Marketing and Industrial Distribution, 1999, B.S., M.B.A. (University of Tennessee), Ph.D. (University of Kentucky)

**Bach, Rebecca Ann** College of Arts and Sciences  
Department of English, Professor of English and Director of Graduate Studies, 1994, B.A., M.A., Ph.D. (Pennsylvania), Shakespeare, Renaissance Drama, Animal Studies

**Bacha, Jeffrey** College of Arts and Sciences

Department of English, Associate Professor of English and Director of Internships, 2012, B.A. (University of Michigan-Flint), M.A. (Georgia State University), Ph.D. (Purdue), Rhetoric and Composition, Professional and Technical Communication

**Baer, Andrew** College of Arts and Sciences

Department of History, Associate Professor, 2016, B.A., M.A., Ph.D. (Northwestern University)

**Baker, Danielle** School of Nursing  
Instructor of Nursing, 2011, B.S.N., M.S.N. (Jacksonville State) D.N.P (UAB)

**Baker, Elizabeth H.** College of Arts and Sciences  
Department of Sociology, Associate Professor of Sociology, 2012, B.A., M.A. (Bowling Green), Ph.D. (Pennsylvania State)

**Ball, Karlene K.** College of Arts and Sciences

Department of Psychology, University Professor; Director, Center for Research in Applied Gerontology; Professor of Psychology, Associate Director, Comprehensive Center for Healthy Aging, 1996, B.A. (Indiana), M.S., Ph.D. (Northwestern)

**Barrett, Doug** College of Arts and Sciences

Department of Art Art History, Associate Professor of Art, 2008, B.F.A. (Central Florida), M.F.A. (Florida), Graphic Design, Typography, Visual Culture, Designer as Author, Design Fiction, Japan

**Basilico, David Anthony** College of Arts and Sciences  
Department of English, Associate Professor of English; Director, Linguistics Linguistics and Honors, 1993, B.A. (Brown), Ph.D. (Arizona), Linguistic Theory, Syntax and Semantics, Cognitive Science

**Batey, David Scott** College of Arts and Sciences  
Department of Social Work, Associate Professor, 2015, B.S., M.S.W., Ph.D. (Alabama)

**Baulos, Doug** College of Arts and Sciences

Department of Art Art History, Associate Professor of Art, 2003, B.F.A. (UAB), M.F.A. (New Orleans), Drawing, Book Arts, Medical Scientific Illustration

**Beachum, Nicole** School of Business  
Department of Marketing, Industrial Distribution, Economics, Assistant Professor, 2021, BA (Mississippi University for Women), MS (University of Central Arkansas), PhD (University of South Alabama)

**Beard, Craig W.** Mervyn H. Sterne Library  
Mervyn H. Sterne Library, Associate Librarian, Reference Services, Mervyn H. Sterne Library, 1990, B.A. (Harding), M.A.R. (Harding Graduate School of Religion), M.L.S. (Florida State)

- Becker, Brooke A.** Mervyn H. Sterne Library  
Mervyn H. Sterne Library, Senior Assistant Librarian, Reference Services, Mervyn H. Sterne Library, 2003, B.A. (Samford), M.L.I.S. (Alabama)
- Bellis, Peter** College of Arts and Sciences  
Department of English, Professor of English, 2007, B.A. (Amherst), M.A. (Texas-Austin), M.A., Ph.D. (Johns Hopkins), American Literature
- Bellis, Susan** College of Joint Health Sciences  
Department of Biochemistry and Molecular Genetics, Professor of Cell, Developmental, and Integrative Biology (School of Medicine), 1999, PhD (University of Rhode Island), The Role of Integrin Receptors in Human Biology and Disease
- Benoit, William** College of Arts and Sciences  
Department of Communication Studies, Distinguished Professor of Communication Studies, 2017, B.S. (Ball State), M.A. (Central Michigan), Ph.D. (Wayne State)
- Berry, Joel L.** School of Engineering  
Department of Biomedical Engineering, Associate Professor of Biomedical Engineering; Associate Director, UAB Science and Technology Honors Program, 2010, B.S., B.S.M.E., M.S.M.E. (UAB), Ph.D. (Wake Forest), Cardiovascular biomechanics and tissue engineering
- Bertrand, Fred (Ted)** School of Health Professions  
Department of Clinical and Diagnostic Sciences, Professor and BS in Biomedical Sciences Program Director, 2014, Ph.D. (UAB)
- Bi, Wenli** College of Arts and Sciences  
Department of Physics, Assistant Professor of Physics, 2019, BS (Xi'an Jiaotong University), MS (Drexel), PhD (Washington St. Louis), Magnetism and superconductivity in strongly correlated materials; experimental high pressure physics; synchrotron x-ray spectroscopy; Mossbauer spectroscopy and inelastic x-ray scattering
- Biga, Chris F.** College of Arts and Sciences  
Department of Sociology, Teaching Associate Professor of Sociology, 2012, B.A. (Nebraska), M.A. (New Orleans), Ph.D. (Washington State)
- Biga, Peggy** College of Arts and Sciences  
Department of Biology, Associate Professor of Biology, 2012, B.S., M.S. (Angelo State), Ph.D. (Idaho), Physiology and Developmental Biology
- Blake-Turner, Chris** College of Arts and Sciences  
Department of Philosophy, Assistant Professor of Philosophy, 2021, B.A. (First Class Honors), University of Durham), BPhil (Oxford), MA (Chapel Hill), Ph.D. (UNC Chapel Hill))
- Blankenship, Brandon** College of Arts and Sciences  
Criminal Justice, Teaching Assistant Professor, 2001, B.A. (UAB), J.D. (Thomas Goode Jones School of Law), Legal Studies, Pre-Law, Criminal Law
- Blanton, Robert G.** College of Arts and Sciences  
Department of Political Science and Public Administration, Professor and Chair, 2014, B.A. (North Carolina State), M.A., Ph.D. (South Carolina)
- Blanton, Shannon L.** College of Arts and Sciences  
Department of Political Science and Public Administration, Professor, Dean, Honors College, 2014, B.A. (Georgia College), M.A. (Georgia), Ph.D. (South Carolina)
- Blokh, Alexander** College of Arts and Sciences  
Department of Mathematics, Professor of Mathematics, 1992, Ph.D. (Kharkov State), Dynamical Systems
- Boggiano, Mary M.** College of Arts and Sciences  
Department of Psychology, Associate Professor of Psychology, 2000, B.A., M.A., Ph.D. (Texas at El-Paso)
- Bolus, Norman E.** School of Health Professions  
Department of Clinical and Diagnostic Sciences, Assistant Professor, 1999, M.P.H. (UAB)
- Bolus, Victoria** School of Nursing  
Instructor of Nursing, 2021, B.S.N. (Samford); M.S.N. (Samford)
- Bordelon, Curry** School of Nursing  
Assistant Professor of Nursing, 2017, B.S.N. (Northwestern State University), M.S.N. (Emory), D.N.P. (UAB)
- Borkowski, Nancy** School of Health Professions  
Department of Health Services Administration, Professor, 2014, DBA (Nova Southeastern)
- Bowers, Deborah** School of Nursing  
Instructor of Nursing, 2017, B.S.N., M.S.N., D.N.P. (UAB)
- Boyar, Scott L.** School of Business  
Department of Management, Information Systems, and Quantitative Methods, Professor of Management, 2009, B.S. (Keene State College), M.B.A. (University of San Diego), Ph.D. (Mississippi State)
- Brainard, Lindsay** College of Arts and Sciences  
Department of Philosophy, Assistant Professor of Philosophy, 2020, B.A. (College of Wooster), M.Phil. (Cambridge University), M.A. (Chapel Hill), Ph.D. (UNC Chapel Hill)
- Brande, Scott** College of Arts and Sciences

Department of Chemistry, Associate Professor of Chemistry, 1979, B.S. (Rochester), M.S. (California Institute of Technology), Ph.D. (SUNY-Stony Brook)

**Brandwein, Craig** College of Arts and Sciences

Department of Music, Assistant Professor of Music, 2016, B.S., M.A. (Long Island)

**Bray, Leigh** School of Nursing  
Assistant Professor, 2018, B.S.N., M.S.N. (UA), Ph.D. (UAB)

**Braziell, James** College of Arts and Sciences

Department of English, Associate Professor of English, 2010, B.A. (Georgia), M.F.A (Bowling Green State), Creative Writing

**Breland, Bryan** School of Health Professions

Department of Health Services Administration, Associate Professor, 2009, DrPH (UAB), Community and Organizational Emergency Preparedness, Healthcare Policy

**Bria, Victoria** School of Nursing  
Instructor of Nursing, 2017, B.S.N., M.S.N. (Samford)

**Britt, Sylvia E.** School of Nursing  
Assistant Professor of Nursing, 2007, B.S.N. (Medical College of Georgia), M.S.N., D.S.N. (UAB)

**Brooker, Megan E.,** College of Arts and Sciences

Department of Sociology, Teaching Assistant Professor of Sociology, 2021, B.A. (Haverford College), M.A. (Washington State), Ph.D. (California Irvine)

**Brott, Brigitta** School of Engineering  
Department of Biomedical Engineering, Professor of Cardiovascular Disease (School of Medicine), 2000, BS (MIT), MD (Loyola University-Illinois), Angiogenesis, cardiac angioplasty, coronary artery disease, cardiac catheterization, interventional cardiology and stents

**Brown, Christopher S.** College of Arts and Sciences

Department of Biology, Professor of Biology (and UAB Vice President for Research), 2017, B.S. (UNC-Chapel Hill), M.S., Ph.D. (NC State University), Plant Biology and Plant Physiology

**Brown, Michelle** School of Health Professions

Department of Clinical and Diagnostic Sciences, Associate Professor and Director, Healthcare Simulation Program, 2008, Ph.D. (UAB)

**Browning, Jillian Marie** College of Arts and Sciences

Department of Art History, Assistant Professor of Art, Photography, BS (Central Florida), M.F.A. (Florida State)

**Bruce, Rachel** School of Nursing  
Instructor, 2017, B.S.N. (Jacksonville), M.S.N., M.P.H. (UAB)

**Bunn, Michele** School of Business  
Department of Marketing, Industrial Distribution, Economics, Assistant Professor of Marketing, 2013, PhD (UNC: Chapel Hill)

**Burke, Donald S.** School of Engineering  
Department of Advanced Safety Engineering and Management, Assistant Professor of Mechanical Engineering; Program Director, Advanced Safety Engineering and Management Program; Track Leader, Advanced Safety Engineering, Interdisciplinary Engineering PhD Program, 2013, B.S., Ph.D. (UAB)

**Burns, Jonathan** College of Arts and Sciences

Department of Chemistry, Assistant Professor of Chemistry, 2021, B.S. (MidAmerica Nazarene), Ph.D. (Texas AM)

**Butcher, Dan** College of Arts and Sciences

Department of English, Instructor of English, 2001, B.A. (Mississippi), M.L.I.S., M.A. (LSU), Literature, Composition

**Byrd, Elizabeth** School of Nursing  
Assistant Professor, 2021, B.S.N., M.S.N. (UAB)

**Byrd, Jim** School of Business  
Department of Accounting and Finance, Associate Professor of Accounting, 2013, B.S. (Auburn), M.B.A. (Georgia State), M.A., Ph.D. (UAB), CPA, CHFP

**Cain, Cindy L** College of Arts and Sciences

Department of Sociology, Assistant Professor of Sociology, 2018, B.A. (Indiana), M.A., Ph.D. (Arizona)

**Callahan, Dale** School of Engineering  
Department of Electrical and Computer Engineering, Associate Professor of Electrical and Computer Engineering; Director, Information Engineering and Management; Associate Dean for Professional Programs and Industry Relations, 2000, B.E.E. (Auburn), M.B.A. (Auburn-Montgomery), M.S.E.E. (UAB), Ph.D. (Alabama), P.E. (Alabama), Entrepreneurship, Innovation and Social Media

**Callighan, Heidi** School of Nursing  
Assistant Professor, 2019, B.S.N., M.S.N. (Samford), Ph.D. (William Carey)

**Camata, Renato** College of Arts and Sciences

Department of Physics, Associate Professor of Physics, 2000, B.S. (University of São Paulo), M.S., Ph.D. (Caltech), Laser and plasma synthesis of quantum electronic materials; critical phenomena in 2D systems; crystal growth and properties of semiconducting and superconducting thin film materials

**Campbell, Edward** School of Nursing  
Instructor of Nursing, 2021, B.S. (UAB), M.S.N. (Liberty), Ed.D. (Creighton)

**Cannon, Joseph J.** College of Arts and Sciences

Department of Theatre, Assistant Professor of Theatre, 2004, B.A. (UAB), M.F.A. (Arizona)

**Carlito, Delores** Mervyn H. Sterne Library

Mervyn H. Sterne Library, Associate Librarian, References Services, Mervyn H. Sterne Library, 2001, B.A. (UAB), M.A., M.Ed. (UAB), M.L.I.S. (Alabama)

**Carpenter, Randy** School of Health Professions

Department of Health Informatics, M.S.H.I., Adjunct Professor (Health Services Administration)

**Carroll, Mary Jacque** College of Arts and Sciences

Department of Social Work, Assistant Professor and Director of Field Education, 2017, B.S. (Wofford College), M.S.W. (South Carolina)

**Carroll, Penny** College of Arts and Sciences

Department of Biology, Assistant Professor, B.S. Biology (Middle Tennessee State University), Ph.D. Biology Education (Middle Tennessee State University), Evidence-Based Teaching, Genetics, Metacognition, Botany, Dendrology

**Casselman, Brock** College of Arts and Sciences

Department of Chemistry, Instructor, 2018, B.S., Ph.D. (Utah)

**Cates, Amy** College of Arts and Sciences

Department of English, Instructor of English, 2017, B.A. (Auburn), M.A. (Alabama), M.A. (Montevallo), Composition, Developmental Writing Literature

**Cattledge, Shane A.** College of Arts and Sciences

Department of Physics, Associate Professor of Physics, 2004, B.S. (California State –Sacramento), Ph.D. (UAB), Synthesis and properties of nanostructured super-hard materials; chemical vapor deposition (CVD) of diamond films and novel nanostructured coatings for industrial cutting and biomedical implant applications; molecular sensing using fluorescent nanodiamond; mechanical properties

**Cato, Shelly** College of Arts and Sciences

Department of English, Instructor of English, 2014, B.A. (Mississippi), M.A. (UAB), Composition, Developmental Writing, Literature, Creative Writing

**Causey, Cora** School of Education  
Department of Curriculum and Instruction, Assistant Professor of Early Childhood, 2014, B.A. (Birmingham Southern), M.A., Ph.D. (UAB)

**Celaya, Leandra** School of Health Professions

Department of Health Services Administration, Assistant Professor, 2008, MSc (University of Salford)

**Chambless, Krista** College of Arts and Sciences

Department of World Languages and Literatures, Associate Professor of Spanish, 2006, B.A., M.A., Ph.D. (Alabama)

**Chambliss, Jessica** School of Public Health  
Department of Health Policy Organization, Instructor, 2017, Ph.D. (UAB), M.P.H. (Texas-Houston), Adolescent health, sexual health, sexual health education and policy, risk reduction behavior, public health practice and systems

**Chan, David** College of Arts and Sciences

Department of Philosophy, Professor of Philosophy and Chair, 2019, B.A. (First Class Honors, University of Melbourne, Australia), M.A. (National University of Singapore), Ph.D. (Stanford University)

**Chapman, Alison** College of Arts and Sciences

Department of English, Professor of English; Chair, Department of English, 2000, B.A. (Davidson), M.A., Ph.D. (Pennsylvania), Milton, Renaissance Poetry and Prose

**Chapman, Gary H.** College of Arts and Sciences

Department of Art Art History, Professor of Art, 1990, B.S., B.A. (Berea), M.F.A. (Cranbrook Academy), Painting, Drawing, Mixed Media, Figuration

**Chatham, Amy H.** School of Public Health  
Department of Environmental Health Sciences, Assistant Professor and Assistant Dean of Undergraduate Education, 2021, Ph.D., M.S.P.H. (UAB), Community Engagement, health education and promotion, environmental health policy, rural health focusing on the Black Belt region, and educational equity and accessibility.

**Chawla, Krishan Kumar** School of Engineering  
Department of Materials Science and Engineering, Professor Emeritus of Materials Science and Engineering, 1998, B.S. (Banaras Hindu, India), M.S., Ph.D. (Illinois, Urbana-Champaign), Metal, Ceramic, and Polymer Matrix Composite Materials; Fibers; Foams

**Chen, Cheng-Chien** College of Arts and Sciences

Department of Physics, Assistant Professor of Physics, 2016, B.S. (National Tsing-Hua University), Ph.D. (Stanford University), condensed matter theory; scientific supercomputing; big data analytics; photon-based spectroscopies; non-equilibrium dynamics and emergent phenomena in strongly correlated systems; unconventional superconductors; quantum magnets; interacting topological states of matter

**Chen, Dongquan** School of Health Professions

Department of Health Informatics, Ph.D., Research Assistant Professor (Health Services Administration)

**Cho, Won** College of Arts and Sciences

Department of Music, Associate Professor of Music, 2011, B.M. (Manhattan), M.M. (Boston), D.M.A. (Memphis)

**Cinnella, Pasquale** School of Engineering

Department of Mechanical Engineering, Professor of Mechanical Engineering; Undergraduate Program Director, 2017, B.S. (University of Bari, Italy), Ph.D. (Virginia Polytechnic Institute and State University), Dynamics

**Clabough, Jeremiah** School of Education

Department of Curriculum and Instruction, Associate Professor of Secondary Education, 2012, B.A. (Maryville College), M.S., Ph.D. (Tennessee)

**Claus, Nancy** School of Nursing

Assistant Professor of Nursing, 2010, B.S. (UAB), A.D. (Wallace State Community College), B.S.N. (Georgia Southern), M.S.N. (Jacksonville State), D.N.P. (UAB)

**Clavell, Alicia** School of Business

Department of Management, Information Systems, and Quantitative Methods, Instructor of Business Communications, 2011, B.A. (Berry College), M.A. (UAB)

**Clay, Olivio** College of Arts and Sciences

Department of Psychology, Associate Professor of Psychology, 2007, B.S., M.A., Ph.D. (UAB)

**Clements, Jill Hamilton** College of Arts and Sciences

Department of English, Assistant Professor of English, 2000, B.A. (Truman State), M.A. (Western Michigan), Ph.D. (Illinois), Medieval Literature and Culture, History of the English Language

**Clinkscales, Savannah** College of Arts and Sciences

Department of World Languages and Literatures, Visiting Instructor of Spanish, 2021, B.A. (Troy University), M.A. (Alabama)

**Coats, Mamie** School of Health Professions

Department of Clinical and Diagnostic Sciences, Associate Professor, 2019, PhD (UAB)

**Cochran, John Brock** College of Arts and Sciences

Department of World Languages and Literatures, Instructor of Spanish, 2012, B.A. (Auburn), M.A. (North Carolina in Charlotte)

**Cofield, Stacy S.** School of Public Health

Department of Biostatistics, Associate Professor, 2003, Ph.D. (Virginia Commonwealth), Mixed-Effects Models, Clinical Trial Design, Management, and Analysis, Out-of-Hospital Cardiac Arrest and Resuscitation.

**Coiner, Sarah** School of Nursing

Instructor of Nursing, 2020, B.S.N. (UA), M.S.N. (UAB)

**Coles, Karen M.** School of Nursing

Assistant Professor, 1993, B.S.N. (Michigan State), M.S.N., D.N.P. (UAB)

**Collins, Robert** College of Arts and Sciences

Department of English, Professor of English Emeritus, 1980, AB (Xavier University), MA, PhD (Ohio State), Creative Writing, Poetry

**Cook, Edwin W. III** College of Arts and Sciences

Department of Psychology, Associate Professor of Psychology, Director, Medical/Clinical Psychology Doctoral Program, 1986, B.S. (Pennsylvania), M.S., Ph.D. (Wisconsin)

**Copes, J. Heith** College of Arts and Sciences

Department of Criminal Justice, Professor, 2001, B.S. (Southwestern Louisiana), M.A., Ph.D., (Tennessee), Qualitative Methods, Criminal Decision Making, Visual Criminology

**Corbetta, Renato** College of Arts and Sciences

Department of Political Science and Public Administration, Associate Professor and International Studies Director, 2005, B.A., M.A. (Portland State), Ph.D. (Arizona)

**Corcoran, Jessica** School of Nursing

Assistant Professor of Nursing, 2020, B.S.N., M.S.N., Ph.D (UAB)

**Corcoran, Stephanie** School of Education

Department of Curriculum and Instruction, Assistant Professor, 2006, B.A., M.A., Ed.S., Ph.D. (Alabama), NCSP

**Cormier, Loretta** College of Arts and Sciences

Department of Anthropology, Professor of Anthropology, 2000, B.S. (Florida), M.A. (UAB), Ph.D. (Tulane)

**Corvey, Kathryn** School of Public Health

Department of Health Policy and Organization, Visiting Assistant Professor, 2020, M.P.H., Dr.P.H. (UAB), Health insurance coverage and adequacy, health care utilization and costs, children with special health care needs, maternal and child health, public health systems and practice, public health communication

**Cracco, Derek A.** College of Arts and Sciences

Department of Art Art History, Associate Professor of Art, 1999, B.F.A. (Louisiana State), M.F.A. (Syracuse), Printmaking, Computer graphics, Color Theory

**Crawley, Diane** School of Business

Department of Marketing, Industrial Distribution, Economics, Instructor of Legal Studies, 2014, JD (Samford University)

**Crooks, Elizabeth** School of Nursing

Instructor of Nursing, 2011, B.S.N. (Catholic University of America), M.S.N. (Case Western Reserve), D.N.P. (UAB)

**Crossland, William** School of Nursing  
Instructor of Nursing , 2021, B.S.N. (Central Florida), M.S.N., D.N.P. (UAB)

**Crowe, Michael** College of Arts and Sciences  
Department of Psychology, Professor of Psychology, Assistant Director of the Center for Research on Applied Gerontology, 2006, B.S. (Illinois), M.A., Ph.D. (Southern California)

**Cullen, Clark** College of Arts and Sciences  
Department of Sociology, Teaching Assistant Professor of Sociology, 2009, B.A. (Mississippi); M.A., Ph.D. (UAB)

**Culver, Sarah E.** School of Business  
Department of Marketing, Industrial Distribution, Economics, Associate Professor of Economics, 1993, B.S., M.A., Ph.D. (Houston)

**Cummings, Cathleen A.** College of Arts and Sciences  
Department of Art Art History, Associate Professor of Art History, 2006, B.A. (Mills College), M.A. (University of London), M.A. and Ph.D. (Ohio State), South Asian Art

**Cusic, Anne M.** College of Arts and Sciences  
Department of Biology, Associate Professor Emeritus of Biology, 1988, B.S. (UAB), M.S. (Samford), Ph.D. (UAB), General Biology and Reproductive Biology

**Dagley, Amy** School of Education  
Department of Human Studies, Assistant Professor of Educational Leadership, 2016, B.A., M.A. (University of Alaska Southeast), Ph.D. (Alabama), School law, policy, finance, supervision and leadership theory

**Dale, Louis** College of Arts and Sciences  
Department of Mathematics, Professor Emeritus of Mathematics, 1973, B.A. (Miles), M.S. (Atlanta), Ph.D. (Alabama), Ring Theory

**Dallow, Jessica** College of Arts and Sciences  
Department of Art Art History, Associate Professor of Art History, 2002, B.A. (San Diego), M.A., Ph.D. (North Carolina-Chapel Hill), Contemporary Art, American Art

**Daniel, Melanie** School of Nursing  
Instructor of Nursing, 2008, B.S.N., M.S.N. (UAB), D.N.P. (Samford)

**Daniélou, Catherine F.** College of Arts and Sciences  
Department of World Languages and Literatures, Associate Professor of French; Senior Associate Dean for Academic Affairs, College of Arts and Sciences, 1990, Licence-ès-Lettres, Maîtrise-ès-Lettres (Sorbonne), M.A., Ph.D. (Michigan State)

**DasGupta, Manabendra** School of Business  
Department of Marketing, Industrial Distribution, Economics, Associate Professor of Economics, 1990, B.A., M.A. (Calcutta), M.A., Ph.D. (Southern Methodist University)

**Davis, Ryan** School of Business  
Department of Accounting and Finance, Assistant Professor of Finance, 2016, BA, MS, PhD (University of Mississippi), MBA (UAB)

**Dawon, Susan Packa** School of Health Professions  
Department of Health Services Administration, Instructor and Director of Operations, 2021, MS (University of Alabama)

**DeCarlo, Thomas E.** School of Business  
Department of Marketing, Industrial Distribution, Economics, Professor of Marketing and Industrial Distribution, 2007, B.S. (N. Carolina State University), Ph.D. (University of Georgia)

**Deutsch, Georg** School of Engineering  
Department of Biomedical Engineering, Professor of Radiology (School of Medicine), 1988, PhD, Cognitive neuroscience and brain imaging

**DeVore, Todd E.** College of Arts and Sciences  
Department of Physics, Instructor of Physics, 1998, B.S. (Lewis and Clark), M.S., Ph.D. (UAB), Physics and science education; computational physics

**Di Gangi, Paul** School of Business  
Department of Management, Information Systems, and Quantitative Methods, Associate Professor of Information Systems, 2013, B.S. (Quinnipiac), M.S. (George Washington), Ph.D. (Florida State)

**Dick, Tracey** School of Nursing  
Assistant Professor of Nursing, 2021, B.S.N. (Auburn), M.S.N. (Samford), Ph.D. (UAB)

**Dluhy, Richard** College of Arts and Sciences  
Department of Chemistry, Professor and Chair, 2015, BS (Connecticut), PhD (Rutgers)

**Dobbins, Allan C.** School of Engineering  
Department of Biomedical Engineering, Associate Professor of Biomedical Engineering, 1996, B.Sc. (Dalhousie), B.S.E., M.S.E., Ph.D. (McGill), Human and machine vision, Neural computation, Brain imaging, Scientific visualization

**Dobbs, Joel** School of Business  
Department of Management, Information Systems, and Quantitative Methods, Senior Instructor, 2011, M.Sc. (UAB)

**Dobias, Joshua** College of Arts and Sciences  
Department of Psychology, Assistant Professor of Psychology, 2019, B.S. (Northern Michigan ), M.A. ( New Hampshire), M.S.T., Ph.D.

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Department of Health Informatics, Assistant Professor, 2014, MSHI (UAB)

**Downs, J. Crawford** School of Engineering

Department of Biomedical Engineering, Professor (Ophthalmology), 2012, BA, MA, MS, PhD (Tulane), Experimental and computational ocular biomechanics, intraocular pressure and physiologic signal telemetry, and 3D histomorphometry

**Downs, Lauren** College of Arts and Sciences

Department of Anthropology, Assistant Professor, 2013, B.A. (North Carolina), M.A., Ph.D. (Alabama)

**Drentea, Patricia** College of Arts and Sciences

Department of Sociology, Professor of Sociology, 1999, B.A. (Wisconsin), M.A., Ph.D. (Ohio State)

**Dugger, Kari J.** School of Health Professions

Department of Clinical and Diagnostic Sciences, Associate Professor, 2016, PhD (UAB)

**Dunbar, Jessie** College of Arts and Sciences

Department of English, Associate Professor of English, 2013, B.A. (Clark Atlanta University), M.A. (Georgia), Ph.D. (Emory), Nineteenth and Twentieth-Century African American Literature and Black Diaspora Studies

**Dwivedi, Aparna** College of Arts and Sciences

Department of English, Instructor of English, 2017, B.A., M.A. (Delhi), M.A. (Illinois at Chicago), Composition, Developmental Writing, Literature

**Dwyer, Zoe. B.** School of Engineering

Department of Materials Science and Engineering, Associate Professor of Materials Science and Engineering; Associate Dean for Undergraduate Programs, 1999, B.S., M.S., Ph.D. (UAB)

**Earwood, Martha** College of Arts and Sciences

Department of Criminal Justice, Teaching Assistant Professor of Criminal Justice Internship Coordinator, 2003, B.S., M.S. (Georgia State), Corrections, Victimology, Restorative Justice, Experiential Learning.

**Eberhardt, Alan** School of Engineering

Department of Biomedical Engineering, Associate Chair and Professor of Biomedical Engineering; Associate Chair of Education, Biomedical Engineering; Director of Master of Engineering in Design and Commercialization, 1991, B.S., M.S. (Delaware), Ph.D. (Northwestern), Solid Mechanics, Injury Biomechanics, Biomedical Implants, Analytical and Numerical Methods in Biomechanics

**Edmonds, Christopher** School of Business

Department of Accounting and Finance, Associate Professor of Accounting, 2013, B.S. (Colorado State), M.B.A. (UAB), Ph.D. (Virginia Tech)

**Edmonds, Jennifer** School of Business

Department of Accounting and Finance, Associate Professor of Accounting, 2013, B.S. (Birmingham-Southern), M.Acc., Ph.D. (Virginia Tech)

**Edmonds, Mark** School of Business

Department of Accounting and Finance, Assistant Professor of Accounting, 2016, BS, MA (UAB), PhD (Southern Illinois)

**Edwards, Griffin** School of Business

Department of Marketing, Industrial Distribution, Economics, Associate Professor of Economics, 2013, PhD (Emory University)

**Ellis, Cassandra** College of Arts and Sciences

Department of English, Associate Professor of English, 2002, A.B. (Syracuse), A.M., Ph.M, Ph.D. (Columbia), American Literature, African-American Literature, Composition

**Ennis, Robin** School of Education

Department of Curriculum and Instruction, Associate Professor of Collaborative Teacher Education K-12, 2015, B.A. (Birmingham Southern), M.Ed. (Vanderbilt), Ph.D. (Georgia State)

**Erdmann, Mitzy** College of Arts and Sciences

Department of Chemistry, Assistant Professor of Chemistry, 2016, B.S. (Loyola), M.S. (UAB), Ph.D. (UAB)

**Ernest, James R.** School of Education

Department of Curriculum and Instruction, Professor of Early Childhood and Elementary Education, 2010, B.A. (The University of Exeter, Exeter, England), M.A. (New Orleans), Ph.D. (UAB)

**Erwin, Paul** School of Public Health

Department of Health Policy and Organization, Professor and Dean, 2018, Dr.P.H. (John Hopkins), Evidence-based Public Health and Public Health Services and Systems Research

**Esposito, Richard A.** School of Engineering

Department of Mechanical Engineering, Research Professor of Mechanical Engineering, 2011, B.S. (Auburn), M.S. (Auburn; Samford), Ph.D. (UAB), P.G. (Alabama, Georgia, Florida, Mississippi, Tennessee), Carbon Dioxide Sequestration; Power Generation

**Estes, Jr., Norman Robert** School of Health Professions

Department of Clinical and Diagnostic Sciences, Assistant Professor, 2015, Ph.D. (UAB)

**Etheridge, Sherita** School of Nursing

Instructor of Nursing, 2008, B.S.N. (UNA), M.S.N. (UAB)

**Evans, Patrick** College of Arts and Sciences

Department of Music, Professor and Chair, 2015, B.M., B.M.E. (Montevallo), M.M., D.M. (Florida State)

**Evans, Paulette** School of Education  
Department of Curriculum Instruction, Master Teacher UABTeach, 2014, B.S., M.A., Ed.S., PhD (UAB)

**Evans, Retta** School of Education  
Department of Human Studies, Professor of Community Health and Human Services, 2003, B.S., (Fort Hays), M.S. (Northeastern), Ph.D. (Arkansas), Health Education/ Adolescent and young adult health, nutrition physical activity, body image, school health

**Fambrough, R. Eugene** College of Arts and Sciences  
Department of Music, Professor of Music, 2001, B.M. (Georgia), M.M. (East Carolina), D.M.A. (Alabama)

**Farley, Joyce-Zoe** College of Arts and Sciences  
Department of African American Studies, Visiting Assistant Professor, 2021, B.A. (Howard); M.A. (Columbia); Graduate Certificate (Universiteit Leiden/University of Leiden); P.h.D. (Michigan State), Black history and culture, urban rebellion, Black film and TV, Protest Documentaries, Black Intellectual Tradition, Black Liberation Theology, and Black English

**Farley, Joyce-Zoe** College of Arts and Sciences  
Department of History, Visiting Assistant Professor, 2021, B.A. (Hampton), M.A. (Columbia), Ph.D. (Michigan State)

**Fast, Vladimir G.** School of Engineering  
Department of Biomedical Engineering, Professor of Biomedical Engineering, 1997, B.S., M.S. Physics, Ph.D. in Biophysics (Moscow Institute of Physics and Technology), Optical imaging of electrical and ionic activity in the heart mechanisms of cardiac arrhythmias and defibrillation

**Fathallah-Shaykh, Hassan** College of Arts and Sciences  
Department of Applied Mathematics, Professor of Neurology; Mathematics; Integrative, Developmental and Cell Biology; Biomedical, Electrical, and Mechanical Engineering, 2008, M.D. (American University of Beirut), Ph.D. (Illinois at Chicago), Mathematical Biology, Systems biology of cancer, Dynamics of molecular networks, Biological rhythms

**Fazio, Massimo A.** School of Engineering  
Department of Biomedical Engineering, Assistant Professor (Ophthalmology and Biomedical Engineering), 2007, M.S.E., Ph.D. (University of Calabria, Italy), ocular tissue biomechanics with emphasis on in-vivo mechanical quantification of the neural damage caused by elevated intraocular pressure

**Fedorov, Vladimir V.** College of Arts and Sciences  
Department of Physics, Research Associate Professor of Physics, 2007, M.S. (Moscow Institute of Physics), Ph.D. (Russian Academy of Science), Physical and mathematical science; coherent and laser spectroscopic characterization of doped laser materials; solid-state lasers; laser spectroscopy for molecular-sensing applications

**Feldman, Dale S.** School of Engineering  
Department of Biomedical Engineering, Associate Professor of Biomedical Engineering, 1985, B.S. (Northwestern), M.S. (Dayton), Ph.D. (Clemson), Biomaterials, Soft-tissue biomechanics, Polymeric implants

**Fiedler, Robin L.** School of Education  
Department of Human Studies, Instructor of Educational Psychology and Research, 2008, B.S. (Edinboro), M.Ed. (Virginia Commonwealth), Ph.D. (Auburn), Measurement, Educational Psychology, Educational Statistics

**Fisher, Colleen** College of Arts and Sciences  
Department of Social Work, Associate Professor and Director of MSW Program, 2018, B.A. (Central Michigan), M.S.W. (Michigan State), Ph.D. (Washington University in St. Louis)

**Fisher, Elizabeth** College of Arts and Sciences  
Department of Music, Visiting Assistant Professor of Music, 2021, B.M.E. (Millikin), M.M. (Westminster Choir College), D.M.A. (Michigan State).

**Fisher, Gordon** School of Education  
Department of Human Studies, Associate Professor of Kinesiology, 2012, B.S. (Hillsdale), M.S. (Mississippi State), Ph.D. (Auburn), Postdoctoral Fellow (UAB), Exercise Physiology; Exercise/Nutrition, Mitochondrial Bioenergetics, Oxidative Stress, and Chronic Inflammation

**Fiveash, John** School of Engineering  
Department of Biomedical Engineering, Vice Chair and Professor of Radiation Oncology (School of Medicine), 2012, B.S. (University of Georgia), M.D. (Medical College of Georgia), Clinical trials of novel therapeutics in combination with radiation therapy, particularly in the treatment of brain and prostate tumors; treatment planning research and education IMRT and IGRT

**Flammini, Steve** School of Health Professions  
Department of Health Informatics, Credit Course Instructor (Health Services Administration)

**Fogger, Susanne** School of Nursing  
Professor of Nursing, 2010, B.S.N. (Wayland Baptist University), M.S.N., D.N.P. (South Alabama)

**Foley, Robin D.** School of Engineering  
Department of Materials Science and Engineering, Associate Professor of Materials Science and Engineering, 1990, B.S., M.S. (Illinois, Urbana-Champaign), Ph.D. (Wisconsin-Madison), Materials Characterization, Physical Metallurgy, Metals Casting

**Fontaine, Kevin** School of Public Health  
Department of Health Behavior, Professor and Chair, 2012, Ph.D. (Victoria University, UK), Obesity, non-descriptive placebo responses, resistance exercise, mirror visual feedback for pain, movement restrictions in Chronic Fatigue Syndrome, and the effects of carbohydrate restricted diets on systemic inflammation

**Forbes, Laura** School of Education  
Department of Human Studies, Professor of Community Health and Human Services, 2005, B.S. (Ball State), M.S. (Central Florida), Ph.D. (South Carolina), Health education program planning and administration / Youth and adult drug use prevention programs / Student assistance programs/ Adolescent Mental Health/ Various college health topics

**Ford, Eric** School of Public Health  
Department of Health Policy and Organization, Professor, 2017, Ph.D. (UAB), Strategic Management, Health Information Technologies, Value-Based Programs, Service integration and their combined effects on performance (both financial and population health related)

**Forman, Michele** College of Arts and Sciences  
Department of History, Director of Media Studies, 2003, B.A. (Harvard), M.A. (UAB)

**Fouad, Fouad H.** School of Engineering  
Department of Civil, Construction, and Environmental Engineering, Chair, Department of Civil, Construction, and Environmental Engineering; Director, UAB Sustainable Smart Cities Research Center; Interim Director, Civil Engineering Construction Management Online Master Program, 1981, B.S.C.E. (Alexandria, Egypt), M.S.C.E. (Texas), Ph.D. (Texas AM), P.E. (Alabama, Texas), Structural Engineering, Reinforced Concrete, Concrete Materials

**Franks, Alan E.** College of Arts and Sciences  
Department of Communication Studies, Assistant Professor; Director, Broadcasting, 2013, B.S. (UAB); MFDI (Sydney); MFA (Montana State)

**Friday, R. David** School of Health Professions  
Department of Health Informatics, M.S.H.I., Adjunct Instructor (Health Services Administration)

**Fu, Richard** School of Business  
Department of Accounting and Finance, Associate Professor of Finance, 2006, Ph.D. (Georgia Institute of Technology)

**Gabriel, Kelley** School of Public Health  
Department of Epidemiology, Professor, 2006, Ph.D. (University of Pittsburgh), Research interests focus on two key areas of inquiry, first the development and evaluation of methodological strategies to optimize the precision of physical fitness, physical activity, and sedentary behavior measures for use in population-based studies; and second is to examine the timing of these exposure variables and risk of subsequent disease and disability using a life-course perspective with a strong focus on midlife women.

**Gainey, Denise** College of Arts and Sciences  
Department of Music, Professor of Music, 2002, B.M.E. (Florida State), M.M. (North Texas), D.M.A. (Kentucky)

**Gallups, Sarah** School of Nursing  
Assistant Professor of Nursing, 2020, B.S.N., M.P.H. (UAB), Ph.D. (University of Pittsburgh)

**Gamlin, Paul** College of Joint Health Sciences  
Department of Biochemistry and Molecular Genetics, Professor of Vision Sciences (School of Medicine), Ph.D. (State University of NY-Stony Brook), Studies of the neural bases of vision eye movements

**Gampher, J. Eric** College of Arts and Sciences  
Department of Psychology, Assistant Professor of Psychology, 2008, B.S. (Florida State), Ph.D. (UAB)

**Gardner, Elizabeth A.** College of Arts and Sciences  
Department of Criminal Justice, Associate Professor and Director, Master of Science in Forensic Science Program, 2007, B.S. (Penn State), Ph.D. (Michigan State), Drug Chemistry, Legal Highs, Gun Powder Residue, Laser Induced Breakdown Spectroscopy, Pharmaceutical Spam

**Gartin, Meredith** School of Public Health  
Department of Health Policy and Organization, Assistant Professor, 2019, Ph.D. (Arizona State), Global health, globalization and health, climate change and health, cross-cultural health research

**Gawne, Timothy J.** School of Optometry  
Department of Vision Sciences, Professor (Vision Sciences), 1996, B.S. (MIT), Ph.D. (USUHS), Information processing in the cerebral cortex, Gamma-band brain activity and neurotransmitter metabolism in schizophrenia, Visual cortical evoked potential

**Genau, Amber L.** School of Engineering  
Department of Materials Science and Engineering, Assistant Professor of Materials Science and Engineering, 2010, B.S., M.S. (Iowa State); Ph.D. (Northwestern), Metal solidification and microstructure formation, Quantitative analysis of complex three-dimensional structures, Ternary eutectic microstructures

**Geng, Baocheng** College of Arts and Sciences  
Department of Computer Science, Assistant Professor of Computer Science, 2011, B.S. (Shanghai Jiao Tong University), 2021, Ph.D. (Syracuse University)

**George, Remo** School of Health Professions  
Department of Clinical and Diagnostic Sciences, Assistant Professor, 2008, Ph.D. (UAB), Using Molecular Beacons for Detection and Attenuation of Mycobacteria

**Gere, Rich** College of Arts and Sciences  
Department of Art Art History, Professor of Art, Chair Department of Art Art History, 2019, B.F.A. (University of Massachusetts), M.F.A. (University of Tennessee), Print Media

**Ghanta, Vithal K.** College of Arts and Sciences  
Department of Biology, Professor of Biology, 1971, B.S. (G.C.W. College), M.S. (Banaras Hinda), Ph.D. (Southern Illinois), Cancer Immunology, Immunology, and Biology of Aging

- Gilchrist, Roger L.** College of Arts and Sciences  
Department of Biology, Assistant Professor of Biology, 1999, B.S., M.S., Ph.D. (Wyoming), Human Anatomy and Physiology
- Gilmer, Dianne** School of Engineering  
Department of Civil, Construction, and Environmental Engineering, Instructor of Civil, Construction, and Environmental Engineering; Co-Founder and Assistant Director of Online Civil Engineering Construction Management Master's Program, 2009, B.S. (Samford), MEng-CEM (UAB), Engineering Online Education, Learning Management System Applications, Student Retention in Online Learning Programs
- Gilray, Thomas** College of Arts and Sciences  
Department of Computer Science, Assistant Professor of Computer Science, 2018, B.S. (Oregon), M.S., Ph.D. (Utah)
- Giordano-Mooga, Samantha** School of Health Professions  
Department of Clinical and Diagnostic Sciences, Assistant Professor, 2017, PhD (UAB)
- Gladysz, Gary** School of Engineering  
Department of Materials Science and Engineering, Adjunct Associate Professor of Materials Science and Engineering, 2017, B.E. (Youngstown State University), M.S. (Ohio University), Ph.D. (New Mexico Institute of Mining and Technology), Materials Science and Engineering, Chemical Engineering; Syntactic Foams
- Goh, Samuel H.** School of Business  
Department of Management, Information Systems and Quantitative Methods, Associate Professor of Information Systems, 2018, B.S., M.B.A. (University of Chattanooga), Ph.D (Florida State University)
- Goldman, Jay** School of Engineering  
Department of Civil, Construction, and Environmental Engineering, Distinguished Service Professor Dean Emeritus, 2017, Ph.D. (Washington University in St. Louis)
- Golightly, Beverly** School of Health Professions  
Department of Health Informatics, M.S.H.A., Credit Course Instructor (Health Services Administration)
- Goodin, Burel** College of Arts and Sciences  
Department of Psychology, Associate Professor of Psychology, 2012, B.S. (Illinois College), M.A. (Boston University of Medicine), M.A., Ph.D (Maryland, Baltimore)
- Gorman, C. Allen** School of Business  
Department of Management, Information Systems, and Quantitative Methods, Associate Professor of Management, 2021, .A. (University of Georgia), M.A. (University of Nebraska at Omaha), Ph.D. (University of Tennessee)
- Grant, Merida** School of Engineering  
Department of Biomedical Engineering, Associate Professor (Psychiatry and Behavioral Neurobiology), Neurobiology of stress as a risk factor for onset and maintenance of unipolar depression; Imaging alterations in brain morphology, physiology and connectivity associated with early life stress in adults; Peripheral physiology and conditioning paradigms
- Graveline, Jeffrey D.** Mervyn H. Sterne Library  
Mervyn H. Sterne Library, Associate Librarian, Reference Services, Mervyn H. Sterne Library, 2006, B.A. (Virginia Tech), M.L.I.S., J.D. (Alabama)
- Gray, Rosianna R.** College of Arts and Sciences  
Department of Biology, Assistant Professor, 2017, B.S. (Stillman College), M.S., Ph.D. (UA), General Biology Microbiology, STEM Education, and Metacognition
- Green, David G.** School of Engineering  
Department of Electrical and Computer Engineering, Instructional Professor Emeritus of Electrical and Computer Engineering, 1981, B.S.E., M.S.E (UAH), Collaborative Systems, Internet Applications, and Engineering Education
- Greenstein, Claire,** College of Arts and Sciences  
Department of Political Science and Public Administration, Assistant Professor,, 2020,, B.A. (Furman), M.A., Ph.D. (North Carolina)
- Griffin, John A.** School of Engineering  
Department of Materials Science and Engineering, Research Assistant Professor of Materials Science and Engineering, 2011, B.S.Mt.E, M.S.Mt.E. (UAB), Metals Casting, Testing and Characterization, Nondestructive Evaluation
- Griffin, O. Hayden** College of Arts and Sciences  
Department of Criminal Justice, Associate Professor and Director, Master of Science in Criminal Justice Program, 2013, J.D. (Richmond), Ph.D. (Florida), Corrections, Policy, Drugs and Society, Law and Society
- Griffith, Donna Herrin** School of Health Professions  
Department of Health Services Administration, Executive in Residence, 2014, MSN
- Grimes, Gary J.** School of Health Professions  
Department of Health Informatics, Ph.D., Professor (Electrical and Computer Engineering)
- Grimes, L. Kyle** College of Arts and Sciences  
Department of English, Professor of English, 1990, B.A. (Dartmouth), M.A., Ph.D. (Illinois)
- Grostick, Sara S.** School of Health Professions  
Department of Health Informatics, M.A., Associate Professor (Health Services Administration)
- Grusenmeyer, Patrick A.** School of Health Professions

Department of Health Services Administration, Associate Professor and Director, Center for Healthcare Management, 2017, ScD Public Health (Tulane University)

**Grytz, Rafael** School of Engineering  
Department of Biomedical Engineering, Associate Professor (Ophthalmology), M.S.(Ruhr University Bochum, Germany), Ph.D., Ocular biomechanics and mechanobiology with emphasis on multi-scale approaches

**Guest, Kristi C.** College of Arts and Sciences  
Department of Psychology, Associate Professor of Psychology, 2003, B.S., M.A., Ph.D. (UAB)

**Gunnels, Ken** School of Business  
Department of Management, Information Systems, and Quantitative Methods, Instructor of Information Systems, 2011, B.S. (UAB); M.B.A. (Samford); M.S., MIS, Ph.D. (Alabama)

**Gunther-Canada, Wendy A.** College of Arts and Sciences  
Department of Political Science and Public Administration, Professor Emerit, 1992, B.A. (Utah), M.A., Ph.D. (Rutgers)

**Gurley, Dennis Keith** School of Education  
Department of Human Studies, Associate Professor of Educational Leadership, 2012, B.A. (Trinity), M.Ed., Ed.D. (Wichita State), Pre-Service and In-Service Development for School Leaders, Professional Learning Communities, and Organizational Theory

**Guthrie, James Ronald** College of Arts and Sciences  
Department of English, Instructor of English, 2014, B.A., M.A. (UAB), Composition, Developmental Writing, Literature

**Hadley, Mark** School of Business  
Department of Marketing, Industrial Distribution, Economics, Professor of Surgery; Professor of Marketing and Industrial Distribution; Spinal Surgery and Medical Equipment and Supplies Distribution, 2008, B.A. (Stanford University), M.D. (Albany Medical College)

**Haider, Mohammad** School of Engineering  
Department of Electrical and Computer Engineering, Associate Professor of Electrical and Computer Engineering, 2011, Ph.D. (Tennessee-Knoxville), Low-power Sensor Electronics, Wireless Telemetry, and Wireless Power Transfer

**Hall, Cheryl D.** College of Arts and Sciences  
Department of Theatre, Assistant Professor of Theatre, 1989, B.A. (Southern Illinois), M.F.A. (Arizona)

**Hall, Sean** School of Education  
Department of Human Studies, Assistant Professor of Counselor Education, 2012, B.A., M.A. (Florida Gulf Coast), Ph.D. (Old Dominion), Counselor Education, Clinical Mental Health Counseling, Assessment and Intervention Techniques, Processes and Outcomes Research, Dropout Prevention

**Hamilton, Tracy P.** College of Arts and Sciences  
Department of Chemistry, Associate Professor of Chemistry, 1991, B.S., M.S., Ph.D. (Arkansas)

**Hammack, Glenn G.** School of Health Professions  
Department of Health Informatics, O.D., M.S.H.I., Assistant Professor (Health Services Administration)

**Hamrick, Jennifer** School of Business  
Department of Accounting and Finance, Assistant Professor of Accounting, 2019, BS (Birmingham-Southern College), MAc (Auburn), PhD (Kennesaw State University)

**Hansen, John** School of Business  
Department of Marketing, Industrial Distribution, Economics, Professor of Marketing, 2009, B.S., M.B.A. (Troy), Ph.D. (University of Alabama)

**Haque, Sejuty** School of Engineering  
Department of Materials Science and Engineering, Adjunct Associate Professor of Materials Science and Engineering, 2017, BDS (University of Dhaka, Bangladesh), Ph.D. (Hokkaido University, Japan), Materials Science and Engineering, Dental Materials

**Hardin, J. Michael** School of Health Professions  
Department of Health Informatics, Ph.D., Credit Course Instructor (Health Services Administration)

**Harper, Doreen** School of Nursing  
Professor and Dean of Nursing, 2005, B.S.N. (Cornell), M.S.N. (Catholic), Ph.D. (Maryland)

**Harris, Linda S.** Mervyn H. Sterne Library  
Mervyn H. Sterne Library, Associate Librarian: Head, Reference Services, Mervyn H. Sterne Library, 1984, B.A. (Stillman), M.S.L.S. (Atlanta)

**Harris, Melissa L.** College of Arts and Sciences  
Department of Biology, Assistant Professor of Biology, 2016, B.S., Ph.D. (UC Davis), Somatic Stem Cells, Aging, Genetics and Genomics, Pigmentation Biology

**Hasan, Ragib** College of Arts and Sciences  
Department of Computer Science, Associate Professor of Computer Science, 2018, B.S. (Dhaka, Bangladesh), M.S., Ph.D. (Illinois Urbana-Champaign)

**Hawkins, Richard B.** School Engineering  
Department of Civil, Construction, and Environmental Engineering, Instructor of Civil, Construction, and Environmental Engineering, 2017, B.S.Ch. (Montevallo), MEng-CEM (UAB), Environmental Engineering, Structural Testing, Construction Management

**Hearld, Kristine Ria** School of Health Professions

Department of Health Services Administration, Associate Professor and Program Director, Doctoral Program in Administration Health-Health Services, 2013, PhD (University of Pennsylvania)

**Hemrick, James** School of Engineering  
Department of Materials Science and Engineering, Adjunct Assistant Professor of Materials Science and Engineering, 2017, B.S. (University of Missouri-Rolla), M.S. (Georgia Institute of Technology), Ph.D. (University of Missouri-Rolla), Ceramic Engineering, Materials Science and Engineering

**Hendricks, Peter** School of Public Health  
Department of Health Behavior, Professor, 2010, Ph.D. (South Florida), Tobacco use initiation, maintenance, and relapse, with a goal of developing novel and potentially more efficacious interventions for intractable smoking behavior

**Henrich, Christopher C** College of Arts and Sciences  
Department of Psychology, Professor of Psychology and Chair of Psychology, 2021, B.A. (Chicago), Ph.D. (Yale)

**Hernandez, S. Robert** School of Health Professions  
Department of Health Services Administration, Distinguished Service Professor, Program Director, Doctoral Program in Healthcare Leadership, 1972, DrPH (UNC - Chapel Hill)

**Herzig, Terrell W.** School of Health Professions  
Department of Health Informatics, M.S.H.I., Credit Course Instructor (Health Services Administration)

**Hettich, Dana L.** Mervyn H. Sterne Library  
Mervyn H. Sterne Library, Senior Assistant Librarian, Reference Services, Mervyn H. Sterne Library, 2008, B.A., M.A., M.L.I.S. (Alabama)

**Hicks, Joan C.** School of Health Professions  
Department of Health Informatics, M.S.H.I., Assistant Professor (Health Services Administration)

**Hill, Kelly L.** School of Education  
Department of Curriculum and Instruction, Associate Professor of Early Childhood Education and English as a Second Language, 2015, B.S., M.A., Ed.S., Ph.D. (UAB)

**Hilton, David** College of Arts and Sciences  
Department of Physics, Adjunct Professor of Physics, 2007, B.S., M.S. (Rochester), M.S., Ph.D. (Cornell), Ultrafast spectroscopy and ultrashort pulse generations; ultrafast terahertz spectroscopy; correlated electron materials; superconductivity; high-magnetic field spectroscopy; magnetic semiconductors; complex functional nanomaterials; materials in extreme environments

**Hitchcock, Laurel** College of Arts and Sciences

Department of Social Work, Associate Professor and Director of BSW Program, 2013, B.A. (Wisconsin-Madison), M.P.H. (UAB), M.S.W., Ph.D. (Alabama)

**Hogewood, Connie M.** School of Nursing  
Instructor of Nursing, 2014, B.G.S., B.S.N., M.S.N. (Samford)

**Holloway, Stacey** College of Arts and Sciences

Department of Art Art History, Associate Professor of Art, 2009, B.F.A (Purdue), M.F.A. (Minnesota-Twin Cities), Sculpture, Ceramics, Engineering

**Holman, William L.,** School of Engineering  
Department of Biomedical Engineering, Professor of Cardiothoracic Surgery, 1988, BA (Williams College), MD (Cornell University Medical College), Management of advanced heart failure; Mechanical circulatory support devices.

**Holmes, Jeffrey W** School of Engineering  
Department of Biomedical Engineering, Dean of Engineering, Goodrich Endowed Chair in Cardiovascular Surgery. Professor of Biomedical Engineering, Cardiovascular Disease, Cardiothoracic Surgery,, 2020, BS (Johns Hopkins), PhD/MD (UC-San Diego). C, Cardiac mechanics; Model-based design of therapies for heart disease; Multi-scale computational modeling of heart mechanics and remodeling; Structure and mechanics of healing myocardial infarcts; Cardiac hypertrophy and remodeling; Scar formation, extracellular matrix turnover, and fibrosis.

**Hood, Anthony** School of Business  
Department of Management, Information Systems, and Quantitative Methods, Associate Professor, 2011, B.S. M.B.A. (UAB), Ph.D. (University of Alabama)

**Hope, Sandrine,** College of Arts and Sciences  
Department of World Languages and Literatures, Visiting Assistant Professor of French, 2018, B.A., M.A., Ph.D. (Alabama)

**Hopkins, Maria** College of Arts and Sciences  
Department of Psychology, Professor of Psychology, Director, Undergraduate Studies of Psychology, 2007, B.S., M.A., Ph.D. (UAB)

**Hosch, Ian E.** School of Engineering  
Department of Civil, Construction, and Environmental Engineering, Assistant Professor of Civil, Construction and Environmental Engineering, 2012, B.S.C.E., M.S.C.E, Ph.D. (UAB), Structural Engineering, Engineering Mechanics, Geotechnical Engineering

**Houser, Shannon** School of Health Professions  
Department of Health Services Administration, Professor, 2004, Ph.D. (UAB)

**Houston, Caleb** School of Business  
Department of Accounting and Finance, Assistant Professor of Finance, 2020, BS, MBA (Mississippi College), PhD (Mississippi State University)

**Howard, Jack Lee** School of Business  
Department of Management, Information Systems, and Quantitative Methods, Professor of Management, Interim Chair, 2009, B.S., A.M., Ph.D. (University of Illinois at Urbana-Champaign)

**Hsu, Shih-Min** School of Engineering  
Department of Electrical and Computer Engineering, Instructor of Electrical and Computer Engineering, 2020, BS (National Taiwan University of Science and Technology), MS, PhD (LSU), ). Power systems; Machinery; Dynamic stability; Model validation.

**Huang, Xuan** School of Business  
Department of Management, Information Systems, and Quantitative Methods, Associate Professor of Quantitative Methods, 2010, B.E. (Tsinghua University, Beijing), M.Sc., Ph.D. (Massachusetts, Amherst)

**Hurst-Wajszczuk, Kristine** College of Arts and Sciences  
Department of Music, Professor of Music, 2007, B.M., M.M. (Westminster Choir-Rider), D.M.A. (Colorado-Boulder)

**Hutchings, William (Bill)** College of Arts and Sciences  
Department of English, Professor of English Emeritus, 1981, A.B. (Transylvania), M.A., Ph.D. (Kentucky), Modern British Fiction, Modern Drama, World Literature

**Hutchison, Jeanne S.** College of Arts and Sciences  
Department of Mathematics, Assistant Professor of Mathematics, 1970, B.S. (Creighton), M.A., Ph.D. (California-Los Angeles)

**Hutson, Susan Perkins** School of Health Professions  
Department of Clinical and Diagnostic Sciences, Associate Professor Emeritus, Respiratory Therapy Program, 1976, M.A.E. (UAB)

**Hyde, Michael T.** School of Nursing  
Instructor of Nursing, 2012, B.S.N., M.S.N. (Alabama)

**Irving, Howard L.** College of Arts and Sciences  
Department of Music, Professor of Music, 1981, B.Mus. (Centenary), M.M., Ph.D. (Louisiana State)

**Jack, Ave** School of Business  
Department of Accounting and Finance, Instructor, 2011, BIE (Georgia Institute of Technology), MS (Boston University), MAEd (UAB)

**Jack, Eric** School of Business  
Department of Management, Information Systems, and Quantitative Methods, Professor of Management; Dean, Faculty Development and Research, 2001, B.S. (Georgia Institute of Technology), M.B.A. (Wright State), Ph.D. (Cincinnati)

**Jackson, Reginald** College of Arts and Sciences  
Department of Music, Assistant Professor of Music, 2018, B.S. (Alabama), M.M. (Northwestern), Ph.D. (Florida State)

**Jamison, DeReef** College of Arts and Sciences  
Department of African American Studies, Associate Professor, African American Studies, 2007, B.S. (Bowie State), M.S. (Florida AM), Ph.D. (Temple), Black Psychology, Africana Intellectual History, Psychology of Hip Hop, Honors African American Studies

**Jannett, Thomas C.** School of Engineering  
Department of Electrical and Computer Engineering, Professor Emeritus of Electrical and Computer Engineering, 1984, B.S.E., M.S.E. (UAB), Ph.D. (Auburn), Sensor Networks, Biomedical Instrumentation and Control Systems

**Janowski, Gregg M.** School of Engineering  
Department of Materials Science and Engineering, Professor of Materials Science and Engineering; Associate Provost for Assessment and Accreditation, 1990, B.S., M.S., Ph.D. (Michigan Technological), X-Ray Diffraction, Composite Materials, Physical Metallurgy, Structure-Processing-Property Relationships

**Javed, Amjad** College of Joint Health Sciences  
Department of Biochemistry and Molecular Genetics, Associate Dean and Professor of Oral and Maxillofacial Surgery (School of Dentistry), 2005, Ph.D. (University of Punjab, UMass Medical School), Genetic and molecular signaling for cellular differentiation and skeletogenesis

**Jaworski, Emily** College of Arts and Sciences  
Department of Music, Assistant Professor of Music, 2018, B.S. (Susquehanna), M.M., D.M.A. (Boston University)

**Jepkembai, Grace** School of Education  
Department of Curriculum and Instruction, Assistant Professor of Early Childhood and Elementary Education, 2008, B.Ed. (Egerton University, Kenya), M.A. (Moi University, Kenya), Ph.D. (UAB)

**Jessee, Margaret Jay** College of Arts and Sciences  
Department of English, Associate Professor of English and Director of Undergraduate Studies, 2013, B.A., M.A. (Tennessee), Ph.D. (Arizona), Gender Studies, Women's Literature, American Literature, Theory

**Johnstone, John K.** College of Arts and Sciences  
Department of Computer Science, Associate Professor of Computer Science; Associate Professor of Ophthalmology; Undergraduate Program Director of Computer Science and Bioinformatics, 1994, B.S. (Saskatchewan-Canada), M.S., Ph.D. (Cornell)

**Jololian, Leon** School of Engineering  
Department of Electrical and Computer Engineering, Associate Professor and Associate Chair of Electrical and Computer Engineering, 2017, Ph.D. (New Jersey Institute of Technology), Software Engineering, Internet of Things, Mobile and Cloud Computing, and Machine Learning

**Jones, Alison** School of Nursing  
Assistant Professor, 2015, B.S.N., M.S.N., Certificate, Ph.D. (Kentucky)

**Jones, Harold P.** School of Health Professions  
Professor and Dean, School of Health Professions, 2001, Ph.D. (Duke)

**Judson, Tonya** School of Nursing  
Instructor, 2017, B.S.N., M.S.N. (UAB)

**Julaka, Steven** School of Nursing  
Instructor of Nursing, 2021, B.A. (Montevallo), B.S.N., M.S.N. (UAB)

**Jun, Ho-Wook** School of Engineering  
Department of Biomedical Engineering, Professor of Biomedical Engineering, 2006, B.S., M.S. (Hanyang University, South Korea), Ph.D. (Rice), Biomimetic nanotechnology, Biomaterials, Tissue engineering

**Kain, Margaret M.** Mervyn H. Sterne Library  
Mervyn H. Sterne Library, Senior Assistant Librarian; Electronic Resources Librarian; Cataloging Collection Management, Mervyn H Sterne Library, 2006, B.S. (Auburn-Montgomery), M.L.S. (Alabama)

**Karpeshina, Yulia** College of Arts and Sciences  
Department of Mathematics, Professor of Mathematics, 1995, M.S., Ph.D. (Saint Petersburg, Russia), Partial Differential Equations and Mathematics Physics

**Kasman, Yakov** College of Arts and Sciences  
Department of Music, Distinguished Professor in Music; Artist in Residence, 2002, B.M. (Music College of Moscow Conservatory), M.M., D.M.A. (Moscow State Conservatory)

**Kawai, Ryoichi** College of Arts and Sciences  
Department of Physics, Associate Professor of Physics, 1991, B.S., M.S., Ph.D. (Waseda, Japan), Condensed-matter theory; biophysics theory; materials physics theory; computational physics; open quantum systems

**Keith, Verna M** College of Arts and Sciences  
Department of Sociology, Professor and Chair of Sociology, 2018, B.A. (Central Arkansas), M.A., Ph.D. (Kentucky)

**Keitt, Andrew W.** College of Arts and Sciences  
Department of History, Associate Professor of History, 1999, B.A. (Duke), M.A., Ph.D. (UC-Berkeley)

**Keltner, Joan** School of Nursing  
Professor of Nursing, 1980, A.S. (Columbia State Community College), B.S.N. (UNA), M.S.N., D.N.P. (UAB)

**Kemp, Dustin W.** College of Arts and Sciences  
Department of Biology, Assistant Professor of Biology, 2016, B.S. (Texas AM); M.S. (Florida Atlantic); Ph.D. (Georgia), Marine Ecology and Physiology, Global Climate Change

**Kennedy, Bridgett H.** College of Arts and Sciences  
Department of Psychology, Associate Professor of Psychology, Director of Online Psychology, 2013, B.A., M.A., Ph.D. (UAB)

**Kennedy, Karen** School of Business  
Department of Marketing, Industrial Distribution, Economics, Professor of Marketing and Industrial Distribution; Senior Associate Dean, Programs and Outreach, 2001, B.S. (Blue Mountain), M.S. (Florida State University), M.B.A. (Georgia State University), Ph.D. (South Florida University)

**Keyser, Kent T.** School of Optometry  
Department of Vision Sciences, Professor (Vision Sciences), 1996, Ph.D. (State University of NY-Stony Brook), Neurotransmitters and receptors

**Kharlampieva, Eugenia** College of Arts and Sciences  
Department of Chemistry, Associate Professor of Chemistry, 2010, B.S. (Chelyabinsk State, Russia), Ph.D. (Stevens Institute of Technology)

**Kilgo, Jennifer L.** School of Education  
Department of Curriculum and Instruction, Professor of Special Education, 1995, B.A. (Auburn), M.A. (UAB), Ed.D. (Alabama)

**Kim, Harrison** School of Engineering  
Department of Biomedical Engineering, Associate Professor (Radiology), Ph.D., Breast, pancreatic, and brain cancer imaging

**King, Dione T. M.** College of Arts and Sciences  
Department of Social Work, Associate Professor, 2017, B.A. (Spelman), M.S.W., Ph.D. (Georgia)

**King, Jerry** School of Health Professions  
Department of Clinical and Diagnostic Sciences, Assistant Professor, Respiratory Therapy Program, 2008, M.S. (UAB)

**King, Matthew** College of Arts and Sciences  
Department of Philosophy, Associate Professor of Philosophy, 2014, B.A. (Virginia), M.A., Ph.D. (Maryland)

**Kiper, Jordan** College of Arts and Sciences  
Department of Anthropology, Assistant Professor of Anthropology, 2019, B.A. (Colorado University), M.A. (Colorado State University), M.A. (University of Connecticut), Ph.D. (University of Connecticut)

**Kirby, Jason** School of Engineering  
Department of Civil, Construction, and Environmental Engineering, Associate Professor of Civil, Construction and Environmental Engineering; Director, Sustainable Smart Cities Program, 2005, B.S. (Auburn), M.S., Ph.D. (Alabama), Environmental Engineering, Water Resources, Hydraulics

**Kittredge, Brian** College of Arts and Sciences

Department of Music, Associate Professor of Music; Director of Choral Activities, 2010, B.M. (Mansfield), M.M. (Eastman), D.M.A. (LSU)

**Knight, Candace** School of Nursing  
Assistant Professor of Nursing, 2012, B.S.N., Ph.D. (UAB)

**Knight, David C.** College of Arts and Sciences

Department of Psychology, Professor of Psychology; Director, Behavioral Neuroscience Doctoral Program, 2007, B.S. (Truman State), M.S., Ph.D. (Wisconsin-Milwaukee)

**Knowles, Ian W.** College of Arts and Sciences

Department of Mathematics, Professor of Mathematics, 1979, B.Sc. (Adelaide), M.Sc., Ph.D. (Flinders-South Australia), Ordinary and Partial Differential Equations, Numerical Analysis

**Koomullil, Roy P.** School of Engineering

Department of Mechanical Engineering, Associate Professor of Mechanical Engineering, 2002, B.S. (Mahatma Gandhi University, India), M.S. (Indian Institute of Technology, India), Ph.D. (Mississippi State), High Performance Computing; Six Degrees of Freedom Simulation; Bio-medical Flow Modeling

**Kornegay, Randall W.** School of Business  
Department of Management, Information Systems, and Quantitative Methods, Instructor of Business Communication, 2006, B.A., M.A. (UAB)

**Koskinen, Karla** College of Arts and Sciences

Department of Theatre, Professor of Theater, 2007, B.A. (Marquette), M.F.A. (Illinois State)

**Kravchuk, Elena** College of Arts and Sciences

Department of Mathematics, Instructor of Mathematics, 2002, M.S. (Donetsk State – Ukraine), Ph.D. (NASU, Donetsk – Ukraine)

**Krishnamurthy, Prasanna** School of Engineering

Department of Biomedical Engineering, Associate Professor of Biomedical Engineering, BVSc, Ph.D. (Bangalore Veterinary College), MVSc (Indian Veterinary Research Institute), Cardiovascular pathophysiology, Stem cell biology, Cardiovascular regeneration and therapeutics, Wound healing, Diabetes

**Krueger-Hadfield, Stacy A.** College of Arts and Sciences

Department of Biology, Assistant Professor of Biology, 2016, B.S., M.S. (California State - Northridge); Ph.D. (Université de Pierre et Marie Curie Sorbonne ), Ph.D. (Pontificia Universidad Católica de Chile), Evolutionary Ecology, Phycology

**Kumar, Sidharth** College of Arts and Sciences

Department of Computer Science, Assistant Professor of Computer Science, 2018, BTech (Dhirubhai Ambani ICT, India), Ph.D. (Utah)

**Kyle, Chris** College of Arts and Sciences

Department of Anthropology, Associate Professor and Interim Chair of Anthropology, 2000, B.A. (Ft. Lewis College), M.A., M.Phil., Ph.D. (Columbia)

**LaChenaye, Jenna** School of Education

Department of Human Studies, Assistant Professor of Educational Psychology and Research, 2014, B.A., B.S., (University of Louisiana), M.S. (Florida State), Ed.S., Ph.D. (Louisiana State), , Place-based, cultural and ecological sustainability and education, neocolonial and poststructuralist theory in education, ethnographic methods in research and evaluation

**Lahti, Adrienne** College of Joint Health Sciences

Department of Biochemistry and Molecular Genetics, Professor; Psych – Behavioral Neurobiology, 2006, M.D. (University of Liege, Belgium), Use of multimodal brain imaging techniques to study the neuropathology of schizophrenia and bipolar disorder and to evaluate the effects of psychotropic drugs on brain function and biochemistry; translational work aiming at bridging human brain imaging and postmortem studies

**Laken, Debra E.** School of Health Professions

Department of Clinical and Diagnostic Sciences, Associate Professor, Respiratory Therapy Program, 1999, M.A.E. (UAB)

**Lancaster, Winston C.** College of Arts and Sciences

Department of Biology, Associate Professor of Biology, 2014, B.S. (Auburn); M.S. (LSU), Ph.D. (North Carolina), Human Anatomy, Comparative Anatomy, Biosonar in Bats and Whales

**Lanzi, Robin Gaines** School of Public Health

Department of Health Behavior, Professor, 2009, M.P.H., Ph.D. (UAB), Reducing family and child health disparities, mental health promotion, positive youth development, HIV/STI prevention and care, Community Engaged Research, and Implementation Science

**Lariscy, Nichole** College of Arts and Sciences

Department of English, Associate Professor of English, 2005, B.A. (Georgia College and State University), M.A. (Northwestern), Ph.D. (Wisconsin-Milwaukee), American Literature, Composition,, Gender Studies

**Latimer, Mary** School of Nursing  
Assistant Professor of Nursing, 2021, B.S. (Georgia), M.S. (Towson), Ph.D. (UAB)

**Lawong, Diane A.** School of Business

Department of Management, Information Systems, and Quantitative Methods, Assistant Professor, 2020, BS, MLRHR, PhD (Florida State University)

**Lawson, Christopher M.** College of Arts and Sciences

Department of Physics, Professor of Physics, 1993, B.S. (Oklahoma State), M.S. (Colorado), Ph.D. (Oklahoma State), Nonlinear optics; fiber optics; optical sensors; optical coherence imaging tomography; laser spectroscopy

**Layton, Shannon** School of Nursing  
Assistant Professor of Nursing, 2010, B.A. (West Georgia); M.S.N. (UAB)

**Leban, Lindsay** College of Arts and Sciences

Department of Criminal Justice, Professor, 2018, B.A. (Florida Gulf Coast), M.A., Ph.D. (Florida), Drugs, Neighborhood Collective Efficacy, Gender

**Ledlow, Jennifer** School of Nursing  
Instructor of Nursing, 2018, B.S.N., M.S.N. (UAB)

**Lee, Heather J.** School of Health Professions  
Department of Health Services Administration, Instructor, 2020, M.P.H. (UAB), Vulnerable populations, public health practice, maternal and child health, population health simulation, health care

**Lee, Hui-Ting** College of Arts and Sciences  
Department of Chemistry, Assistant Professor, 2019, BS (National Dong Hwa Univ, Taiwan), PhD (Univ Nebraska Medical Center)

**Lee, Yookyong** College of Arts and Sciences  
Department of Social Work, Associate Professor, 2013, B.A., M.S.W. (Michigan), M.A., Ph.D. (Columbia)

**Leece, Ryan** School of Business  
Department of Accounting and Finance, Associate Professor of Accounting, 2014, BS (University of Minnesota); MA (University of North Carolina), PhD (Virginia Tech)

**Levine, Timothy R.** College of Arts and Sciences  
Department of Communication Studies, Distinguished Professor and Chair, 2015, B.A. (Northern Arizona); M.A. (West Virginia); Ph.D. (Michigan State)

**Levitan, Emily B.** School of Public Health  
Department of Epidemiology, Professor, 2009, Sc.D. (Harvard), Comparative Effectiveness Research, Cardiovascular Epidemiology, Epidemiologic Methods

**Lewis, Angela K.** College of Arts and Sciences  
Department of Political Science and Public Administration, Professor, 2003, B.A. (Alabama), M.P.A., Ph.D., (Tennessee)

**Lewis, Roger T.** College of Arts and Sciences  
Department of Mathematics, Professor Emeritus of Mathematics, 1975, A.B. (Tennessee), M.S. (Florida Institute of Technology), Ph.D. (Tennessee), Differential Equations, Spectral Theory

**Li, JunFang** College of Arts and Sciences  
Department of Mathematics, Associate Professor of Mathematics, 2008, B.A. (Wuhan Univ., China), Ph.D. (Oklahoma), Geometric Analysis and Non-linear Partial Differential Equations

**Li, Wei** School of Health Professions  
Department of Clinical and Diagnostic Sciences, Associate Professor, 2017, Ph.D. (Southern Illinois University, Carbondale)

**Lightner, Roy** College of Arts and Sciences  
Department of Theatre, Assistant Professor, 2017, B.A. (Oklahoma City), M.F.A. (Goddard)

**Lim, Hyeyoung** College of Arts and Sciences  
Department of Criminal Justice, Associate Professor, 2013, Ph.D. (Sam Houston State), Police Use of Force, Police Decision Making, Quantitative Methods, Program and Policy Evaluation

**Lingasubramanian, Karthikeyan** School of Engineering  
Department of Electrical and Computer Engineering, Assistant Professor of Electrical and Computer Engineering, 2011, Ph.D. (South Florida), Hardware Security, Reliability and Low Power Design for Digital VLSI Circuits and Systems

**Linville, Jason G.** College of Arts and Sciences  
Department of Criminal Justice, Teaching Assistant Professor, 2004, B.S. (Ohio), M.S., Ph.D. (UAB), Forensic Biology, Entomology, Forensic Science Education

**Littlefield, David L.** School of Engineering  
Department of Mechanical Engineering, Professor of Mechanical Engineering; Chair of Mechanical Engineering, 2005, B.S., M.S, Ph.D. (Georgia Tech), Computational Mechanics; Impact Mechanics and Shock Physics; Weapons Effects

**Littleton, Caroline** School of Nursing  
Instructor of Nursing, 2021, B.S.N., M.S.N. (UAB)

**Liu, Xiaoguang (Margaret)** School of Engineering  
Department of Biomedical Engineering, Associate Professor of Biomedical Engineering, 2016, Chemical Engineering (Shangdong University, M.S. in Biochemical Engineering (Tianjin University)), Ph.D. in Chemical and Biomolecular Engineering (The Ohio State University), Cellular therapy, antibody, anti-cancer, heart failure treatment, industrial biopharmaceutical and biotechnology, metabolic cell-process engineering, bioreactor, cell culture

**Loder-Jackson, Tondra** School of Education  
Department of Human Studies, Professor of Foundations of Education, 2003, B.S. (Birmingham-Southern), M.P.P. (Chicago), Ph.D. (Northwestern), Urban Education, African, American Educational History, Civil Rights and Education, Life Course and Life History Approaches

**Long, Jennifer M.** Mervyn H. Sterne Library  
Mervyn H. Sterne Library, Senior Assistant Librarian, Reference Services, Mervyn H. Sterne Library, 1997, B. S. (Bowling Green), M.L.S. (Kent State)

**Love, April** School of Nursing  
Instructor of Nursing, 2017, B.S.N., M.S.N. (UAB)

**Loyd, Christine** School of Health Professions  
Department of Clinical and Diagnostic Sciences, Assistant Professor, 2019, PhD (University of Cincinnati)

**Lucius, Aaron L.** College of Arts and Sciences  
Department of Chemistry, Professor of Chemistry, 2006, B.S. (Oregon State), Ph.D. (Washington U.)

**Lungu, Anca** College of Arts and Sciences  
Department of Physics, Instructor of Physics, 2014, B.S., M.S. (University of Bucharest), Ph.D. (South Carolina), Physics education research, eLearning applied to physics education, development of new online courses and laboratories

**Ma, Ling** College of Arts and Sciences  
Department of World Languages and Literatures, Instructor of Chinese, 2013, B.A. (Jinan University, China), B.S. (UAB), Chinese Language Training Program (Troy; Sun Yat-sen University, China) M.Ed., (UAB)

**Madden-Lunsford, Kerry** College of Arts and Sciences  
Department of English, Associate Professor of English; Director of Creative Writing, 2009, B.A., M.F.A. (Tennessee), Creative Writing

**Maddox, John** College of Arts and Sciences  
Department of World Languages and Literatures, Associate Professor of Foreign Languages, 2014, B.A., B.S.Ed., M.A. (Georgia), Ph.D. (Vanderbilt)

**Mahapatra, Majoj K.** School of Engineering  
Department of Materials Science and Engineering, Assistant Professor of Materials Science Engineering, 2015, BTech (University of Calcutta - India), MTech (IT-BHU - India), Ph.D. (Virginia Tech), Ceramics and glasses for advanced energy systems, Structural ceramics, Solid waste immobilization, Chemistry-processing-structure-property relationship, Electrochemistry, Materials degradation

**Major, Melba** College of Arts and Sciences  
Department of English, Assistant Professor of English, 2014, B.A. (Union), M.A. (UAB), M.F.A. (Antioch), Composition, Developmental Writing, Literature

**Malone, Meagan E** College of Arts and Sciences  
Department of English, Assistant Professor of English, 2021, B.A. (Millsaps), M.A. (UNC Greensboro), M.A., Ph.D. (Georgia State), Professional Writing, Digital Rhetoric, Composition

**March, Joe L.** College of Arts and Sciences

Department of Chemistry, Professor of Chemistry; Associate Director, Science and Technology Honors Program, 1999, B.S., M.S. (Southwestern Texas), Ph.D. (Texas)

**Marion, Ken R.** College of Arts and Sciences  
Department of Biology, Professor Emeritus of Biology, 1971, B.A., Ph.D. (Washington, St. Louis), Animal Natural History and Aquatic Environmental Biology

**Marstrander, Jon** School of Engineering  
Department of Electrical and Computer Engineering, Instructor of Electrical and Computer Engineering, 2005, B.S.E.E., M.S.E.E. (UAB), P.E. (Alabama), Signal and Image Processing, Embedded Systems, and Field Programmable Gate Arrays

**Martin, Heather** Mervyn H. Sterne Library  
Mervyn H. Sterne Library, Associate Librarian, Reference Services, Mervyn H. Sterne Library, 1998, B.A. (Furman), M.A., M.L.I.S. (South Carolina)

**Martin, James C.** College of Arts and Sciences  
Department of Physics, Professor Emeritus of Physics, 1980, B.S. (Florida State), Ph.D. (Georgia Tech), Physics and science Education

**Martyshkin, Dmitri V.** College of Arts and Sciences  
Department of Physics, Research Assistant Professor, 2010, B.S. (Novosibirsk State University, Russia), M.S., Ph.D. (UAB), Development of spectroscopic characterization of doped laser materials; solid-state lasers; laser spectroscopy for molecular-sensing applications

**May, Josh** College of Arts and Sciences  
Department of Philosophy, Associate Professor of Philosophy, 2013, B.A. (California State Sacramento), Ph.D. (University of California-Santa Barbara)

**Mayer, John C.** College of Arts and Sciences  
Department of Mathematics, Professor of Mathematics; Associate Chair, Department of Mathematics, 1984, B.A. (Randolph-Macon), M.A., Ph.D. (Florida), Topology, Continuum Theory, Dynamical Systems, Mathematics Education

**Mayfield, Brenda** School of Nursing  
Instructor, 2019, B.S.N. (Colorado State), M.S.N. (UAB)

**Mayoral-Hernández, Roberto** College of Arts and Sciences  
Department of World Languages and Literatures, Associate Professor of Spanish, 2008, Licenciatura (Universidad Complutense de Madrid), Diploma de Estudios Avanzados (Universidad Autónoma de Madrid), Ph.D. (Southern California)

**McCain, Kevin** College of Arts and Sciences

Department of Philosophy, Professor of Philosophy, 2012, B.A. (Southeast Missouri State), M.A. (Missouri-Columbia), Ph.D. (Rochester)

**McCarthy, Shannon N.** School of Education  
Department of Human Studies, Assistant Professor of Counselor Education, 2014, B.A. (Pennsylvania State), M.A. (Central Florida), Ph.D. (Florida)

**McClintock, James B.** College of Arts and Sciences

Department of Biology, Endowed University Professor of Polar and Marine Biology, 1987, B.S. (California), M.S., Ph.D. (South Florida), Marine Invertebrate Chemical Ecology, Climate Change Biology

**McCormick, Lisa** School of Public Health  
Department of Health Policy and Organization, Professor and Associate Dean of Public Health, Dean's Office, 2010, Dr.PH. (UAB), Public health preparedness and response, the organization of response systems, and assessing interorganizational networks as a dimension of response capacity and community resiliency

**McCornack, Steven** College of Arts and Sciences  
Department of Communication Studies, Professor of Communication Studies, 2015, B.A. (Washington); A.M. (Illinois at Urbana-Champaign)

**McDaniel, David R.** School of Engineering  
Department of Mechanical Engineering, Research Associate Professor of Mechanical Engineering, 2008, B.S. (US Air Force Academy), M.S. (George Washington University), Ph.D. (Colorado, Colorado Springs), High Performance Computing; Computational Fluid Dynamics; Multidisciplinary Air Vehicle Simulation

**McGrath, Shelly A.** College of Arts and Sciences  
Department of Criminal Justice, Associate Professor, 2008, B.S. (St. Mary's), M.S. (Ball State), Ph.D. (Southern Illinois), Quantitative Methods, Crime Mapping, Violence

**McKenzie, Tim** School of Education  
Department of Curriculum Instruction, Master Teacher UABTeach, 2015, B.S., M.A. (UAB), Ed.S. (Montevallo)

**McKnight, Andrew** School of Education  
Department of Human Studies, Associate Professor of Foundations of Education, 2003, B.A. (Virginia Commonwealth), M.A.Ed. (William Mary), Ph.D. (North Carolina at Greensboro), Social/Cultural Theory, Diversity and Equity, Ethics, Current Educational Policy, and the Emotional Contexts of Schooling

**McLain, Rhonda** School of Nursing  
Assistant Professor of Nursing; Assistant Dean for Evaluation, 2005, B.S.N. (College of Mt. St. Joseph), M.N. (Emory), D.S.N. (UAB)

**McLernon, Dennis J.** College of Arts and Sciences  
Department of Theatre, Professor of Theatre, Head of Performance, 2000, B.A. (Allentown), M.Ed. (Auburn-Montgomery), M.F.A. (Alabama-Alabama Shakespeare Festival)

**Meadows, Benjamin** School of Business  
Department of Marketing, Industrial Distribution, Economics, Assistant Professor of Economics, 2020, B.S.(Samford University), Ph.D. (University of Tennessee)

**Meadows, Lee** School of Education  
Department of Curriculum and Instruction, Associate Professor of Secondary Education, 1993, B.A. (Mississippi), M.A. (Texas), Ph.D. (Georgia)

**Meakin, Robert** School of Engineering  
Department of Mechanical Engineering, Professor of Mechanical Engineering, 2007, B.S. (Brigham Young), M.S., Ph.D. (Stanford), Software Engineering for Multi-Disciplinary, Physics-Based Simulation Capability Development; Computational Geometry; Aerodynamics of Multiple-Bodies in Proximate Flight

**Meese, Katherine A.** School of Health Professions  
Department of Health Services Administration, Assistant Professor, 2020, PhD (UAB)

**Mehta, Tapan** School of Health Professions  
Department of Physical Therapy, Associate Professor and Director of Research, 2013, PhD (UAB)

**Melton, Latoya** College of Arts and Sciences  
Department of Social Work, Assistant Professor, 2018, B.A. (Stillman), M.S.W. (Alabama)

**Menasche, Phillippe** School of Engineering  
Department of Biomedical Engineering, Professor of Biomedical Engineering, 2019, M.D., Ph.D. (University of Paris), Stem-cell-derived extracellular vesicles for the treatment of heart failure

**Menear, Kristi S.** School of Education  
Department of Human Studies, Professor of Kinesiology, 2001, B.A. (Louisiana), M.A., Ph.D. (New Orleans), Adapted physical education/activity, wellness for individuals with disabilities

**Merritt, Stephen** College of Arts and Sciences  
Department of Anthropology, Associate Professor of Anthropology, 2013, B.S., M.A., Ph.D. (Rutgers)

**Mersmann, James** College of Arts and Sciences  
Department of English, Associate Professor of English. Emeritus, 1973, B.A. (Missouri-Kansas City), M.A., Ph.D. (Kansas)

**Messina, Frank M.** School of Business  
Department of Accounting and Finance, Alumni and Friends Professor of Accounting, 1993, B.S. (University of West Alabama), M.Acc., Ph.D. (Mississippi State University), C.P.A.

**Messina, Marena** School of Business  
Department of Accounting and Finance, Visiting Instructor of Accounting, 2020, BS (Alabama), MAc (UAB), Phd Candidate (Kennesaw State University)

**Metcalf, Sevante K.** School of Business  
Department of Accounting and Finance, Instructor of Finance, 2012, B.A., M.B.A. (UAB)

**Midyette, Paula** School of Nursing  
Instructor of Nursing, 2017, B.S.N., M.S.N. (UAB)

**Millard, Andre J.** College of Arts and Sciences  
Department of History, Professor of History, 1989, B.A. (Nottingham-England), M.A. (Mississippi), Ph.D. (Emory)

**Miller, Brianna** School of Health Professions  
Department of Clinical and Diagnostic Sciences, Assistant Professor, 2009, M.S. (UAB), Transfusion Medicine

**Miller, Gabe H.,** College of Arts and Sciences  
Department of Sociology, Assistant Professor of Sociology, 2022, B.A., M.A., Ph.D. (Texas AM).

**Miller, Kenneth** School of Business  
Department of Marketing, Industrial Distribution, Economics, Instructor of Marketing and Industrial Distribution; Executive, 2008, B.S. (Auburn University), M.B.A. (Golden Gate University), Ed.D. (Vanderbilt University))

**Miller, Stephen J.** College of Arts and Sciences  
Department of History, Professor of History, 2001, B.A. (Wisconsin-Madison), M.A., Ph.D. (UCLA)

**Milligan, Gary** School of Nursing  
Assistant Professor of Nursing; Mobility Program Coordinator, 2008, B.S.N. (Birmingham-Southern), M.S.N. (Jacksonville State), M.S.H.A., D.N.P. (UAB)

**Minnix, Christopher** College of Arts and Sciences  
Department of English, Associate Professor of English, 2012, B.S. (Grace College), M.A. (Radford), Ph.D. (Tennessee), Rhetorical Theory, Transnational Rhetoric, Compositions Studies, Writing Program Administration

**Mirbozorgi, S. Abdollah** School of Engineering  
Department of Electrical and Computer Engineering, Assistant Professor of Electrical and Computer Engineering, 2018, BS (Mazandaran University), MS (Ferdosi University of Mashhad), PhD (Laval University), Neural and bionic wearable and implantable devices; Integrated analog/mixed-signal circuits and microsystems; Wireless power/data transfer; Assistive technologies.

**Mirov, Sergey B.** College of Arts and Sciences

Department of Physics, University Professor, 1993, Master (Moscow Power Engineering Institute), Ph.D. (USSR Academy of Sciences), Experimental quantum electronics, solid-state lasers, laser spectroscopy

**Mitchell, Dana** School of Nursing  
Assistant Professor of Nursing, 2009, B.S.N. (Alabama), M.S.N., D.N.P. (UAB)

**Moak, Stacy,** College of Arts and Sciences  
Department of Political Science and Public Administration, Professor,, 2020,, B.S. (Southern Mississippi), J.D. (Loyola), Ph.D. (New Orleans)

**Mohammad Firouz** School of Business  
Department of Accounting and Finance, Assistant Professor of Management, 2019, B.S. (Sharif University of Technology, Iran), M.S. (University of Alabama, Tuscaloosa, AL), Ph.D. (University of Alabama, Tuscaloosa, AL)

**Moneyham, Linda** School of Nursing  
Professor of Nursing; Senior Associate Dean for Academic Affairs, 2007, B.S.N. (Berea College), M.S.N. (Kentucky), D.S.N. (Indiana)

**Moody, Myles** College of Arts and Sciences  
Department of Sociology, Assistant Professor of Sociology, 2020, B.A. (Morehouse), M.A. (Memphis), Ph.D. (Kentucky)

**Moore, John K.** College of Arts and Sciences  
Department of World Languages and Literatures, Professor of Spanish, 2003, B.A. (University of the South), M.A.T. (Middle Tennessee State), Ph.D. (North Carolina-Chapel Hill)

**Moore, Randy** School of Nursing  
Assistant Professor, B.S.N., M.S.N., D.N.P. (UAB)

**Moradi, Lee** School of Engineering  
Department of Mechanical Engineering, Professor of Mechanical Engineering; Director of Engineering and Innovative Technology Development, 1996, B.S., M.S., Ph.D. (UAB), Vibrations; Systems Engineering; Finite Elements Method

**Morantz, Cara** College of Arts and Sciences  
Department of Music, Associate Professor of Music, 2014, B.M. (Miami), M.M., Ed.D. (Georgia)

**Morgan, Kathryn** College of Arts and Sciences  
Department of Criminal Justice, Professor; Director of African American Studies, 1991, B.S., M.A. (Texas Woman's), Ph.D. (Florida State), Corrections, Criminological Theory, Minorities, Violence

**Morris, Cody** School of Education  
Department of Human Studies, Assistant Professor of Kinesiology, 2018, B.S. (Lipscomb University), M.S. (University of Mississippi), Ph.D., Exercise Physiology; Sport and Human Performance; Ergonomics; Musculoskeletal Injury Risk Reduction

- Morris, J. Jeffrey** College of Arts and Sciences  
Department of Biology, Associate Professor of Biology, 2015, B.S. (Kennesaw State); Ph.D. (Tennessee-Knoxville), Experimental Evolution, Microbial Ecology, and Marine Microbiology
- Morrison, Kelly** College of Arts and Sciences  
Department of Communication Studies, Professor of Communication Studies, 2015, B.A. (Illinois at Urbana-Champaign); M.A., Ph.D. (Michigan State)
- Morrison, Shannon** School of Nursing  
Associate Professor of Nursing, 2010, B.S.N., M.S.N. (Jacksonville State), Ph.D. (UAB)
- Moss, Jacqueline** School of Nursing  
Professor of Nursing; Chair, Associate Dean for Technology and Innovation, 2011, B.S.N., M.S.N (Georgia State), Ph.D. (Maryland)
- Mowling, Claire M.** School of Education  
Department of Human Studies, Assistant Professor of Kinesiology, 2015, B.S., M.S. (Troy State), Ed.D. (Auburn), Physical Education
- Mrug, Sylvie** College of Arts and Sciences  
Department of Psychology, University Professor, Professor of Psychology, 2005, M.A. (Charles), M.S., Ph.D. (Purdue)
- Mukhtar, Karolina M** College of Arts and Sciences  
Department of Biology, Associate Professor of Biology, 2010, M.S. (Stettin), Ph.D. (Cologne), Plant Molecular Biology, Plant Immune System
- Mukhtar, Shahid** College of Arts and Sciences  
Department of Biology, Associate Professor of Biology, 2010, B.Sc. (Hons.), M.Sc.(Hons.) (Faisalabad), Ph.D. (Cologne), Genetics, Molecular Biology, Functional Genomics, and Bioinformatics, and Network Biology
- Mumford, Gregory** College of Arts and Sciences  
Department of Anthropology, Associate Professor of Anthropology, 2007, B.S., M.A., Ph.D. (Toronto)
- Munchus III, George M.** School of Business  
Department of Management, Information Systems, and Quantitative Methods, Professor of Management, 1976, B.S., M.B.A., Ph.D. (North Texas State), A.P.S.
- Murphree, Allen J.** School of Engineering  
Department of Civil, Construction, and Environmental Engineering, Instructor; Student Relations Manager, 2014, B.Sc. (Southern Polytechnic State University), MEng (UAB), Engineering Online Education, Construction Project Risk Management
- Murphy, Patrick J.** School of Business  
Department of Management, Information Systems, and Quantitative Methods, Professor and Goodrich Endowed Chair of Innovation and Entrepreneurship, 2018, B.S. (Morningside College), M.S. (Wright State University), Ph.D. (University of Illinois - Chicago)
- Murray, Pamela S.** College of Arts and Sciences  
Department of History, Professor of History, 1990, B.A. (New Mexico State), M.A., Ph.D. (Tulane)
- Murray, Sean P.** College of Arts and Sciences  
Department of Music, Associate Professor of Music, 2017, B.A., M.A., Ph.D. (Florida State)
- Musa, Phillip F.** School of Business  
Department of Management, Information Systems, and Quantitative Methods, Professor of Management, 2000, B.S., M.S., M.B.A. (Texas Tech)
- Musgrove, Karen** School of Public Health  
Department of Health Care Organization and Policy, Instructor, 2020, Ph.D. (UAB), Non-profit management, LGBTQAI+ rights, social work, HIV/AIDS support.
- Myers, Gregory** School of Engineering  
Department of Electrical and Computer Engineering, Instructor of Electrical and Computer Engineering, 2000, BS (Auburn), MS (UAB), Computer methods in engineering; Programming; Internet of Things.
- Nabors, Eddie** School of Business  
Department of Accounting and Finance, Instructor of Accounting and Internship Coordinator, 2011, B.S. (Alabama), M.Acc. (University of West Florida)
- Nabors, L. Burt** School of Engineering  
Department of Biomedical Engineering, Professor (Neurology), 2000, M.D. (University of Tennessee Medical Science Center), Brain tumor treatment and research program
- Nakhmani, Arie** School of Engineering  
Department of Electrical and Computer Engineering, Assistant Professor of Electrical and Computer Engineering, 2011, B.Sc., M.Sc., Ph.D (Technion - Israel Institute of Technology), Computer Vision, Visual Tracking, Biomedical Image Analysis, Systems and Control
- Navasca, Carmeliza** College of Arts and Sciences  
Department of Mathematics, Associate Professor of Mathematics and Associate Chair, 2012, B.A. (California - Berkeley), Ph.D. (California - Davis), Multilinear Algebra, Control Theory, Optimization, Data Mining
- Nazari, Rouzbeh** School of Engineering  
Department of Civil, Construction, and Environmental Engineering, Associate Professor of Civil, Construction and Environmental Engineering, 2019, B.S. (Isfahan), M.E. (City College of New York), M.S., Ph.D. (CUNY), Environmental Engineering, Water Resources, Coastal Resiliency

**Nelson, Dalton S.** School of Engineering  
Department of Electrical and Computer Engineering, Assistant Professor of Electrical and Computer Engineering, 1994, B.S.E.E., M.S.E.E., (UAB), Ph.D. (UAH), P.E. (Alabama), Intelligent Control Systems, Medical Instrumentation, Software Systems and Algorithm Development

**Nelson, Jordan** School of Public Health  
Department of Environmental Health Science, Assistant Professor, 2020, Ph.D., M.S.P.H. (UAB), Assessing health effects from exposures to environmental and occupational pollutants with a focus on pulmonary and cardiovascular inflammation responses to particulate matter air pollution and biomass (wildfire) smoke

**Nguyen, Somali** School of Nursing  
Instructor of Nursing, 2019, B.S.N., M.S.N., D.N.P. (UAB)

**Nichols, Lynn Stover** School of Nursing  
Associate Professor of Nursing, Assistant Dean for Undergraduate and Pre-Licensure Edu Alternative Pathways, 2014, B.S.N., M.S.N., Ph.D. (UAB)

**Nichols, Robert H.** School of Engineering  
Department of Mechanical Engineering, Research Professor of Mechanical Engineering, 2002, B.S. (Mississippi State), M.S., Ph.D. (Tennessee), Propulsion; Computational Fluid Dynamics; Turbulence Modeling

**Nikles, Jacqueline A.** College of Arts and Sciences  
Department of Chemistry, Associate Professor of Chemistry, 2001, B.S. (Marietta College), Ph.D. (Case Western Reserve)

**Ning, Haibin** School of Engineering  
Department of Materials Science and Engineering, Assistant Professor, 2010, B.E. (Central South University, China); M.S. (Guangxi University, China), Ph.D. (UAB), Polymer Matrix Composite Materials, Metal; Design and Modeling

**Niranjan, Soumya** School of Health Professions  
Department of Health Services Administration, Assistant Professor, 2018, PhD (UAB)

**Niwa, Minae** School of Engineering  
Department of Biomedical Engineering, Associate Professor of Psychiatry and Behavioral Neurobiology, BS (Tokyo University of Pharmacy and Life Sciences), MS (Chiba University), PhD (Nagoya University), Psychosocial stress on brain maturation, function, and behavior.

**Nkashama, Mubenga N.** College of Arts and Sciences  
Department of Mathematics, Professor of Mathematics, Department of Mathematics, 1989, Ph.D. (Catholic University of Louvain, Belgium), Partial Differential Equations; Nonlinear Analysis; Continuous Dynamical Systems

**Nordlund, Thomas M.** College of Arts and Sciences

Department of Physics, Associate Professor Emeritus of Physics, 1990, B.A. (Oregon), M.S., Ph.D. (Illinois), Physics education; biological imaging and self-assembly

**O'Kelley, Sarah E.** College of Arts and Sciences

Department of Psychology, Associate Professor of Psychology, 2012, B.A., M.A., Ph.D. (Alabama)

**Odame, Emmanuel** School of Public Health  
Department of Environmental Health Science, Assistant Professor, 2019, Ph.D., M.P.H. (East Tennessee State), WBGT application in heat stress monitoring and evaluation, occupational health and safety, health impacts of climate change, assessing heat-related mortality and morbidity in rural communities, and developing heat warning systems

**Olive, J. Fred** Mervyn H. Sterne Library  
Mervyn H. Sterne Library, III, Associate Librarian: Head, User Services, Mervyn H. Sterne Library, 1988, B.A. (Samford), M.L.S., Ed.S., Ed.D. (Alabama)

**Oliveira, Ana** School of Health Professions  
Department of Clinical and Diagnostic Sciences, Assistant Professor, 2014, DrPH (UAB), Infectious Diseases, Global Health, Food Safety

**Oliver, Nathan** School of Business  
Department of Management, Information Systems, and Quantitative Methods, Senior Instructor, 2003, B.S. (UAB), M.B.A. (Alabama AM)

**Oversteegen, Lex G.** College of Arts and Sciences  
Department of Mathematics, Professor of Mathematics, 1980, Kandidaat Doctorandus (Amsterdam), Ph.D. (Wayne State), Topology, Continuum Theory, Dynamical Systems

**O'Leary, Malinda Blair** College of Arts and Sciences  
Department of World Languages and Literatures, Associate Professor of Spanish, 2005, B.A., M.Ed. (UAB), Ph.D. (Alabama)

**O'Neil, Peter V.** College of Arts and Sciences  
Department of Mathematics, Professor Emeritus of Mathematics, 1978, B.S. (Fordham), M.S., Ph.D. (Rensselaer Polytechnic Institute), Graph Theory, Combinatorics

**Padalino, Mike** School of Business  
Department of Management, Information Systems, and Quantitative Methods, Instructor of Management, 2015, B.A. (University of Alabama), M.S. (University of Alabama at Birmingham)

**Padilla, Luz** School of Public Health  
Department of Epidemiology, Assistant Professor, 2016, M.S.P.H.; M.D. (Guadalajara), International health disparities and Global Studies

**Page, Amy** College of Arts and Sciences

Department of Theatre, Assistant Professor of Theatre, 2014, B.A. (Winthrop), M.F.A. (North Carolina)

**Palazzo, Robert E.** College of Arts and Sciences

Department of Biology, Professor of Biology, 2013, B.S., Ph.D. (Wayne State University), Cell Biology, Biochemistry, Centrosome Biology

**Panion III, Henry** College of Arts and Sciences

Department of Music, University Professor of Music, 1987, B.S. (Alabama AM), M.A., Ph.D. (Ohio State)

**Parcak, Sarah H.** College of Arts and Sciences

Department of Anthropology, Professor of Anthropology, 2006, B.A. (Yale), M.A., Ph.D. (Cambridge)

**Parpura, Vladimir** College of Joint Health Sciences

Department of Biochemistry and Molecular Genetics, Professor; Neurobiology, M.D. (University of Zagreb, Croatia), Ph.D. (Iowa State University), The role of glial cells in physiology of nervous system

**Parris, Kaitrin** School of Nursing

Assistant Professor of Nursing, Assistant Dean for Undergraduate and PreLicensure Edu BSN, 2014, B.S.N. (William Carey); M.S.N. (Phoenix); D.N.P. (Case Western)

**Patel, Bela** School of Nursing

Instructor of Nursing, 2016, B.S., M.S.N., D.N.P. (UAB)

**Patton, Emily** School of Nursing

Instructor, B.S.N. (Carson-Newman), M.S.N. (UAB)

**Paul, Julie** School of Education

Department of Curriculum and Instruction, Assistant Professor of Early Childhood Education, 2021, BA (Birmingham Southern), MA, PhD (UAB)

**Paustian, Pamela E.** School of Health Professions

Department of Health Services Administration, Assistant Professor and Program Director, Health Care Management Program, 2001, PhD (UAB), Leadership Resilience, Managerial, and Operational Practices in Healthcare, Technology Driven Approaches to Education

**Pellathy, Elisabeth** College of Arts and Sciences

Department of Art History, Associate Professor, 2014, B.F.A., M.F.A. (Alfred University - New York), Art Technology, video, internet environments and ecology

**Perakis, Ilias** College of Arts and Sciences

Department of Physics, Professor and Chair, 2015, B.S. (National Technical University of Athens), M.S., Ph.D. (Illinois, Urbana-Champaign), Theoretical computational condensed matter physics; simulation of time-dependent nonlinear phenomena away from equilibrium; optical properties of quantum materials; harnessing quantum coherence with laser pulses

**Perry, Charmane** College of Arts and Sciences

Department of African American Studies, Assistant Professor, 2019, B.A. (Temple); M.A. (Syracuse); Ph.D. (Wisconsin), Black Identities, Haitian History; Blacks in the American City

**Perry, Tonya** School of Education

Department of Curriculum and Instruction, Professor of Secondary Education, 2002, B.A. (North Carolina), M.A., Ph.D. (UAB), NBPTS

**Perumean-Chaney, Suzanne** School of Public Health

Department of Biostatistics, Assistant Professor, 2004, B.S., M.S. (Nevada), Ph.D. (SUNY Albany), Problem-based learning, teaching statistics online, adolescent at-risk behaviors, microaggression, complementary and alternative medicine, general and generalized linear models and count data

**Peters, Gary B.** School of Education

Department of Human Studies, Associate Professor, 2010, B.A., M.A. (Governors State), Ed.S., Ph.D. (UAB), Leadership; Organizational Theory

**Peters, Robert W.** School of Engineering

Department of Civil, Construction, and Environmental Engineering, Professor of Civil, Construction and Environmental Engineering, 2001, B.S. (Northwestern), M.S., Ph.D. (Iowa State), P.E. (Indiana and Illinois), Environmental Engineering, Water and Wastewater Treatment, Hazardous Waste Treatment

**Pfluger, Peter** School of Business

Department of Management, Information Systems, and Quantitative Methods, 2016, B.B.A (Penn State University - Harrisburg), M.B.A. (Penn State University)

**Phillips, Jennan** School of Nursing

Associate Professor, 2008, B.S.N. (Samford), M.S.N., Ph.D. (UAB)

**Phillips, Scott L.** College of Arts and Sciences

Department of Music, Associate Professor of Music, 2008, B.A. (Brigham Young), M.A. (Central Florida), Ph.D. (Iowa)

**Pilkerton, Patty A.** Mervyn H. Sterne Library

Mervyn H. Sterne Library, Associate Librarian, Cataloging Collection Management, Mervyn H. Sterne Library, 1988, B.S. (Montevallo), M.A. (UAB), M.L.S. (Alabama)

**Pillay, Selvam** School of Engineering

Department of Materials Science and Engineering, Associate Professor and Chair of Materials Science and Engineering, 2007, Bach (M L Suttan Technikon), M.S.M.E. (Florida AM), Ph.D. (UAB), Polymer Matrix Composites, Manufacturing and Processing, Design for Manufacture; R D to Commercialization

**Pimentel, Michael** School of Business

Department of Marketing, Industrial Distribution, Economics, Assistant Professor of Marketing, 2018, B.S., M.B.A., Ph.D. (University of Alabama)

**Pitner, Ronald O** College of Arts and Sciences  
Department of Social Work, Professor and Chair, 2021, B.A. (Lee), M.A. (Tennessee), M.S.W., Ph.D. (Michigan)

**Plaisance, Eric** School of Education  
Department of Human Studies, Associate Professor of Kinesiology, 2013, B.S. (Nicholls State), M.S. (United States Sports Academy), Ph.D. (Auburn), Exercise Physiology, Exercise and nutritional based strategies to improve blood glucose and lipid metabolism

**Pogwizd, Steven** School of Engineering  
Department of Biomedical Engineering, Professor, Division of Cardiovascular Disease (Department of Medicine), Medicine, Physiology and Biophysics

**Pollio, Elizabeth Whitney** School of Nursing  
Assistant Professor of Nursing, 2017, B.S.N. (UAB), M.S.N. (UA)

**Ponder, Jennifer** School of Education  
Department of Curriculum and Instruction, Associate Professor of Elementary Education, 2015, B.S., M.A. (UAB), Ph.D. (Indiana)

**Powell, Larry** College of Arts and Sciences  
Department of Communication Studies, Professor of Communication Studies, 1998, B.A., M.A. (Auburn), Ph.D. (Florida)

**Powell, Mickie L.** College of Arts and Sciences  
Department of Biology, Assistant Professor of Biology, 2016, B.S., M.S., Ph.D. (UAB), Invertebrate Physiology

**Powers, Summer** School of Nursing  
Assistant Professor of Nursing; Co-Coordinator of AMNP Program, 2009, B.S.N. (Southern Mississippi), M.S.N., D.N.P. (UAB)

**Powers, Thomas L.** School of Business  
Department of Marketing, Industrial Distribution, Economics, Professor of Marketing and Industrial Distribution, 1985, B.S., M.B.A. (Eastern Michigan), Ph.D. (Michigan State)

**Prado, Josephine** School of Education  
Department of Curriculum and Instruction, Assistant Professor of English as a Second Language, 2013, B.A. (Agnes Scott College), M.A., Ph.D. (Alabama)

**Preskitt, Julie** School of Public Health  
Department of Health Policy and Organization, Associate Professor, 2010, M.S.O.T., M.P.H. (UAB), Ph.D. (Auburn), Children with special health care needs, maternal and child health policy, disability policy, and underinsurance/adequacy of insurance

**Price, Julie** School of Public Health  
Department of Health Policy and Organization, Assistant Professor, 2020, Ph.D. (UAB), M.S. (Auburn University), Organizational sustainability, triple bottom line (environmental, social, and economic) contributors to public health, place-based experiential learning

**Price, William** College of Arts and Sciences  
Department of Music, Professor of Music, 2006, B.M.E. (UNA), M.M., D.M.A. (LSU)

**Puchta, Tami** College of Arts and Sciences  
Department of Mathematics, Instructor, 2015, Ed.S. (UAB), Math Education

**Qiao, Aijun** School of Engineering  
Department of Biomedical Engineering, Assistant Professor of Biomedical Engineering, 2017, B.A. (Gansu Agriculture University in China), M.S. (Shehezi University in China), Ph.D. (Chinese Academy of Medical Sciences and Peking Union Medical College, Tsinghua University), Obesity, Diabetes, Cardiovascular disease, Liver cancer

**Qiao, Zhilei** School of Business  
Department of Management, Information Systems, and Quantitative Methods, Assistant Professor of Information Systems, 2018, PhD. (Virginia Tech)

**Qin, Gangjian** School of Engineering  
Department of Biomedical Engineering, Professor of Medicine and Biomedical Engineering; Director of Molecular Cardiology Program, 1986, MD/MS (Tongji Medical University, China)

**Quinlan, Kieran** College of Arts and Sciences  
Department of English, Professor of English Emeritus, 1986, B.A., M.A. (Oxford), M.A., Ph.D. (Vanderbilt), American Literature, Literature of the American South

**Quintana, Jose B.** School of Health Professions  
Department of Health Services Administration, Associate Professor, 1989, PhD, Outcomes Management and Process Improvement, Quality

**Rast, Lauren** College of Arts and Sciences  
Department of Physics, Assistant Professor of Physics, 2014, B.S., M.S., Ph.D. (UAB), Physics education research, eLearning, development of physics courses for the online environment, educational technologies for in-person and online courses

**Raut, Samiksha** College of Arts and Sciences

Department of Biology, Associate Professor of Biology, 2012, B.S., M.S. (Nagpur), Ph.D. (UAB), General Biology, Microbiology, and STEM Education

**Reuter, Tina Kempin** College of Arts and Sciences

Department of Political Science and Public Administration, Associate Professor, Director, Institute for Human Rights, 2016, M.A., Ph.D. (Zurich)

**Reynolds, Jeff W.** College of Arts and Sciences

Department of Music, Associate Professor of Music, 1998, B.M. (Samford), M.M. (Southwestern Baptist Theological Seminary), D.M.A. (Illinois)

**Reynolds, Jenna** College of Arts and Sciences

Department of World Languages and Literatures, Instructor of Spanish, 2022, B.A., M.A. (Alabama)

**Richardson, Nadia** School of Health Professions

Department of Clinical and Diagnostic Sciences, Instructor, 2019, PhD (UAB)

**Riddle, Nicole C.** College of Arts and Sciences

Department of Biology, Associate Professor of Biology, 2012, B.S. (University of Missouri), Ph.D. (Washington University in St. Louis), Epigenetics Chromatin, Gene Regulation, and Drosophila as Model for Exercise Research

**Rinker, Erika H.** College of Arts and Sciences

Department of World Languages and Literatures, Associate Professor of German, 2008, B.A. (Wake Forest), M.A., Ph.D. (Washington in Saint Louis)

**Rivera, C. Julio** School of Business

Department of Management, Information Systems, and Quantitative Methods, Associate Professor of Information Systems, 1988, B.S., M.S. (Texas AM), M.B.A. (Southern Mississippi), Ph.D. (Mississippi State)

**Robbin, Michelle** School of Engineering

Department of Biomedical Engineering, Professor (Radiology), M.D. (Mayo Medical School), Hemodialysis patient ultrasound, ultrasound contrast agents and vascular ultrasound

**Roberts, Steve** College of Arts and Sciences

Department of Music, Associate Professor of Music, 2007, B.M. (Oberlin), M.M., D.M.A. (Illinois)

**Robinson, Josh** School of Business

Department of Marketing, Industrial Distribution, Economics, Associate Professor of Economics, 2012, PhD (Emory)

**Roche, Cathy C.** School of Nursing

Associate Professor of Nursing, 2014, B.S. (South Florida), Ph.D. (UAB)

**Rodriguez Tsouroukdissian, Carolina** College of Arts and Sciences

Department of World Languages and Literatures, Assistant Professor of Spanish, 2020, BA (Universidad Catolica Andres Bello, Caracas, Venezuela), MA, PhD (Vanderbilt)

**Rodriguez, Christina M.** College of Arts and Sciences

Department of Psychology, Professor of Psychology, 2013, B.S. (Miami), M.S., Ph.D. (Florida)

**Rogers, Jack M.** School of Engineering

Department of Biomedical Engineering, Professor of Biomedical Engineering, 1994, B.S., M.S., Ph.D. (California-San Diego), Cardiac electrophysiology, Computer simulations, Signal analysis of cardiac arrhythmias

**Russo-Skinner, Giuliana** College of Arts and Sciences

Department of World Languages and Literatures, Instructor of Italian, 2015, B.A. (G. D'Annunzio U., Pescara, Italy), M.Ed. (UAB), M.A. (Ca'Foscari U., Venezia, Italy)

**Ryan, Cynthia** College of Arts and Sciences

Department of English, Associate Professor of English and Director Professional Writing, 1998, B.S., M.A. (Illinois State), Ph.D. (Purdue), Composition, Professional Writing, Public Discourse, Medical Rhetoric

**Saito, Yoshimi** College of Arts and Sciences

Department of Mathematics, Professor Emeritus of Mathematics, 1983, B.A., M.A., Ph.D. (Kyoto, Japan), Scattering Theory, Differential Equations

**Sanabria, Daniel** School of Business

Department of Accounting and Finance, Instructor of Finance, 2016, B.S., M.B.A. (UAB)

**Sanders, Allyson Nicole** School of Nursing

Instructor of Nursing, 2021, B.S.N. (Jacksonville University), M.S.N. (UAB)

**Santiago, Ana Maria** College of Arts and Sciences

Department of English, Instructor of English, 2014, B.A., M.A. (UAB), Literature, Composition

**Sathiakumar, Nalini** School of Public Health

Department of Epidemiology, Professor, 1988, M.D. (India), Dr.PH. (UAB), Environmental Epidemiology, Occupational Epidemiology, Chronic Disease Epidemiology

**Savage, Arline** School of Business

Department of Accounting and Finance, Professor of Accounting, 2012, Ph.D. (University of Port Elizabeth-South Africa), CA (SA)

**Saxena, Nitesh** College of Arts and Sciences

Department of Computer Science, Professor of Computer Science; MS Cyber Security Program Co-Director, 2011, B.S. (IIT Kharagpur, India), M.S., Ph.D. (California-Irvine)

**Schimizzi, Anthony J.** Mervyn H. Sterne Library

Mervyn H. Sterne Library, Associate Librarian, Cataloging Collection Management, Mervyn H. Sterne Library, 1978, B.A. (Cornell), M.A. (North Carolina), M.L.S. (Kentucky)

**Schnormeier, Kimberly A.** College of Arts and Sciences

Department of Theatre, Associate Professor of Theatre, 1991, B.F.A. (Miami), M.F.A. (Northwestern)

**Schwebel, David C.** College of Arts and Sciences

Department of Psychology, University Professor and Associate Vice President, 2000, B.A. (Yale), M.A., Ph.D. (Iowa)

**Scripa, Rosalia** School of Engineering

Department of Materials Science and Engineering, Professor Emeritus of Materials Science and Engineering; Professor of Biomedical Engineering, 2017, B.S. (Alfred), M.S. (Penn State), Ph.D. (Florida), P.E. (Alabama), Structure and Properties of Glass and Ceramics, Semiconductor Crystal Growth, Electronic and Magnetic Materials, Growth and Characterization of II-VI Semiconducting Compounds

**Selinger, Nikita** College of Arts and Sciences

Department of Mathematics, Assistant Professor of Mathematics, 2015, Ph.D. (Jacobs University, Bremen), Conformal Dynamics; Teichmüller Theory

**Sen, Bisakha** School of Public Health

Department of Health Care Organization and Policy, Professor, BCBS Endowed Chair, 2002, Ph.D. (Ohio State)

**Serra, Rosa** College of Joint Health Sciences

Department of Biochemistry and Molecular Genetics, Professor (Cell, Development Integrative Biology), 2002, Ph.D. (Pennsylvania State), Mechanism of TGF- $\beta$  action in developmental and disease processes

**Sethu, Palaniappan** School of Engineering

Department of Biomedical Engineering, Associate Professor of Medicine and Biomedical Engineering, 2013, M.Eng., M.S., Ph.D. (University of Michigan, Ann Arbor), B.Tech (PSG College of Technology, India), Microfluidic cellular and molecular analysis, Physiologically relevant models of cardiac and vascular tissue, Nanotechnology based approaches to study sub-cellular signaling

**Sewell-Loftin, Mary K.** School of Engineering

Department of Biomedical Engineering, Assistant Professor of Biomedical Engineering, 2020, B.S., M.S. (University of Alabama Tuscaloosa), Ph.D. (Vanderbilt University), Biochemical and biomechanical regulation of tumor progression

**Shackleford, Lee** College of Arts and Sciences

Department of Theatre, Associate Professor of Theatre, 2000, B.A. (UAB), M.F.A. (Southern Illinois)

**Shaia, Jacquelyn S.** College of Arts and Sciences

Department of Communication Studies, Assistant Professor of Communication Studies, 2015, B.A., Ph.D. (University of Alabama); J.D. (Cumberland School of Law)

**Sharlach, Lisa** College of Arts and Sciences

Department of Political Science and Public Administration, Associate Professor and Women's and Gender Studies Director, 2004, B.A. (California), M.A. (California), Ph.D. (California - Davis)

**Shaw, Rachel** School of Nursing

Instructor of Nursing, 2020, B.S.N. (Auburn University at Montgomery), M.S.N. (UAB)

**Shealy, David L.** College of Arts and Sciences

Department of Physics, Professor Emeritus of Physics, 1973, B.S., Ph.D. (Georgia), Geometrical optics; laser beam shaping optics; radiative transfer; caustic and optical aberration theory

**Shebib, Samantha** College of Arts and Sciences

Department of Communication Studies, Assistant Professor, 2021, B.S. (Arizona State University), M.S. (Illinois State University), Ph.D. (Michigan State)

**Sheek, Lesley** School of Education

Department of Curriculum and Instruction, Assistant Professor of Early Childhood Education, 2008, B.S., M.S. (University of South Alabama), Ed.S., Ph.D. (UAB)

**Sheng, Shibin (Simon)** School of Business

Department of Marketing, Industrial Distribution, Economics, Professor of Marketing, 2011, B.S. (Tsinghua University), Ph.D. Economics (Tsinghua University) Ph.D. Marketing (Virginia Tech)

**Sherif, Muhammad M.** College of Engineering

Department of Civil, Construction, and Environmental Engineering, Assistant Professor of Civil, Construction, and Environmental Engineering, 2019, B.S.C.E. (United Arab Emirates University), M.S.C.E. (Carnegie Mellon), Ph.D. (Virginia), Structural analysis and modeling; Innovative materials; Machine learning

**Shirey, Maria R.** School of Nursing

Professor of Nursing, Associate Dean for Clinical and Global Partnerships, 2013, B.S.N. (Florida State); M.S.N. (Texas Women's); M.B.A. (Tulane); Ph.D. (Indiana)

**Shores, Melanie L.** School of Education

Department of Human Studies, Associate Professor of Educational Psychology and Research, 2005, B.S., M.A.M., M.A., Ph.D. (Auburn), Gender studies, Math/Science education, and Assessment and measurement

**Shorten, Allison** School of Nursing

Professor of Nursing, Chair, Acute, Chronic Continuing Care, 2016, B.S.N., M.S.N. (University of Wollongong), Ph.D. (University of Sydney)

**Shterenberg, Roman G.** College of Arts and Sciences

Department of Mathematics, Professor of Mathematics, 2007, M.S., Ph.D. (St. Petersburg State University – Russia), Mathematical Physics, Spectral Theory, Inverse Problems, Partial Differential Equations, Non-linear Partial Differential Equations

**Sicking, Dean L.** School of Engineering  
Department of Mechanical Engineering, Professor of Mechanical Engineering, 2012, B.S., M.S., Ph.D. (Texas AM), Crashworthiness Design; Sports Safety Equipment; Computational Mechanics

**Siegel, Daniel** College of Arts and Sciences  
Department of English, Associate Professor of English, 2002, B.A. (Chicago), M.A., Ph.D. (Virginia), Nineteenth-Century British Literature and Culture, The Novel, Cinema

**Silver, Geoffrey** School of Health Professions  
Department of Health Services Administration, Assistant Professor, 2021, Ph.D. (The Pennsylvania State University)

**Simien, Clayton** College of Arts and Sciences  
Department of Physics, Associate Professor of Physics, 2013, B.S. (Prairie View AM), Ph.D. (Rice), Strongly correlated ultracold neutral plasmas; next generation frequency standards; precision measurements and variations in fundamental constants; quantum dipolar gases and rare-earth elements; laser cooling; nanotechnology; atomic sensors

**Simon, Cliff** College of Arts and Sciences  
Department of Theatre, Professor of Theatre, 2002, B.A. (Queens), M.F.A. (Texas-Austin)

**Simpson, Laura** Mervyn H. Sterne Library  
Mervyn H. Sterne Library, Senior Assistant Librarian, Cataloging Collection Management, Mervyn H. Sterne Library, 2008, B.A. (Rhodes College), M.L.S. (Indiana-Bloomington)

**Sims, Michele** School of Education  
Department of Curriculum and Instruction, Associate Professor of Reading and Secondary Education, 1999, B.A., M.S. (CUNY), Ed.D. (Pennsylvania)

**Sims, Omar T.** College of Arts and Sciences  
Department of Social Work, Associate Professor, 2015, A.B., M.S.W., Ph.D. (Georgia)

**Sims, Sandra** School of Education  
Department of Human Studies, Associate Professor of Kinesiology, 2005, B.S. (Montevallo), M.A. (UAB), Ed.S. (UAB), Ph.D. (Southern Mississippi), Physical Education/ Youth fitness, school health fitness / Advocacy initiatives and legislation for healthy youth

**Simányi, Nándor** College of Arts and Sciences  
Department of Mathematics, Professor of Mathematics, 1999, M.S., Ph.D. (Rolánd Eötvös - Hungary), Dr.M.S. (Hungarian Academy of Sciences), Dynamical Systems, Ergodic Theory, Topology

**Singh, Keshav** College of Arts and Sciences

Department of Philosophy, Assistant Professor of Philosophy, 2021, B.A. (Princeton), M.A. (UNC Chapel Hill), Ph.D. (UNC, Chapel Hill)

**Sisiopiku, Virginia P.** School of Engineering  
Department of Civil, Construction, and Environmental Engineering, Associate Professor of Civil, Construction and Environmental Engineering, 2002, B.S. (Aristotelian University of Thessaloniki), M.S., Ph.D. (Illinois-Chicago), Transportation Engineering, Traffic Engineering

**Slaughter, Lauren** College of Arts and Sciences  
Department of English, Associate Professor of English, 2007, B.A. (Kenyon), M.F.A. (Alabama), M.A. (Montana), Creative Writing, Poetry, Literature, Composition

**Sloane, Michael E.** College of Arts and Sciences  
Department of Psychology, Associate Professor of Psychology, Director, University Honors Program, 1982, B.A., M.A. (University College, Dublin), Ph.D. (Northwestern)

**Smith, Angel** School of Business  
Department of Accounting and Finance, Instructor of Accounting, 2008, B.S., MAC. (UAB)

**Smith, Tamika** School of Public Health  
Department of Health Behavior, Assistant Professor, 2020, PhD (UAB), Risky sexual health behavior and outcomes, child outcomes and first-time parenting, HIV/STI among African American adolescents

**Smith, Tommy G.** School of Education  
Department of Curriculum and Instruction, Associate Professor of Secondary Education, 1989, B.S., M.S., Ed.D. (Auburn)

**Snyder, Scott W.** School of Education  
Department of Human Studies, Professor of Research and Early Childhood Special Education, 1988, B.A. (SUNY-Potsdam), M.S., Ph.D. (Purdue), Program evaluation, applications of the Rasch model to scale construction, grading in K-16 education, applications of systems theory and Bronfenbrenner's theory to education and related programs

**Song, Chen** School of Business  
Department of Accounting and Finance, Senior Instructor of Accounting, 2013, BS (Beijing Information Technology Institute), MA (Virginia Tech)

**Song, Yuhua** School of Engineering  
Department of Biomedical Engineering, Assistant Professor of Biomedical Engineering, 2006, B.S. (Jilin University of Technology), M.S. (Harbin University of Science and Technology), Ph.D. (Harbin Institute of Technology), Computational biomechanics, Computational biology, Multiscale modeling

**Soorappan, Rajasekaran N** School of Engineering  
Department of Biomedical Engineering, Associate Professor of Molecular and Cellular Pathology, MSc, MPhil, PhD (University of Madras), Transcriptional regulations; Redox signaling; Proteotoxic cardiac and brain diseases; Aging; Stem cells; Muscle and cardiac regeneration.

**Sorace, Anna** School of Engineering  
Department of Biomedical Engineering, Assistant Professor of Biomedical Engineering, 2019, B.S. (Mississippi State University), M.S., Ph.D. (UAB), Cancer imaging, Drug delivery, Tumor microenvironment, Precision oncology

**Sorge, Robert** College of Arts and Sciences  
Department of Psychology, Associate Professor of Psychology, 2012, H.B.Sc. (McMaster), M.A. (Wilfrid Laurier), Ph.D. (Concordia)

**Sosa, Santiago** College of Arts and Sciences  
Department of Theatre, Assistant Professor of Theatre, 2021, B.A. (Texas State), M.F.A. (Wisconsin)

**Spence, Paul H.** Mervyn H. Sterne Library  
Mervyn H. Sterne Library, Professor Emeritus, Mervyn H. Sterne Library, 1970, A.B., M.A. (Emory), Ph.D. (Illinois)

**Spezzini, Susan K.** School of Education  
Department of Curriculum and Instruction, Professor of English Learner Education, 2005, B.A., M.A. (California), Ph.D. (Alabama)

**Stanishevskaya, Irina N.** Mervyn H. Sterne Library  
Mervyn H. Sterne Library, Senior Assistant Librarian, Cataloging Collection Management, Mervyn H. Sterne Library, 2008, B.S. (Belarusian University of Culture), M.L.I.S. (Alabama)

**Stanishevsky, Andrei V.** College of Arts and Sciences  
Department of Physics, Professor of Physics, 2002, M.S. (Minsk Radioengineer Institute-USSR), Ph.D. (Belarus Academy of Sciences – USSR), Focused ion beam micro- and nanofabrication; PVD thin films deposition, characterization, and application; nanoparticle research

**Stanislavova, Milena** College of Arts and Sciences  
Department of Mathematics, Professor of Mathematics, 1993, M.S. (Sofia University, Bulgaria), 2000 PhD (Missouri), Partial Differential Equations, Dynamical Systems, Analysis

**Starr, Shannon** College of Arts and Sciences  
Department of Mathematics, Associate Professor of Mathematics, 2012, B.A. (California - Berkeley), Ph.D. (California - Davis), Mathematical Physics and Probability

**Stavrinos, Despina** College of Arts and Sciences  
Department of Psychology, Associate Professor of Psychology; Director, Developmental Psychology Doctoral Program, 2011, B.S. (Alabama), M.A., Ph.D. (UAB)

**Steadman, Laura** School of Nursing  
Assistant Professor of Nursing, 2010, B.S.N. (Auburn University), M.S.N. (Troy State), Ed.D. (UA)

**Steele, Brian D.** College of Arts and Sciences  
Department of History, Associate Professor of History, 2005, B.A., M.A. (Tulsa), Ph.D. (UNC)

**Stefanov, Atanas** College of Arts and Sciences  
Department of Mathematics, Professor of Mathematics, 1993, D.E.A. (University of Paris-VI), 1993 M.S. (Sofia University, Bulgaria), 1999 PhD (Missouri), Fourier Analysis, Partial Differential Equations

**Stepanikova, Irena** College of Arts and Sciences  
Department of Sociology, Associate Professor of Sociology, 2012, B.A. (Campbellsville), M.A. (Masaryk), Ph.D. (Stanford)

**Stephens, Jerry W.** Mervyn H. Sterne Library  
Mervyn H. Sterne Library, Librarian and Director, Mervyn H. Sterne Library, 1974, B.S., M.B.A. (UAB), M.L.S., Ph.D. (Alabama)

**Stewart, Katherine M. E.** School of Engineering  
Department of Materials Science and Engineering, Adjunct Assistant Professor of Materials Science and Engineering, 2019, B.S. (Wilfrid Laurier University), M.S., Ph.D. (University of Waterloo), Synthesis and Modification of Polymeric Materials

**Stocks, Douglas R.** College of Arts and Sciences  
Department of Mathematics, Associate Professor Emeritus of Mathematics, 1969, B.A., M.A., Ph.D. (Texas)

**Stolz, Günter** College of Arts and Sciences  
Department of Mathematics, Professor of Mathematics, 1994, Ph.D. (Frankfurt, Germany), Spectral Theory, Mathematical Physics

**Strang, Christianne** College of Arts and Sciences  
Department of Psychology, Assistant Professor of Psychology, 2014, B.S. (Miami), M.A. (Vermont), Ph.D. (UAB)

**Sui, Mingxiao** College of Arts and Sciences  
Department of Communication Studies, Assistant Professor, 2021, B.A. (Hunan University, China), M.A. (Hunan University, China), Ph.D. (Louisiana State)

**Sullivan, Andrew** School of Engineering  
Department of Civil, Construction, and Environmental Engineering, Assistant Professor of Civil, Construction and Environmental Engineering, 2009, B.S.C.E. (Pennsylvania), M.S.C.E. (UAB), P.E. (Alabama), Transportation Engineering, Traffic Operations

**Summerlin, Jennifer** School of Education  
Department of Curriculum and Instruction, Assistant Professor of Reading, 2011, B.A., M.A., Ph.D. (UAB), NBPTS

**Sun, Liou Y.** College of Arts and Sciences

Department of Biology, Associate Professor of Biology, 2015, B.S., M.D. (Southeast University); Ph.D. (Southern Illinois), Biology of Aging, Endocrinology, Obesity, Neurodegenerative Diseases

**Szaflarski, Magdalena** College of Arts and Sciences

Department of Sociology, Associate Professor of Sociology, 2012, B.A., M.A. (Michigan), Ph.D. (Cincinnati)

**Sánchez-López, Lourdes** College of Arts and Sciences

Department of World Languages and Literatures, Professor of Spanish; Director, Spanish for Specific Purposes Certificate Program, 2001, B.A. (Universidad de Granada), M.A. (Southern Mississippi), M.A., Ph.D. (Universidad de Jaén)

**Takamiya, Yumi** College of Arts and Sciences

Department of World Languages and Literatures, Assistant Professor of Japanese, 2015, B.A. (Bunkyo University, Japan), M.A. (Wisconsin-Madison), Ph.D. (Purdue)

**Tanik, Murat M.** School of Engineering

Department of Electrical and Computer Engineering, Professor and Chair of Electrical and Computer Engineering, 1998, B.S. (Middle East Technical), M.C.S., Ph.D. (Texas AM), Software Systems Engineering, Quantum Information Theory, Embedded Systems

**Tant, Cynthia J** College of Arts and Sciences

Department of Biology, Assistant Professor of Biology, 2021, B.S. (Birmingham-Southern), M.S. (Alabama), Ph.D. (Georgia), General Biology, Limnology, Ecosystem Ecology, Environmental Science

**Taub, Edward** College of Arts and Sciences

Department of Psychology, University Professor; Professor of Psychology, 1986, B.A. (Brooklyn), M.A. (Columbia), Ph.D. (New York)

**Temple, Cheryl** College of Arts and Sciences

Department of English, Instructor of English, 2005, B.S. (Missouri), M.A. (Chapman), American Literature, Composition

**Temple, Gale M.** College of Arts and Sciences

Department of English, Associate Professor of English, 2001, B.S. (Michigan), M.A., Ph.D. (Loyola-Chicago), Early American Literature and Culture

**Temples, Taryn** School of Nursing  
Instructor of Nursing, 2017, B.S.N (Clemson), M.S.N. (Samford)

**Terndrup, Thomas E.** School of Health Professions

Department of Health Informatics, M.D., Professor (Emergency Medicine)

**Thomas, Vinoy** School of Engineering

Department of Materials Science and Engineering, Assistant Professor of Materials Science and Engineering, 2007, B.S., M.S. (University of Kerala, India), Ph.D. (Sree Chitra Tirunal Institute for Medical Sciences Technology, India), Polymeric Biomaterials and 3D Composite Scaffolds for Tissue Engineering, Nanomaterials and Nanodiamonds for Biomedical Applications, Green Materials Synthesis and Structure-Property Relationships

**Thomeer, Mieke B.** College of Arts and Sciences

Department of Sociology, Associate Professor of Sociology, 2014, B.A. (Virginia), M.A., Ph.D. (Texas)

**Thompson, Sam** School of Business

Department of Management, Information Systems, and Quantitative Methods, Assistant Professor of Information Systems, 2013, B.A., M.B.A. (Texas A M), M.S., Ph.D. (UA)

**Today, Natalie** College of Arts and Sciences

Department of Criminal Justice, Assistant Professor, 2017, B.A. (California-San Diego), M.S. (Bowling Green State), Ph.D. (Arizona State), Policing, Use of Force, De-escalation, Qualitative Methods

**Tofani, Peter** School of Nursing

Assistant Dean of Student Affairs; Instructor of Nursing, 2008, B.S. (The United States Military Academy), MS (Pennsylvania State), Ed.D (UA)

**Tollefsbol, Trygve** College of Arts and Sciences

Department of Biology, Distinguished Professor of Biology, 1998, B.S. (Houston), M.S., D.O., Ph.D. (North Texas Health Sciences Center), Gene Regulation in Cancer and Aging, Epigenetics of Nutrition

**Tucker, Brenna** College of Arts and Sciences

Department of Chemistry, Instructor, 2020, MS (Texas Woman's Univ), PhD (UAB)

**Tucker, Diane C.** College of Arts and Sciences

Department of Psychology, Professor Emerita of Psychology, 1984, B.S., M.S., Ph.D. (Iowa)

**Turel, Noa** College of Arts and Sciences

Department of Art History, Associate Professor of Art History, 2012, B.A. (State University of New York), M.A. (University of London), Ph.D. (California-Santa Barbara), North Renaissance Art, Late Medieval and Early Modern Visual Culture and Science, Performance Art and theory

**Turnbull, Elizabeth** School of Business

Department of Marketing, Industrial Distribution, Economics, Instructor of Business, 2010, MBA (University of South Alabama)

**Turner, Benjamin P** College of Arts and Sciences

Department of Biology, Instructor of Biology, 2021, B.A. (Utah-Brigham Young University), M.S. (Iowa-Palmer College of Chiropractic), Human Anatomy, Cadaver Dissection, and Mycological Cultivation

**Tyson, Lawrence E.** School of Education

Department of Human Studies, Associate Professor of Counselor Education, 1997, B. A. (Atlantic Christian), M.Ed. (Rollins), Ph.D. (Mississippi State), School counseling, factors affecting academic performance, adventure based counseling

**Uddin, Nasim** School of Engineering

Department of Civil, Construction, and Environmental Engineering, Professor of Civil, Construction and Environmental Engineering, 2001, B.S. (University of Engineering and Technology, Bangladesh), M.S. (Oklahoma-Norman), Ph.D. (SUNY Buffalo), P.E. (New York), Structural Engineering, Wind and Seismic Loads, Bridge Design

**Unan, Mahmut** College of Arts and Sciences

Department of Computer Science, Assistant Professor of Computer Science, 2018, B.S. (Ege, Turkey), M.S., Ph.D. (University of Houston)

**Uswatte, Gitendra** College of Arts and Sciences

Department of Psychology, Professor of Psychology, 2001, B.A. (Princeton), M.A., Ph.D. (UAB)

**Van Matre, Joseph G.** School of Business

Department of Management, Information Systems, and Quantitative Methods, Professor of Quantitative Methods, 1971, B.E.E., M.B.A. (Auburn), Ph.D. (Alabama)

**Van Sant, John E.** College of Arts and Sciences

Department of History, Associate Professor of History and Interim Chair, 2000, B.A., M.A. (UC-Davis), Ph.D. (Oregon)

**Vance, David** School of Nursing

Professor of Nursing; Associate Dean for Research and Scholarship, 2004, B.S. (Virginia Tech), M.S. (New Orleans), M.G.S. (Miami), Ph.D. (UAB)

**Vantsevich, Vladimir V.** School of Engineering

Department of Mechanical Engineering, Professor of Mechanical Engineering, 2012, Dip.-Eng., Ph.D. (Belarusian National Technical University, Minsk, Belarus), D.Sc. (State Supreme Attestation Board, Moscow, Russia), Mechatronic Systems Design, Modeling and Control; Manned/Unmanned Ground Vehicle Dynamics and Design; Dynamics and Design of Robotic Manipulators

**Vaughn, Gregg L.** School of Engineering

Department of Electrical and Computer Engineering, Professor Emeritus of Electrical and Computer Engineering, 1979, B.S.E.E., M.S.E.E, Ph.D. (Alabama), P.E. (Alabama), Digital Communication, Image Processing, Radiation Effects

**Velu, Sadanandan** College of Arts and Sciences

Department of Chemistry, Professor of Chemistry, 2002, B.Sc., M.Sc. (Calicut – India), Ph.D. (Madras – India)

**Verbeek, Peter** College of Arts and Sciences

Department of Anthropology, Associate Professor, 2015, B.S. (Eckerd College), M.A., Ph.D. (Emory)

**Verstraet, Charly,** College of Arts and Sciences

Department of World Languages and Literatures, Assistant Professor of French,, 2019,, B.A. (Université Catholique de Lille, France), M.A. (North Carolina State .), Ph.D. (Emory)

**Vetter, Imelda L.** Mervyn H. Sterne Library

Mervyn H. Sterne Library, Assistant Librarian, Reference Services, Mervyn H. Sterne Library, 2007, B.A. (Oberlin), M.L.S. (Indiana)

**Vilcassim, MJ Ruzmyn** School of Public Health

Department of Environmental Health Science, Assistant Professor, 2019, Ph.D., M.S. (New York University), Health effects associate with or caused by exposure to environmental pollutants, with a special focus on particulate matter air pollution in urban environments

**Vines, Adam** College of Arts and Sciences

Department of English, Associate Professor of English and Director of Creative Writing, 2006, B.A., M.A. (UAB), M.F.A. (Florida), Creative Writing, Poetry, Twentieth and Twentieth-First Century Poetry

**Visscher, Kristina** School of Optometry

Department of Vision Sciences, Associate Professor (Neurobiology), 2009, Ph.D. (Washing University- St. Louis)

**Vohra, Yogesh K.** College of Arts and Sciences

Department of Physics, Professor of Physics, University Scholar, Associate Dean, 1992, B.S., M.S. (Delhi, India), Ph.D. (Bombay, India), High Pressure Materials Research, Growth and Characterization of Synthetic Diamond, and Nanoscale Materials for Biomedical Applications

**Voltz, Deborah** School of Education

Department of Curriculum and Instruction, Professor of Special Education, 2003, B.A. (National College of Education), M.A. (UAB), Ed.D. (Alabama)

**Walden, Carolyn** Mervyn H. Sterne Library

Mervyn H. Sterne Library, Associate Librarian; Head, Cataloging Collection Management, Mervyn H. Sterne Library, 1978, B.M., M.A. (Iowa), M.M. (Cincinnati)

**Waldron, Christopher** School of Engineering

Department of Civil, Construction, and Environmental Engineering, Associate Professor of Civil, Construction and Environmental Engineering; Director of Online Structural Engineering Master's Program, 2008, B.S.C.E. (Drexel); M.S.C.E., Ph.D. (Virginia Tech), P.E. (Commonwealth of Pennsylvania), Structural Engineering, Bridge Design, Engineering Mechanics

**Walker, Harrison** School of Engineering  
Department of Biomedical Engineering, Professor (Neurology), 2006, M.D. (UAB), Deep brain stimulation for the management of Parkinson's disease and other movement disorders

**Walker, Jeffery** College of Arts and Sciences  
Department of Criminal Justice, Professor and Chair, 2015, B.S. (Arkansas), M.A. (Arkansas - Little Rock), Ph.D. (Sam Houston), Social Structures of Neighborhoods, Crime Analysis/Mapping, Crime and Place

**Wallace, Diana G.** School of Engineering  
Department of Mechanical Engineering, Instructor of Mechanical Engineering, 2019, B.S. (Auburn University), M.S. (UAB), Engineering communications and entrepreneurship

**Walsh, Peter M.** School of Engineering  
Department of Mechanical Engineering, Research Professor of Mechanical Engineering, 2002, B.S. (Robert College, Turkey), M.A. (Wesleyan), Ph.D. (Cornell), Carbon Dioxide Sequestration; Combustion in Industrial Furnaces and Electric Utility Boilers; Control of Air Pollutant Emissions from Combustion

**Wang, Pengfei** College of Arts and Sciences  
Department of Chemistry, Professor of Chemistry, 2005, B.E., B.Sc. (Tsinghua, China), M.S. (Illinois-Chicago), Ph.D. (Wisconsin)

**Wang, Yu-Mei** School of Education  
Department of Curriculum and Instruction, Associate Professor of Technology, 2002, B.A. (Harbin Normal University, China), Post Graduate Degree (Liao Ning University, China), Ph.D. (Oregon-Eugene)

**Ward, Walter D.** College of Arts and Sciences  
Department of History, Professor of History, 2010, B.A., M.A. (NCSU), M.A., Ph.D. (UCLA)

**Warner, David F.** College of Arts Sciences  
Department of Sociology, Associate Professor of Sociology, 2019, B.S. (Cornell), M.A., Ph.D. (Pennsylvania State)

**Warner, Gary** College of Arts and Sciences  
Department of Criminal Justice, Instructor and Director of the Computer Forensics Research Lab, 2007, B.S. (UAB), Digital Forensics, Cybercrime and Security

**Warner, Tara** College of Arts and Sciences  
Department of Criminal Justice, Associate Professor, B.A. and B.S. (Louisiana State), M.A. (Pennsylvania State), Ph.D., (Bowling Green State), Sociology, Victimization, Health Well-being, Neighborhoods, Adolescence Emerging Adulthood

**Warner, Vessela** College of Arts and Sciences

Department of Theatre, Associate Professor of Theater, 2007, M.A. (Sofia University, Bulgaria), M.F.A. (National Conservatory of Theater, Bulgaria), Ph.D. (Washington)

**Washington, Teneasha** School of Public Health  
Department of Health Behavior, Assistant Professor, 2019, Ph.D., M.P.H. (UAB), Online and in-person teaching for graduate and undergraduate students, Quality Matters, maternal child health, chronic diseases, needs assessments, community engagement, disabilities, rare disease

**Wasko, Molly McLure** School of Business  
Department of Management, Information Systems, and Quantitative Methods, Professor of Management; Associate Dean, 2010, B.B.A., B.A. (James Madison), M.B.A. (Averett), Ph.D. (Maryland, College Park)

**Watson, Amy** College of Arts and Sciences  
Department of History, Assistant Professor, 2020, BA (Yale), M.Phil (University of Cambridge), PhD (Yale)

**Watson, Dayna M.** School of Education  
Department of Human Studies, Assistant Professor of Counselor Education, 2005, B.S. (Vanderbilt); M.Ed. (Auburn); Ph.D. (Florida), Issues of poverty and class in counseling. Community-School Collaboration, Program Development

**Watts, Penni** School of Nursing  
Associate Professor Director of Clinical Simulation and Training, 2002, B.S.N. (Auburn), M.S.N. (Troy State), Ph.D. (UAB)

**Watts, Stephen A.** College of Arts and Sciences  
Department of Biology, Professor of Biology, 1987, B.S. (Auburn), M.S., Ph.D. (South Florida), Nutrition of Animal Models; Aquatic Biology

**Waugh, Jonathan B.** School of Health Professions  
Department of Clinical and Diagnostic Sciences, Associate Professor, Respiratory Therapy Program, 1999, Ph.D. (Ohio State)

**Weaver, Kendra S.** School of Nursing  
Assistant Professor of Nursing, 2014, B.S.N. (Mississippi Medical Center), M.S.N. (UAB)

**Webb, Tera** School of Health Professions  
Department of Clinical and Diagnostic Sciences, Assistant Professor, 2021, M.S. (UAB)

**Wech, Barbara** School of Business  
Department of Management, Information Systems, and Quantitative Methods, Associate Professor of Management, 2001, B.S. (Wayne State), M.B.A. (Michigan State), Ph.D. (Louisiana State)

**Weech-Maldonado, Robert** School of Health Professions  
Department of Health Services Administration, Professor and L. R. Jordan Endowed Chair of Health Administration, 2009, PhD (Temple University)

**Weikard, Rudi** College of Arts and Sciences  
Department of Mathematics, Professor of Mathematics, 1990, Ph.D. (Technical University of Braunschweig, Germany), Ordinary and Partial Differential Equations, Mathematical Physics

**Welch, Brynn** College of Arts and Sciences  
Department of Philosophy, Associate Professor of Philosophy, 2016, B.A. (Davidson), M.A., Ph.D. (Wisconsin-Madison)

**Wells, Jaclyn** College of Arts and Sciences  
Department of English, Associate Professor of English, 2013, B.A. (Knox), M.A. (Southern Illinois University Carbondale), Ph.D. (Purdue), Rhetoric and Composition

**Westenberger, Scott.** College of Arts and Sciences  
Department of Sociology, Teaching Assistant Professor of Sociology, 2022, B.A. (Minnesota), M.A., Ph.D. , (Stanford)

**Whall, Mary B.** College of Arts and Sciences  
Department of Philosophy, Associate Professor of Philosophy, 1993, B.S., B.A. (UAB), Ph.D. (Georgia)

**Wibbels, Thane** College of Arts and Sciences  
Department of Biology, Professor of Biology, 1993, B.S. (Nebraska), M.S. (Houston), Ph.D. (Texas AM), Reproductive and Conservation Biology

**Wick, Timothy M.** School of Engineering  
Department of Biomedical Engineering, Interim Dean, School of Engineering; Professor of Biomedical Engineering, 2005, B.S. (Colorado), Ph.D. (Rice), Tissue engineering and regenerative medicine, Bioreactor design, Drug delivery

**Wiesen, Jonathan** College of Arts and Sciences  
Department of History, Professor and Chair of History, 2019, B.A. (UC Berkeley), M.A., Ph.D. (Brown)

**Wijeratne, Gayan B.** College of Arts and Sciences  
Department of Chemistry, Assistant Professor of Chemistry, 2018, B.S. (Columbo, Sri Lanka), Ph.D. (Kansas)

**Wilkinson, Larrell** School of Education  
Department of Human Studies, Associate Professor of Community Health and Human Services, 2012, B.S. (Tennessee State University), MSPH, Ph.D. (University of South Carolina), Health Education, Health Disparities/Health Equity, Access and utilization of health care services, Substance Abuse

**Willey, Christopher** School of Engineering  
Department of Biomedical Engineering, Professor (Radiation Oncology), 2008, M.D./Ph.D. (Medical University of South Carolina), Investigating kinase driven signal transduction cascades in a spectrum of biological systems, Bioinformatics for kinomics and personalized medicine, Systems biology approaches in glioblastoma multiforme

**Williams, Jessica Hillman** School of Health Professions  
Department of Health Services Administration, Associate Professor and Director, BS in Health Care Management Program, 2012, PhD (UAB), The Role of Patients' Unconscious Bias in the Delivery of Healthcare, Health Disparities

**Wilson, Lara** College of Arts and Sciences  
Department of Music, Visiting Assistant Professor of Music, 2021, .M. (Cincinnati), M.M. (Indiana), D.M.A. (South Carolina)

**Wingate, Martha** School of Public Health  
Department of Health Policy and Organization, Associate Professor and Interim Chair, 2005, Dr.PH. (UAB), Preterm birth, fetal and infant mortality, racial and ethnic disparities in birth outcomes, and health policies related to pregnancy and infant health

**Wingo, Nancy P.** School of Nursing  
Associate Professor of Nursing, 2007, M.A. (Auburn), Ph.D. (UAB)

**Witherspoon, Taajah** School of Education  
Department of Curriculum and Instruction, Assistant Professor of Early Childhood and Elementary Education, 2015, B.S. (ASU), M.A., Ed.S., Ph.D. (UAB)

**Wittig, John W.** College of Arts and Sciences  
Department of Communication Studies, Interim Chair, Department of Communication Studies; Associate Professor of Communication Studies, 1981, A.B. (Carson-Newman), M.A. (Florida), Ph.D. (Southern Illinois)

**Wittmann, C. Michael** School of Business  
Department of Marketing, Industrial Distribution, Economics, Professor and Chair, Department of Marketing, Industrial Distribution, and Economics, 2015, B.S.B.A. (University of Southern Mississippi), M.B.A. (University of Alabama), Ph.D. (Texas Tech University)

**Wolfe, Joseph D.** College of Arts and Sciences  
Department of Sociology, Assistant Professor of Sociology, 2013, B.A. (Millsaps), M.A. (Indiana), M.S., Ph.D. (Indiana)

**Wood, Joseph** College of Arts and Sciences  
Department of English, Assistant Professor of English, 2014, B.A. (Brandeis), M.F.A. (Arizona), Creative Writing, Poetry, Literature, Composition

**Woodward, Laura** School of Nursing  
Instructor of Nursing, 2021, B.S.N. (UA), M.S.N. (UAB)

**Wooten, Michelle** College of Arts and Sciences

Department of Physics, Assistant Professor of Physics, 2021, B.S. (UC Santa Cruz), M.S. (San Francisco State), Ph.D.(Alabama), Astronomy education, qualitative research methodologies, Dark skies advocacy

**Worrell, James L.** School of Business  
Department of Accounting and Finance, Professor of Accounting, 2008, B.S., M.Ac., Ph.D. (Florida State University)

**Wright, Erin** College of Arts and Sciences  
Department of Art History, Professor of Art, 2001, B.F.A. (Colorado State), M.F.A. (Arizona), Social/Political Poster Design, Logo design, Graphic Design History

**Wright, Tyler** School of Health Professions  
Department of Clinical and Diagnostic Sciences, Assistant Professor, 2018, PhD (UAB)

**Xu, Nuo** School of Business  
Department of Management, Information Systems, and Quantitative Methods, Associate Professor of Quantitative Methods, 2010, B.S. (Shanghai Jiao Tong University), M.S., Ph.D. (Cincinnati)

**Xue, Fei** College of Arts and Sciences  
Department of Physics, Assistant Professor of Physics, 2021, B.S. (Nanjing University), Ph.D. (Texas at Austin), Condensed matter theory; interaction-induced exotic phases collective excitations; topological phases materials; first-principles calculations; spintronics; spin-orbit coupling mediated quantum transport

**Yan, Da** College of Arts and Sciences  
Department of Computer Science, Assistant Professor of Computer Science, 2017, B.S. (Fudan, China), Ph.D. (Hong Kong)

**Yang, Fan** College of Arts and Sciences  
Department of Communication Studies, Professor, 2017, B.A. (China Youth University for Political Science), M.A., Ph.D. (University of Miami)

**Yang, Junjie,** School of Engineering  
Department of Biomedical Engineering, Assistant Professor of Biomedical Engineering, 2018, B.S. (Qingdao University), M.S. (Second Military Medical University), Ph.D. (Osaka University), Biology and therapeutic uses of extracellular vesicles

**Yates, Stephanie** School of Business  
Department of Accounting and Finance, Professor of Finance, Chair, Department of Accounting and Finance, 2007, B.S., M.A., M.B.A. (Cincinnati), Ph.D. (LSU)

**Yildirim, Abidin** School of Engineering  
Department of Electrical and Computer Engineering, Associate Professor of Electrical and Computer Engineering, 2016, BS (Bogazici University), MS (Beuth University of Applied Sciences, Berlin), MS (UAB) PhD (Texas Tech University), Autonomous systems; Brain-machine interface; Embedded systems; Biomedical instrumentation.

**Yoder, Stephen A.** School of Business  
Department of Marketing, Industrial Distribution, Economics, Assistant Professor of Legal Studies, 2008, A.B. (Duke), J.D. (Northwestern University School of Law)

**Young, Jennifer** College of Arts and Sciences  
Department of English, Assistant Professor of English, 2007, B.A. (Whittier), M.A. (Tulane), American Literature, Composition

**Younger, Jarred W.** College of Arts and Sciences  
Department of Psychology, Professor of Psychology, 2014, B.A. (Maryville), Ph.D. (Tennessee)

**Yuen, Hon** School of Health Professions  
Department of Occupational Therapy, Professor and Director of Research, Ph.D., OTR/L

**Zaretsky, Natasha** College of Arts and Sciences  
Department of History, Professor of History, 2019, B.A. (UC Santa Cruz), M.A., Ph.D. (Brown)

**Zech, Wesley C.** School of Engineering  
Department of Civil, Construction, and Environmental Engineering, Professor of Civil, Construction, and Environmental Engineering; Director of the Online Civil Engineering Construction Management Master's Program, 2019, B.S., M.E., Ph.D. (Buffalo), Construction Management, Construction Safety, Erosion and Sediment Control

**Zeng, Yanni** College of Arts and Sciences  
Department of Mathematics, Professor of Mathematics, 1997, B.S., M.S. (Zhongshan, China), Ph.D. (New York), Nonlinear Analysis, Applied Partial Differential Equations

**Zengul, Ferhat** School of Health Professions  
Department of Health Services Administration, Associate Professor, 2015, PhD (UAB)

**Zhang, Chengcui** College of Arts and Sciences  
Department of Computer Science, Professor and Graduate Program Director of Computer Science, 2004, B.S., M.S. (Zhejiang, China), Ph.D. (Florida International)

**Zhang, Jianyi (Jay)** School of Engineering  
Department of Biomedical Engineering, Chair of the Department of Biomedical Engineering, Professor of Medicine and Biomedical Engineering, T. Michael and Gilliam Goodrich Endowed Chair of Engineering Leadership, 2015, M.D. (Shanghai Medical University), M.S. (Tufts University), Ph.D. (University of Minnesota), Cardiac tissue engineering, NMR imaging, Heart failure

**Zhang, Jun** College of Arts and Sciences

Department of Chemistry, Assistant Professor of Chemistry, 2016, B.S. (Nankai, China), M.S. (Tsinghua, China), Ph.D. (North Carolina - Chapel Hill)

**Zhang, Yufei** School of Business  
Department of Marketing, Industrial Distribution, Economics, Assistant Professor of Marketing, 2018, B.A. (UIBE, China), M.S., P.h.D. (Michigan State)

**Zheng, Yuliang** College of Arts and Sciences  
Department of Computer Science, Professor and Chair of Computer Science, 2015, B.S. (Nanjing, China), M.S., Ph.D. (Yokohama - Japan)

**Zhou, LuFang** School of Engineering  
Department of Biomedical Engineering, Associate Professor, Division of Cardiovascular Disease (Department of Medicine), 2011, Ph.D. (Case Western Reserve), Pathophysiology and therapeutics of oxidative stress related to diseases of mitochondrial origin as it pertains to cardiovascular disease and diabetes

**Zhou, Yang** School of Engineering  
Department of Biomedical Engineering, Assistant Professor of Biomedical Engineering, 2019, B.S. (Fudan University in China), Ph.D. (Chinese Academy of Sciences), Cardiac reprogramming, Heart regeneration, Stem cells, Epigenetics

**Zhou, Yong** School of Engineering  
Department of Biomedical Engineering, Associate Professor, Division of Pulmonary/Allergy/Critical Care (Department of Medicine), 2009, M.D. (Wuhan University, China), Myofibroblast differentiation and emphysema

**Zingara, James** College of Arts and Sciences  
Department of Music, Associate Professor of Music, 2011, B.S. (Wisconsin-La Crosse), M.M. (East Carolina), D.M.A. (Illinois)

**Zou, Henghui** College of Arts and Sciences  
Department of Mathematics, Associate Professor of Mathematics, 1994, B.S. (Xiangtan, P.R.C.), M.S. (Peking, P.R.C.), Ph.D. (Minnesota), Nonlinear Partial Differential Equations, Nonlinear Analysis

**Zuckerman, Edward D.** College of Arts and Sciences  
Department of Theatre, Associate Professor of Theatre, 1999, B.A. (Westchester State), M.F.A. (Wayne State)

**Zvanut, Mary E.** College of Arts and Sciences  
Department of Physics, Professor of Physics, 1992, B.S., M.S., Ph.D. (Lehigh), Electrical studies and EPR studies of insulators and semiconductors; microelectronics and optoelectronics

## Academic and Student Resources

This section of the catalog describes some of the services, policies, and programs that support and enhance the experience of our students through their stay at UAB.

- [Admission](#) (p. 45)
- [New Student Orientation](#) (p. 91)
- [Financial Information](#) (p. 56)
- [Freshman Year](#) (p. 91)
- [UAB Core Curriculum](#) (p. 122)
- [Student Outreach](#) (p. 111)
- [Student Life](#) (p. 106)
- [Student Services and Facilities](#) (p. 111)
- [Progress Towards a Degree](#) (p. 91)
- [Completion of a Degree](#) (p. 49)
- [Academic Engagement and Global Citizenship](#) (p. 42)
- [Early Medical School Acceptance Program](#) (p. 51)
- [English Language Programs, INTO UAB](#) (p. 51)
- [ROTC](#) (p. 102)
- [UAB Sustainability](#) (p. 125)
- [Vulcan Materials Academic Success Center](#) (p. 126)

## Academic Engagement & Global Citizenship

The Office of Academic Engagement and Global Citizenship is comprised of two offices and three programs that promote academically enriching and engaging experiences for students across campus. [UAB Education Abroad](#) (p. 42) administers and establishes study abroad programs, assistance for student organization travel abroad, assistance for student travel to attend conferences that take place abroad as a UAB representative, and passport application acceptance services. The [UAB Office for Service Learning and Undergraduate Research](#) (p. 43) engages students, faculty members, and community partners into academically-based service experiences that both enrich student learning and provide community benefit. The Office also supports and fosters the research, scholarship, and creative activities across all disciplines between students and their faculty and community mentors.

- Education Abroad
- Service Learning & Undergraduate Research

## Education Abroad

### Office of Education Abroad

[Contact Education Abroad](#)

### Mission

The mission of the UAB Office of Education Abroad (UABEA) is to administer, establish, and send UAB students on high-quality education abroad opportunities to prepare them for success in the globalized world.

### Education Abroad

The Office of Education Abroad is a member of the Forum for Education Abroad (Forum), Institute of International Education, and Association of International Educators (NAFSA). The Office of Education Abroad strives

to meet the Forum's [Standards of Good Practice for Education Abroad](#), 6th Edition and [Code of Ethics](#).

UAB Education Abroad administers, establishes, and sends UAB students on high-quality education abroad opportunities to prepare them for success in the globalized world.

Pursuant to our mission, UABEA engages in the activities described below.

- [Study Abroad](#): Take courses for which academic credit is received and transferred to UAB on our supported study abroad programs. This includes academic credit for student exchanges, UAB affiliate programs, and faculty-led programs that feature traditional classes, research, service learning, internships, volunteerism, shadowing, clinical rotation, and observations.
- [International Internships, Research & Service-Learning](#): Take courses for which academic credit is received and transferred to UAB on our supported study abroad programs. These opportunities are designed to enhance your resume with hands-on experiential learning abroad and offer credit-bearing outcomes.
- [Virtual Experiences](#): UAB students may participate in a variety of virtual/remote learning experiences, which vary from group internships, part/full time internships, and remote academic courses. Explore these opportunities to immerse yourself in a virtual remote experience while earning academic credit at UAB.
- [Student Organizations Abroad](#): Travel abroad as part of a UAB student organization; including Outreach Abroad, Outdoor Pursuits, artistic performances, athletic activities, or other student organization travel. Our office can help students register travel with the university, obtain the necessary [education abroad insurance](#), and prepare for travel.
- [Student Conference Travel Abroad](#): Present at or attend a conference that takes place abroad as a UAB representative. Our office can help students register travel with the university, obtain the necessary education abroad insurance, and prepare for travel.
- [Passport Office](#): Apply for a passport conveniently on campus. As an official U.S. Department of State Passport Acceptance Facility, we are happy to accept passport applications for students, employees, and members of the community. Our passport service is open to the public.

## Eligibility

To be eligible to apply for our programs, one must:

1. be an enrolled UAB student;
2. be 19 years of age or older (or have parental permission); and
3. be in good academic, disciplinary, and financial standing with UAB.

Some programs have additional eligibility requirements, such as GPA minima, listed on the individual program webpages.

Students may petition to the Director of Education Abroad for a possible exception to the eligibility criteria.

## Grade Posting

All grades earned while abroad will be posted to the student's UAB transcript and included in GPA calculations. Letter grades are used rather than pass/fail marks. In all cases, students must participate fully in all course activities and meet all stated course requirements. Auditing of

any course abroad is not permitted. The process of grade posting varies depending on the program type:

## UAB Exchanges

Students earn direct UAB course credit. Courses taken on student exchanges will begin with IN ("International" indicating that the course took place at an international UAB exchange location) and a two-letter subject code such as ME (Mechanical Engineering), GN (German), SP (Spanish), etc. to indicate the subject that was studied. Additionally, each of the courses are numbered. All courses are variable in the number of credit hours students can receive based upon their enrollment at the host university. INxx courses are repeatable. INxx courses include:

Subject	Description
INAB	Study Abroad Arabic
INAH	Study Abroad Art History
INAN	Study Abroad Anthropology
INAR	Study Abroad Art Studio
INAT	Study Abroad Astronomy
INBE	Study Abroad Biomedical Engineering
INBU	Study Abroad Business
INBY	Study Abroad Biology
INCH	Study Abroad Chinese
INCM	Study Abroad Communication Studies
INCS	Study Abroad Computer & Information Science
INCY	Study Abroad Chemistry
INDC	Study Abroad Digital Community
INEC	Study Abroad Economics
INED	Study Abroad Education
INEE	Study Abroad Electrical Engineering
INEH	Study Abroad English
INES	Study Abroad Earth Science
INEV	Study Abroad Environmental Science
INFN	Study Abroad Finance
INFR	Study Abroad French
INGN	Study Abroad German
INHY	Study Abroad History
INIS	Study Abroad International Studies
INIT	Study Abroad Italian
INJP	Study Abroad Japanese
INJS	Study Abroad Justice Sciences
INMA	Study Abroad Mathematics
INME	Study Abroad Mechanical Engineering
INMG	Study Abroad Management
INMK	Study Abroad Marketing
INMU	Study Abroad Music
INPC	Study Abroad Physics
INPE	Study Abroad Physical Education
INPH	Study Abroad Philosophy
INPS	Study Abroad Political Science

INPY	Study Abroad Psychology
INSC	Study Abroad Sociology
INSP	Study Abroad Spanish
INTH	Study Abroad Theatre
INTL	Study Abroad Special Topics

For all other programs, visit [UAB Education Abroad's website](#) for details.

## Residency

Courses taken on UAB Exchanges, USAC programs, ISA programs, CISAbroad programs, U.S. - UK Fulbright Commission Summer Institutes, U.S. Department of State Critical Language Scholarship Program, Clinton Scholarship at the American University in Dubai, UAB Faculty-Led Programs, and UAB Internship/Practicum Courses Abroad will satisfy the UAB residency requirement. Students must contact UABEA to ensure their Graduation Planning System records are noted accordingly.

## Changes of Grades

Requests for grade changes to UABEA must be accompanied by official documentation sent directly from the host university.

# Service Learning and Undergraduate Research

### Office of Service Learning and Undergraduate Research

As a UAB student, you can explore and pursue your interests through service learning and research opportunities. Service - both local and global - and the pursuit of knowledge through research, scholarship, and creative activities are vital and core to UAB's mission. Service learning and research opportunities are available to all students who want to engage with today's pressing issues and problems. UAB's Office of Service Learning and Undergraduate Research works to bring students, faculty members, and community partners together to advance student learning and provide community benefit through for-credit academic courses and non-credit campus and experiential opportunities in all disciplines across campus.

## Service Learning

UAB is fortunate to be situated in the heart of a vibrant urban community with a large number of passionate and highly effective nonprofit organizations. The directors and staffers of these organizations – working to reduce systemic poverty, advocate for clean air and water, or increase access to healthcare, among many other issues - collaborate with UAB's faculty members and students in academic service learning courses. Service with a local or global community partner is integrated into these courses to enhance student learning of course content, to provide community benefit, and to produce participatory citizens. You also gain real-life, hands-on experience that enables you to be a top-notch candidate in job and graduate school interviews.

The Office of Service Learning and Undergraduate Research helps students find service learning courses and meaningful long-term community service experiences. In addition, it advises and supports faculty members and community partners who are providing experiences that integrate academic learning and civic engagement.

## Service Learning Courses

The list of service learning courses grows and changes each semester as UAB faculty are continually developing new courses and integrating service learning into existing courses. Eligibility to participate in a service learning course depends on the particular course requirements as established by the department and professor.

For the most up-to-date list of service-learning courses available, perform an Advanced Search in the UAB Class Schedule, and select "Service Learning" in the attribute box.

For details on international service learning opportunities, see [www.uab.edu/educationabroad](http://www.uab.edu/educationabroad).

For More Information on Service Learning:

- [www.uab.edu/service-research/](http://www.uab.edu/service-research/)
- [www.facebook.com/UABServiceLearning](https://www.facebook.com/UABServiceLearning)
- Twitter: @UABServeLearn

## Undergraduate Research

As one of the 108 institutions in the nation currently classified as a "Very High Research University" by the [Carnegie Classification of Institutions of Higher Education](#), UAB attracts students, faculty, and staff from all over the world to engage in groundbreaking, innovative research across the disciplines. As an undergraduate student, you have the opportunity to participate in research, investigation, performance, scholarship, or creative activities in collaboration with a mentor to enhance and illuminate your learning.

The Office of Service Learning and Undergraduate Research helps students engage in research, scholarship, and creative activities in collaboration with a faculty mentor via an academic course or through an independent project. The office also provides opportunities for students to showcase their scholarship through the Spring, Summer, and Fall Expo events. In addition, it provides programming and workshops to students and faculty members to advance, facilitate and promote undergraduate research.

## Undergraduate Research Courses

Eligibility to participate in a research-designated course depends on the particular course requirements as established by the department and professor. The list of undergraduate research courses grows and changes each semester.

For the most up-to-date list of research courses available, perform an Advanced Search in the UAB Class Schedule, and select "Undergraduate Research" in the attribute box.

For details on international undergraduate research opportunities, see [www.uab.edu/educationabroad](http://www.uab.edu/educationabroad).

For More Information on Undergraduate Research:

<https://www.uab.edu/service-research/>

<https://www.facebook.com/UABUndergradResearch/>

# Accelerated Learning Opportunities

## Accelerated Learning Opportunities

UAB offers several options for high-achieving undergraduates to accelerate the time and cost necessary to complete both their undergraduate and graduate degrees. These include Accelerated Bachelors/Masters Programs (ABM), Fast-Track programs, and Early Acceptance. For more information visit: <https://www.uab.edu/graduate/programs/accelerated-learning-opportunities>

## Accelerated Bachelors/Masters Program

The accelerated bachelors/masters (ABM) program allows undergraduate students to share credits toward both an undergraduate and graduate degree. Through ABM, an undergraduate student can take courses that count simultaneously toward their undergraduate and graduate programs. Once admitted, an ABM student can take up to 12 hours of approved 500/600-level graduate courses that will count towards both the undergraduate and graduate degree. This can significantly shorten the time it takes to earn a master's degree.

### Requirements

UAB undergraduate, degree seeking students may start the ABM program once they have earned 60 or more undergraduate hours, at least 36 of which must be earned at UAB. ABM differs from traditional Fast-Track programs in that, at the time of application, eligible students must have a UAB undergraduate grade point average of at least 3.5 (or higher if required by their program). Programs may require a higher GPA for admission and/or not permit the full 12 hours to be shared between programs. Post-baccalaureate students are not eligible to apply to an ABM or Fast-Track program.

Permission to take graduate courses will be granted by the Graduate School if the student has met the criteria above as well as other minimum requirements for graduate admission. Upon admission to the Graduate School, an ABM student will begin a program of study leading to the master's degree, as approved by his or her department and by the Graduate School. Students must maintain a cumulative GPA of 3.0 or higher in all graduate and undergraduate coursework. Programs may set higher requirements or require specific grades in individual courses.

In addition to any graduate-level coursework taken in a given term, undergraduate students enrolled in an Accelerated Bachelor's/Master's program must enroll in a minimum of 6 undergraduate hours. ABM hours approved as shared credit count toward this minimum. Students enrolled in a summer term OR in the final semester of their undergraduate program who have less than 6 hours remaining are exempted from this requirement. ABM students must submit an application for degree and graduate in the term in which undergraduate degree requirements are met, at which point they will transition to graduate student status. Other exceptions to this policy must be approved by the Graduate School.

### How to Apply

Students who meet the above requirements are eligible to apply to an ABM program after completing the following steps:

- Meet with Accelerated Learning Opportunities Advisor to confirm eligibility and review application requirements.

- Meet with Undergraduate Advisor and the relevant Graduate Program Director(s) to discuss program requirements.
- Complete the [ABM program Application Form](#) (including all approvals) and return it to the Graduate School.
- Submit departmental application materials (as required by program).

### Program Completion

Upon completing an undergraduate degree, students will be recertified as graduate-level degree-seeking students and charged the graduate tuition rate.

## Fast Track Programs

Fast Track programs allow students to apply to master's degree program before finishing their undergraduate degree. Beginning graduate coursework while enrolled as an undergraduate allows students to pay undergraduate tuition rates and accelerate the time needed to complete their master's degree. While hours cannot be shared between the two programs, certain masters programs allow students to waive equivalent course content covered while enrolled in their undergraduate degree.

### Requirements

Requirements vary by program, but typically require at least 60 undergraduate hours, at least 36 of which must be earned at UAB, and a 3.0 GPA to enroll in master's courses.

Additionally, individual programs may specify required prerequisite courses, only be available to certain undergraduate majors, or require the completion of the bachelor's degree prior to admission.

In addition to any graduate-level coursework taken in a given term, undergraduate students enrolled in a Fast-Track program must enroll in a minimum of 6 undergraduate hours. Students enrolled in a summer term OR in the final semester of their undergraduate program who have less than 6 hours remaining are exempted from this requirement. Fast Track students must submit an application for degree and graduate in the term in which undergraduate degree requirements are met, at which point they will transition to graduate student status. Other exceptions to this policy must be approved by the Graduate School.

### Program Completion

Upon completing an undergraduate degree, students will be recertified as graduate-level degree-seeking students and charged the graduate tuition rate.

## Early Acceptance to Graduate School

Early Acceptance Programs are designed for academically superior high-school students. Early Acceptance Programs allow high achieving students to be conditionally admitted into a graduate program at the same time they are admitted to an undergraduate program.

### Requirements

Eligible students will be notified at the time of matriculation. In order to maintain eligibility for the Early Acceptance program, students must maintain a 3.5 UAB undergraduate GPA, meet all relevant pre-requisites of the program they wish to pursue, and maintain continuous enrollment while at UAB.

## Admission to Undergraduate Programs

UAB welcomes applications from all individuals whose preparation and abilities give them a reasonable chance of success in its programs. All applicants must offer acceptable evidence of ability and intent to meet the academic standards of the university. Admission decisions are based on a number of factors including a previous record of satisfactory academic performance, strength of curriculum, and test scores. Admission to the university is valid for one academic year.

The application for admission, application instructions, and application deadlines can be accessed at <http://www.uab.edu/chooseuab>. Applications are processed in the order in which they are complete and ready for a decision.

Credentials and documentation required for admission vary by application status. To be considered official, all academic documents required for admission must be sent to UAB directly from the high school, colleges/universities attended, and testing agencies. All credentials submitted as part of the application for admission become and remain the property of the university and will not be returned to the student, duplicated, or transferred to another institution.

Any change in a student's record prior to enrollment will necessitate a new review of the application. Any omissions or misrepresentations on a student's application for admission will automatically invalidate consideration by and acceptance to UAB. If, after a student is admitted to the university, information comes to light that indicates an applicant did not meet all admission requirements, the applicant's offer of admission will be rescinded and the applicant will be withdrawn from the university.

## Priority Application Deadlines

Prospective students are encouraged to apply well in advance of the date of the desired term of enrollment but no more than one year.

Entry Term	Deadline
Fall	June 1
Spring	November 1
Summer	May 15

The application for admission, application fee, and all supporting official academic documents must be complete and received in the Office of Undergraduate Admissions by 5 p.m. on the respective deadline date. If the deadline falls on a weekend or university holiday, applications will be considered the following business day.

## Admission to Specific Schools or Programs

Admission to the university as an undergraduate student may not be the final step required to gain admission to the desired school or academic program. For the undergraduate programs listed below, additional steps or requirements are required:

- College of Arts and Sciences (Bioinformatics, Cancer Biology, Immunology, Music, Musical Theatre, Neuroscience)
- School of Education (Teacher Education Program)
- School of Engineering

- School of Health Professions
- School of Nursing

Further information on the additional steps required is given in the section of this catalog devoted to the particular school/college.

## Declaration of School and Major

Applicants are asked to indicate an intended major field of study on the application for admission. Applicants who do not have a general field of interest may request admission as Undeclared. International students must declare a major.

## Admission Appeal

Applicants denied admission to the undergraduate program who believe they have extenuating circumstances that might justify a different decision may appeal for further consideration.

## Freshmen

Entering freshmen who are admitted through this procedure must participate in the Blazing Start program with terms and conditions set forth by the appeals committee.

## Non-Traditional Freshmen, Transfer students, Returning UAB students

Applicants who are admitted through this procedure:

- Will be admitted to and advised in the Vulcan Materials Academic Success Center.
- Must adhere to all policies and procedures of academic probation status.
- Must limit the first-term course load to a maximum of 12 semester hours.

Applicants who wish to appeal should contact Undergraduate Admissions for details.

## Advanced Placement (AP), International Baccalaureate (IB), College Level Examination Program (CLEP)

UAB awards credit to students who have earned designated scores on Advanced Placement (AP) Program examinations of the College Board. AP examinations are usually taken at the end of an AP-designed course of study in high school. Credit, if awarded, will be recorded without grades or quality points and will not, therefore, be included in the calculation of the grade point average.

Credits awarded by other institutions for Advanced Placement (AP), International Baccalaureate (IB), and the College Level Examination Program (CLEP) must be reevaluated to determine if credit will be awarded at UAB. Students wishing to submit such credits should send an official score report to the Office of Registration and Academic Records.

UAB score requirements for Advanced Placement, International Baccalaureate, and the College Level Examination Program are available online (<https://www.uab.edu/admissions/apply/credit-equivalencies>).

## Equal Opportunity Policy

UAB administers its educational programs and activities, including admission, without regard to race, color, religion, sex, sexual orientation,

age, national origin, disability unrelated to job performance or Vietnam-era or disabled veteran status. The full text of this policy can be found [here](#).

## Office of Undergraduate Admissions

**Mailing Address for Documents and Credentials:** Box 99 • 1720 2nd Ave S • Birmingham, AL 35294-4600

**Physical Address:** 1701 11th Avenue South • Birmingham, Alabama 35294-4412

(205) 934-8221 or (800) 421-8743 • [ChooseUAB@uab.edu](mailto:ChooseUAB@uab.edu)  
([undergradadmit@uab.edu](mailto:undergradadmit@uab.edu)) • [www.uab.edu/chooseuab](http://www.uab.edu/chooseuab)

## Freshman Admission

UAB employs a holistic approach when reviewing candidates for admission to the university. Consideration for admission is based on a variety of performance factors including strength of curriculum, grade point average (GPA), test scores, etc. All applicants are considered on an individual basis.

College preparatory curriculum requirements:

Subject	Units	Description
English	4 units	To include composition and literature
Science	3 units	To include two courses with laboratory components
Mathematics	3 units	To include algebra I and II, geometry, pre-calculus or other college preparatory or advanced level senior math
Social Science	3 units	History, psychology, sociology, etc.
Additional Core Courses	4 units	

## Home-Schooled Students

UAB welcomes applications from students who are schooled at home. Home schooled high school students are reviewed for admission and for academic scholarships following the same criteria utilized for students who attend public and private high schools. The official high school transcript should contain the titles of courses in each subject area beginning with grade nine, course grades, overall GPA on a 4.0 scale, course grading scale, signature and contact information of the school administrator.

## Freshman Enrollment Deposit

All first-time freshmen are required to pay a non-refundable \$200 Freshman Enrollment Deposit to secure a place in the entering class. The Freshman Enrollment Deposit covers the cost of Blazer Beginnings New Student Orientation and associated enrollment fees. Students may not apply for on-campus housing or make a reservation for [Blazer Beginnings New Student Orientation](#) until the Freshman Enrollment Deposit is submitted.

Deadline: May 1 to submit the Freshman Enrollment Deposit or request a deferral of payment.

**Deferral Requests:** Entering freshmen who have demonstrated financial need may request a deferral of payment. Deferrals will only be granted for students who have submitted a [Free Application for Federal Student Aid \(FAFSA\)](#) to UAB.

**Exemptions:** First-time freshmen who (1) enroll in the spring semester and/or (2) graduated from high school three years ago or more.

## Adult Learner

Applicants who graduated from high school three or more years ago and have not attended college are considered non-traditional, adult learners. Visit the [Undergraduate Admissions](#) website for admission requirements and deadlines.

## Transfer Admission

Applicants with a minimum of 24 transferable college semester hours (not including dual enrollment coursework earned while attending high school) must:

1. Have a minimum grade point average of 2.0 in all such work, including courses granted academic clemency, bankruptcy, or forgiveness.
2. Be considered in good standing at all previously attended colleges or universities.

Applicants who have earned college credits, but fewer than 24 semester hours, must have a 2.0 grade point average in all transferable college work attempted and also satisfy freshman admission requirements (See ["Freshman Admission"](#)). (p. 46)

## Eligibility of College Credits for Transfer

The eligibility of credit for transfer to UAB depends both on the subject matter of the credit and on the accreditation status of the institution that awarded the credit.

The evaluation and awarding of transfer course credit is based on review of official transcripts. Students are required to submit official transcripts, sent directly to UAB, from all postsecondary institutions attended. Students do not retain the right to choose, or eliminate certain courses for transfer. All academic transfer work will be posted to the UAB transcript, including courses with final grades of D's, F's, and WF's. This includes instances when a student has repeated a course. All occurrences of the course, including grade, will be posted to the UAB transcript. Courses for which a student has been granted academic clemency, bankruptcy, or forgiveness, by the institution at which the course was completed will not be posted to the UAB transcript. However, those courses and grades are included in review for admissions purposes.

Technical/vocational credits or remedial credits, whether earned at UAB or at any other institution of higher education, are not eligible for transfer and may not be used to satisfy degree requirements. The exception to this rule is when the transfer of certain courses applicable to specific professional degree programs are approved in advance by the appropriate department. The accepted courses will be posted only while the student is in the degree program approving the credit. If the student changes programs, the courses will be removed. Credits earned while on academic suspension from UAB or another institution may be eligible

for transfer. However, the UAB forgiveness policy can only be applied to grades earned at UAB.

Transfer credit in academic subjects will be considered for transfer to UAB from post-secondary institutions that are fully accredited by one of the six regional accrediting associations (see below) that offer the baccalaureate degree or associate's degree leading to the baccalaureate degree. If an institution is not yet accredited, but has acquired candidate status from a regional accrediting agency, then academic credits from the institution will be considered for transfer to UAB.

- Middle States Commission on Higher Education (MSCHE)
- Higher Learning Commission (HLC)
- New England Commission on Higher Education (NECHE)
- Northwest Commission on Colleges and Universities (NWCCU)
- Southern Association of Colleges and Schools Commission on Colleges (SACSCOC)
- Western Association of Schools and Colleges Accrediting Commission for Schools (WASC ACS)
- Western Association of Schools and Colleges Accrediting Commission for Community and Junior Colleges (WASC ACCJC)

Academic credit earned at Alabama Community Colleges during the initial organization of the Alabama College System (1965-1967) will be acceptable for transfer to UAB.

College courses completed at unaccredited non-candidate institutions are not usually considered for transfer to UAB. However, applicants with credits in this category may contact the Office of the Registrar for information on the Credit by Portfolio option. The official determination of acceptability of courses from other institutions is the responsibility of the Office of the Provost.

Students with credits from institutions outside the United States should review [transfer of international credits](#).

Credits awarded by other institutions for Advanced Placement (AP), International Baccalaureate (IB), College Level Examination Program (CLEP) and Advanced International Certificate of Education (AICE) must be reevaluated to determine if credit will be awarded at UAB. Students wishing to submit such credits should send an official score report to the Office of the Registrar.

## Limitations of Transferred Credit

One half of the credit hours required for a degree may be transferred from a two-year college provided the courses are numbered as freshman-level (100) and sophomore-level (200) courses.

## Acceptance of Transfer Credits toward a Degree

College-level coursework transferred from a regionally accredited institution will be shown on the UAB transcript (Post Baccalaureates excluded); however, applicability of the course toward a degree is determined by the student's major department.

## Appeal Process for Transfer Credit

If a student disagrees with a transfer credit evaluation, the student must submit further information to a transfer articulation specialist to initiate an

appeal of the evaluation. Supporting documentation can include, but is not limited to, a course outline, syllabus, or textbook.

Transfer Articulation will review all supporting documentation in coordination with the academic department and will amend the original evaluation if a change is warranted. Once a secondary review has been completed the decision is final.

## Admission as an International Student

An international student is defined as any applicant who is not a US citizen or permanent resident. International students should apply at least six months in advance of desired attendance date in order to facilitate timely admission and enrollment.

### Freshman Admission

Minimum admission requirements for applicants who have completed secondary school abroad under a grading system different from the US system:

1. Minimum overall GPA of 2.75 on a 4.0 US grading scale based on UAB's evaluation of the secondary school transcript.
2. English proficiency exam\* if English is not the applicant's native language; or ACT/SAT score if English is the applicant's native language.

*An English proficiency score is not required if the applicant has attended a US high school for at least two years; additional scores will be required.*

### Transfer Admission

Minimum admission requirements for applicants who have attended a college or university outside the US:

1. Minimum overall GPA of 2.0 on a 4.0 US grading scale based on UAB's evaluation of post-secondary school transcripts.
2. English proficiency exam\* if English is not the applicant's native language.

*NOTE: Applicants who have earned fewer than 24 semester hours at a postsecondary institution must also meet the minimum admission requirements for freshmen.*

\* Please refer to <https://www.uab.edu/admissions/apply/international> for a complete list of current acceptable exams.

### Student Visa

To obtain immigration documents for an F-1 or J-1 student visa, applicants must provide an affidavit of financial support; an original or certified copy of a bank statement confirming a balance sufficient to cover the first year's tuition, fees, and living expenses; and a transfer clearance form if transferring from another school within the US.

To meet the requirements of the F-1 visa, international students must be enrolled full-time. Full-time students are defined as those earning a minimum of 12 semester hours of credit for two consecutive semesters.

International students who will not need an F-1 or J-1 visa because they hold a different immigration status within the US must email a copy of their USCIS Form I-797 approval notice for their current immigration and a copy of the biographical page of their valid passport to UAB's Office of International Student and Scholar Services, [iss@uab.edu](mailto:iss@uab.edu).

## Health Insurance

All international students are required to register with the UAB Student Health Service and to carry a health and accident insurance policy approved by UAB Student Health Service. International students in J-1 status must carry a health insurance policy that meets the Department of State's regulatory coverage minimums.

## Readmission of Former UAB Students

Former students who have not been enrolled in undergraduate courses at UAB for one academic year or more must apply for readmission. Former students are subject to the same conditions as newly-admitted students.

Former UAB students who are returning to continue their programs of study should consult with their academic advisor or department chair to determine whether curriculum or degree requirements have changed since their last enrollment.

## Post-Baccalaureate Admission

### Degree Seeking

Persons with a baccalaureate degree who wish to seek a second baccalaureate degree must apply by the published deadline and have a minimum grade point average of 2.0 in all undergraduate coursework attempted.

### Non-Degree Seeking

Persons with a baccalaureate degree who wish to:

1. Meet prerequisites for advanced programs or
2. Satisfy requirements for professional certification

Must apply by the published deadline and submit an official transcript from the college or university from which the baccalaureate degree was earned.

## Admission as a Non-Degree Student

Students who wish to enroll in undergraduate courses with no intent of pursuing a degree should apply by the published deadline to be considered as a non-degree seeking student (Temporary, Transient, and Non-Degree Post-Baccalaureate). The following restrictions apply to non-degree students:

1. Ineligible for financial aid or priority registration.
2. If a course is over-enrolled, non-degree students may be dropped in favor of degree-seeking students.
3. May not participate in intercollegiate sports.

### Temporary

A prospective student seeking personal enrichment or career enhancement may be admitted as a Temporary student. Temporary students are limited to applying a maximum of 24 semester hours to a UAB degree program.

Applicants in this category must be at least 25 years of age unless enrolling in an approved certificate program. Students must provide a letter of good standing if they have attended another college or university within the last year.

## Transient Students

Persons who want to transfer credit earned at UAB back to their home institution where they are enrolled as a full-time student may be admitted as Transient students.

Requirements: Applicants for Transient status must submit an official transcript or letter of good standing from the home institution. Enrollment as a Transient student is typically for one term, with a maximum of two consecutive semesters.

## Change from Non-Degree to Degree Status

A student with a non-degree classification who wishes to change to a degree-seeking classification must reapply for admission by submitting an application for admission, application fee, and all required transcripts. To be admitted as a degree-seeking student, the individual must:

1. Meet the published application deadline and admission requirements.
2. Submit all documentation required for a degree-seeking applicant.

## Concurrent Enrollment and Dual Enrollment/Dual Credit

UAB welcomes applications from exceptional high school students who wish to earn college credit while still enrolled in high school. Evidence must be presented that enrollment at UAB would enhance the student's educational experience beyond that available in high school.

Requirements include:

1. Enrolled in 10th grade or higher.
2. A minimum overall grade point average of 3.0.
3. A letter of permission from a parent or guardian.
4. A letter of support from the high school counselor acknowledging the student's appropriate preparation based on high school courses completed or in progress.
5. A one-page essay stating addressing motivation for taking courses at UAB (concurrent enrollment only).
6. An ACT or SAT score is recommended, but not required.

## Concurrent Enrollment

Students may apply for Concurrent Enrollment in order to take courses as a non-degree student at UAB, while concurrently enrolled in high school. This option may be appropriate for students whose high schools do not participate in the Dual Enrollment/Dual Credit program.

## Dual Enrollment/Dual Credit

The Dual Enrollment/Dual Credit option is available only to those students whose high schools have a formal Dual Enrollment/Dual Credit agreement with UAB. Students may apply for dual enrollment/dual credit in order to take courses as a non-degree student at UAB while still completing high school and apply credit earned at UAB both toward college requirements and toward the high school diploma.

Individual courses taken by dual enrollment/dual credit must be pre-approved by the student's high school. Prior to each term of enrollment under the dual enrollment/dual credit option, the student must submit a letter from the high school identifying the pre-approved course(s) to be taken for dual credit.

## Admission as an Auditor

Applicants who wish to audit credit courses must follow standard admission procedures and meet minimum admission requirements.

## Completion of a Degree

### Requirements

#### Baccalaureate Degrees

Requirements for the baccalaureate degree at UAB include at least 120 semester hours of appropriately distributed courses, a UAB GPA of 2.00, a 2.00 GPA on all college work attempted (Higher Education grade point average), and satisfaction of the Core Curriculum, major, minor (if required), and residency requirements, along with all other criteria specified by the school or department governing the major.

Students are subject to the catalog policies in effect at the time of their most recent admission as a degree-seeking student, with the following exceptions. Seven years after the date of their first enrollment as a degree-seeking student, policies of the catalog currently in effect become applicable. The student who is not enrolled at UAB for 12 consecutive months must meet the requirements of the catalog in effect at the time of re-enrollment. For courses required for the major or minor, the administering department(s) may establish written policies for the re-certification of courses taken more than seven years previously.

### Residency

At least 25 percent of the total semester hours required for graduation must be taken at UAB. At least 21 of the last 30 semester hours must be taken at UAB or on a program supported by the UAB Office of Education Abroad. Courses taken as alternative credit or as a non-degree student (excluding post-baccalaureate students) may not be used to satisfy the residency requirement. A minimum of nine semester hours required for the major (at or above the 400 level) must be completed at UAB or on a program supported by the UAB Office of Education Abroad. Individual departments may have additional requirements.

### Total Credits and Averages

The minimum total credit hours required for a baccalaureate degree is 120 semester hours. The student must have a higher education grade point average of at least 2.00 (C) in all credit hours attempted at all institutions including UAB and an average of at least 2.00 (C) in all credit hours attempted at UAB.

### Distribution of Credits

In addition to the overall requirements mentioned above, there are important requirements for the distribution of credits. All programs of study leading to the baccalaureate degree have as an essential component a common Core Curriculum. Students majoring in the Schools of Business, Education, Engineering, Nursing, and Health Professions satisfy Core Curriculum requirements in addition to specific school requirements and requirements in their chosen major(s). In the College of Arts and Sciences students meet Core Curriculum requirements, requirements for a major specialization, and any requirements for a minor, specialization or concentration, if required.

### Major

Requirements for majors vary and can be found in the sections of this catalog on the specific academic unit responsible for the major. A

minimum C average in the major is required for graduation. Furthermore, the academic unit responsible for the major may require the student to repeat, or otherwise compensate for, any course required for the major in which a grade below C was earned. Majors should be declared or changed online. Some majors are subject to additional admission requirements and enrollment limitations.

## Double Major

Students who wish to double major must maintain an affiliation with one school and graduate under that school's core curriculum and major requirements. In addition, the student must complete the requirements for the second major including all prerequisites. It is important for students to maintain contact with advisors of both majors so that requirements are completed for both majors.

## Dual/Multiple Degrees

A bachelor's degree is based on at least 120 semester hours of coursework. For each additional degree, a student must complete at least 30 semester hours of work over and above the work done for the first degree. As with the first degree, work done for each additional degree must include any necessary prerequisites for the new major and all major requirements. The residency requirement must be met for each degree.

## Second Bachelor's Degree

After graduating with a bachelor's degree, a student may earn a second bachelor's degree by completing in residence, with an average of C or better, at least 30 semester hours of work taken subsequent to awarding of the first degree. Work done for the second degree must include any necessary prerequisites for the new major and all major requirements. Core requirements are considered fulfilled by the first degree. The first degree, whether earned at UAB or another regionally accredited institution, must be based on at least 120 semester hours of fully accredited work. No minor is required for the second degree. A student interested in earning a second degree is required to have the program of study approved by the school in advance.

## Minor

The availability of minors is indicated in the sections of this catalog on the various schools. The course requirements for the minor are specified in the catalog section for the department offering the minor. The department offering the minor may require the student to repeat, or otherwise compensate for, any course required for the minor in which a grade below C was earned. Whether a minor is required for a particular major is specified in the catalog section for the school in which the major resides.

## Individually Designed Majors and Minors

Students with specific career goals or with unique intellectual objectives may propose majors and minors designed to meet their individual academic needs. The Individually Designed Major/Minor is designed to assist the student who would like a major or minor for which there is no established curriculum. The following policies govern the program:

1. The student must be enrolled at UAB with a degree-seeking status
2. The student is expected to meet all core curriculum, general studies, school, and any requirements designated by the dean of the college or school.
3. The student must satisfy all university policies for completion of a degree. This includes the university's residency and capstone requirement.

4. A comprehensive academic proposal should be submitted which includes a rationale for pursuing the individually designed major/minor as well as a list of academic objectives and learning outcomes must accompany your application.
  - a. The proposal may include your academic interests, reasons why you are passionate about the topic you have chosen as a major, societal significance of the topic, the courses you have chosen, and your career goals.
  - b. The proposal must be focused, organized, detailed, and thorough. At least 3.5 pages in length, double-spaced, and grammatically correct.
  - c. The proposal should articulate educational goals for critical thinking, knowledge, and delineate the expectations for your educational experience.
  - d. In addition, the proposal should contain a list of learning outcomes. The learning outcomes articulate what you will be able to do at the end of your studies. These can be knowledge-based or skills-based outcomes. A minimum of 5 to 6 outcomes are expected.
5. An Individually Designed Major must have a minimum of 40 semester hours with 20 hours at the 300 level or above (including 9 hours at the 400-level or above). An Individually Designed Minor requires 21 semester hours with 9 hours at the 300-level or above. All courses must be passed with a 'C' or higher. A course may not be used to satisfy both a major and minor requirement.
6. A student should first submit an application for IDM to an academic advisor in the school most directly associated with the proposed program of study. The student and advisor should develop a plan of course work to meet the goals of the IDM. The application must be approved by the appropriate department chair (if applicable) and dean of the college or school. Any changes from the originally approved program must also be approved by the dean. Substitutions for courses are rare and must be submitted by the student's academic advisor and approved by the dean.
7. When the proposal is completely approved it will be filed with the Office of the Registrar. A student will not be recognized as an Individually Designed Major/Minor until their program has been filed.
8. Certain schools cannot award degrees for Individually Designed Majors/Minors due to accreditation requirements. Students should discuss this with their academic advisor.

The Individually Designed Major or Minor must be reviewed and approved by the departments involved, by the dean of the school in which the degree will be awarded, and by the Office of the Registrar. For advising on program development consult your academic advisor.

For approval procedures, consult the Office of the Registrar, [registrar@uab.edu](mailto:registrar@uab.edu); 1300 University Blvd. Campbell Hall 117A, Birmingham, AL 35294.

## Limitations on Some Types of Credit

For some types of credit, there are limitations on the amount that can be applied toward the minimum hours required for a baccalaureate degree (usually 120 semester hours).

1. For credits transferred from a two-year college, the limit is no more than one-half the number required for a baccalaureate degree, provided that the work is freshman (100) or sophomore (200) level.
2. For alternative work, including Advanced Placement, College Level Examination Program, credit by examination, evaluation of non-collegiate-sponsored courses, credit for military services courses,

International Baccalaureate credit, and credit by portfolio, the limit is no more than 45 semester hours.

## Bachelor's Degree with Honors

The Higher Education grade point average is used in conferring academic honors at graduation and is based on all college work attempted. Honors designations are conferred according to the following GPA Ranges:

GPA Range	Designation
3.50 - 3.69	cum laude
3.70 - 3.89	magna cum laude
3.90 or above	summa cum laude

Honors designations at commencement are based on the grades reported at the end of the previous term and may not reflect all earned honors.

## Procedures for Applying for a Degree

Students are advised to file an online application for degree at least two terms prior to completing work for a baccalaureate degree. This will allow time for the application to be processed and completion of degree requirements to be verified. The absolute deadline to apply for degree is the tenth day of the term in which the student plans to graduate. Online applications are available at <http://www.uab.edu/commencement/degree-applications>.

## Graduation

Official UAB graduation ceremonies are held in April, August, and December for graduates of the preceding semester or term. Graduates are listed in the commencement program for that term. Students who have completed the requirements for baccalaureate degrees are urged to attend.

Students receive their diplomas approximately four to six weeks after the end of the regular term in which they complete their degree requirements, provided the application for degree is submitted by the published deadline. Diplomas are considered ceremonial documents which will list the name of the degree awarded only. The academic transcript will list the full program of study including majors, minors, concentrations and certificates earned.

Please visit the commencement website for additional information <http://www.uab.edu/commencement>.

## Early Medical School Acceptance Program (EMSAP)

The Early Medical, Dental, and Optometry School Acceptance Programs are undergraduate and professional school educational programs that provide highly qualified students an enriched undergraduate experience in preparation for medical, dental, or optometry school. They provide a path to medical, dental, or optometry school while offering undergraduate students maximum flexibility in exploring the humanities, neurosciences, social sciences, or any other major. The three programs are commonly referred to as EMSAP although they include both dental and optometry school.

After successful completion of program requirements and graduation from an undergraduate program at UAB, EMSAP assures highly motivated

undergraduates admission to the UAB School of Medicine, UAB School of Dentistry, or UAB School of Optometry.

For further information, including criteria for remaining in good standing in EMSAP, please see the EMSAP web site at: <http://www.uab.edu/emsap/>.

## English Language Programs, INTO UAB

### INTO UAB

At INTO UAB, international students join a supportive community committed to helping them integrate with ease into American university life while preparing for degree studies. Unique programs help improve academic and English language skills, and helpful faculty and staff ensure students adjust to life in the US. Students studying in the INTO UAB Center have all the benefits of campus life at an American university. Living and learning in the heart of UAB's campus, international students develop friendships with American and international students and have access to all of the academic, social and cultural resources and activities at The University of Alabama at Birmingham.

### Pathway Programs

INTO UAB offers academic Pathway programs designed to prepare students to progress with confidence to UAB undergraduate and graduate degree programs.

### Academic English Program

The Academic English program at INTO UAB prepares international students for university study in the US. This academically rigorous program provides international students with high-quality English language instruction and the academic skills to succeed at UAB through development of:

- Listening
- Speaking
- Reading
- Writing
- Vocabulary and pronunciation skills
- Correct grammar usage
- Academic study skills

### Program Highlights

- Intensive English instruction to prepare for university study
- Academic advising and support throughout the program
- Small class sizes
- Highly trained and experienced instructors

### Program Courses

#### Level 1-2

- Integrated Skills
- Vocabulary Building
- Writing
- Reading

#### Level 3-5

- Grammar in Use
- Academic Listening and Speaking
- Academic Reading
- Academic Writing

## Program Outcomes

After finishing this intensive program, successful students will be able to:

- Interact comfortably in the US classroom with professors and fellow students
- Understand US values in an academic setting
- Present their spoken and written ideas accurately and effectively in English
- Write research papers with proper use of citations and references
- Use the internet and UAB libraries databases to conduct academic research
- Read, understand and critically evaluate academic texts
- Understand and use vocabulary common to academic disciplines
- Take useful and accurate notes in academic lectures and presentations
- Develop and deliver oral presentations

## Understand the Pathway Program

INTO UAB's Undergraduate Pathway program combines intensive language study, academic skills development and academic coursework in a program designed to move students successfully through the first year of their four-year degree program of study in the US.

The Undergraduate Pathway program is for students who:

- Want to study for an undergraduate degree in the US
- Desire additional academic, language and cultural support in order to succeed during the first year at a US university
- May need to improve English language skills
- May have a lower GPA than required for direct admission to degree program
- Meet any or all of the above criteria

In addition to intensive English instruction, Pathway students take core academic courses including math, science, writing and other courses required of all students, domestic and international. All Undergraduate Pathway courses are UAB credit-bearing courses. Undergraduate Pathway programs are available in the fall, spring and summer semesters. Some programs will require taking courses in the summer in order to complete the degree in four years. Programs such as engineering may require a fifth year to complete a bachelor's degree.

## Program Benefits

Pathway students receive the highest level of support during their transition abroad, making the program an ideal choice for international students who are driven to achieve high academic goals. Other benefits include:

- Guaranteed progression to a UAB degree program (upon successful completion of a Pathway program)
- Full integration with domestic and international students on the UAB campus
- Access to all UAB cultural events, athletic events and activities including UAB's state-of-the-art recreation center

- Classrooms and accommodations in the heart of UAB's compact and accessible campus with shopping, dining and other services located nearby
- Individual supplemental tutoring
- Highly trained and experienced university instructors
- Academic advising throughout the program

## Prepare for Success

At the end of the first year, Pathway students should be able to:

- Communicate effectively in written and spoken English
- Interact fully with professors and fellow students in a US classroom setting
- Understand research, reference and citation standards for American academic papers
- Use on-campus technology including computer hardware and software
- Read, comprehend and critically evaluate academic texts and problems
- Take useful and accurate notes in academic lectures

## Undergraduate Pathway Programs

- Business
- Computer and Information Science
- Engineering
- General Studies
- Public Health
- Science

## Graduate Pathway

The innovative Graduate Pathway Programs offered at INTO UAB are designed to develop international students' academic knowledge and strengthen their language ability and study skills, enabling them to progress successfully to a UAB graduate degree program.

There are two Pathway options for students with the equivalent of a four-year undergraduate bachelor's degree:

### Standard Pathway (two semesters)

- Students with an equivalent four-year bachelor's degree **and**
- TOEFL iBT 65+, IELTS 5.5 or completion of Academic English Level 4.

### Accelerated Pathway (one semester)

- Students with an equivalent four-year bachelor's degree **and**
- TOEFL iBT 80+, IELTS 6.5

### Decide if the Program is Right for You

The Graduate Pathway program is for students who:

- Want to study for a graduate degree in the US
- Desire additional academic, language and cultural support in order to succeed during the first year at a US university
- May need to improve English language skills

- May have a lower GPA than required for direct admission to degree program
- Meet any or all of the above criteria

#### Graduate Pathway Programs at UAB:

- Master of Science in Biotechnology
- Master of Business Administration (MBA)
- Master of Science in Computer Science
- Master of Science in Data Science
- Master of Science in Civil Engineering
- Master of Science in Electrical Engineering
- Master of Science in Materials Engineering
- Master of Science in Mechanical Engineering
- Master of Engineering Management
- Master of Science in Public Health
- Master of Science in Cyber Security
- Master of Public Administration
- Master of Arts in TESOL
- Master of Educational Studies
- Master of Physics

## Courses

### ELI 010. ELI Session. 10,20 Hours.

This course registers students as full-time or part-time students in Banner.

### ELI 011. Reading Level 1. 0 Hours.

Students will learn reading skills to get meaning from simple non-fiction, non-academic texts in English. Students will learn general vocabulary.

Objectives: Students will read at least 14 non-fiction non-academic texts of up to 200 words in English. The texts are written for use with Level 1 students. Students will learn and practice basic reading skills and strategies, text analysis, and vocabulary skills. Students will learn the form, meaning, and pronunciation of vocabulary in the readings.

### ELI 012. Integrated Skills Level 1. 0 Hours.

Grammar, vocabulary, speaking, and listening will be learned and practiced together. Students will learn form, meaning, and pronunciation of simple present, simple past, present continuous, and going to; nouns, adjectives and adverbs. They will practice this language in spoken and written activities. Students will learn and practice form, meaning, and pronunciation of basic vocabulary. They will learn basic speaking skills through practice of grammar and vocabulary in communicative activities. Students will develop basic listening skills to get meaning from classroom and recorded speech that uses the grammar and vocabulary.

### ELI 013. Vocabulary Building Level 1. 0 Hours.

Students will learn basic vocabulary that is useful in daily life, in topic groups including time & calendar, daily activities, family, weather, clothes, food, furniture, and places in town. Students will learn the meaning, pronunciation, and form (spelling, part of speech, plurals and non-count, collocations, and phrasal verbs) of the words.

### ELI 014. Writing Level 1. 0 Hours.

Students will complete at least 10 paragraphs of up to 100 words. Paragraphs will eventually include topic and supporting sentences. Students will follow the process of generating content, analyzing models, organizing content, and writing drafts with teacher, peer, and self-editing. Students will learn and practice Level 1 mechanics, grammar, sentence structure, and functional language for content area.

### ELI 015. Support for Beginners. 0 Hours.

This course is designed to support Level Pre-1 students in their outcomes for ELC 013 Vocabulary Building 1 and ELC 012 Integrated Skills 1.

### ELI 021. Reading Level 2. 0 Hours.

Goals: Students will develop reading skills to get meaning from non-fiction non-academic and simplified academic texts in English. Students will learn general vocabulary. Students will read at least 12 non-fiction non-academic and simplified academic texts of up to 400 words in English. Texts are graded for use with Level 2 students. Students will learn and practice general reading skills and strategies, text analysis, and vocabulary skills. Students will learn the form, meaning, and pronunciation of vocabulary in the readings.

### ELI 022. Integrated Skills: Grammar, Listening and Speaking Level 2. 0 Hours.

Grammar, vocabulary, speaking, and listening will be learned and practiced together. Students will improve their use simple present, simple past, present continuous, and going to; and learn present perfect, present continuous for future, comparatives and superlatives, modals, quantifiers, and basic infinitives and gerunds. They will practice language in spoken and written activities. Students will learn and practice form, meaning, and pronunciation of general vocabulary. They will develop their speaking fluency through communicative activities, and their listening skills to get meaning from classroom and recorded speech. Students will also develop their writing skills through communicative activities.

### ELI 023. Vocabulary Building Level 2. 0 Hours.

Students will learn vocabulary that is useful in daily life, in topic groups including personality, emotions, health, emergencies, errands, workplace, geography, hobbies & sports, and transportation. Students will learn the meaning, pronunciation, and form (spelling, part of speech, plurals and non-count, collocations, and phrasal verbs) of the words.

### ELI 024. Writing Level 2. 0 Hours.

Students will complete at least 4 academic paragraphs of up to 120 words. Paragraphs will include topic, supporting, and concluding sentences. Students will follow the process of generating content, analyzing models, outlining, and writing 2 drafts with teacher, peer, & self-editing. Students will learn and practice mechanics, grammar, sentence structure, and functional language for paragraph genre.

### ELI 031. Academic Reading Level 3. 0 Hours.

Students will read at least 12 non-fiction academic texts of 600-1000 words in English. Texts are those graded for use with Level 3 students, and authentic articles and excerpts. Students will learn and practice basic academic reading skills and strategies, text analysis, and vocabulary skills. Students will learn the form, meaning, and pronunciation of vocabulary in the readings.

### ELI 032. Speaking and Listening Skills Level 3. 0 Hours.

Students will develop their speaking skills to communicate in groups, and give short presentations on general and simplified academic topics. Students will develop their listening skills to get meaning and take notes on graded & authentic conversations and academic lectures. Students will learn basic academic vocabulary on listening and speaking topics. Speaking and listening skills and vocabulary will be studied together with 4 popular and academic topics. Students will develop their communicative speaking skills in topic-based interactive activities. They will give at least 4 short presentations with attention to non-verbal communication. They will receive feedback on their pronunciation and grammar use. Students will listen to at least 4 graded and authentic recorded conversations and academic lectures. They will learn basic lecture note-taking skills with guided outlines. Students will learn form, meaning, & pronunciation of topic vocabulary.

**ELI 033. Grammar: Using English Accurately Level 3. 0 Hours.**

Students will develop their ability to accurately use verb tenses, and relative clauses. Students will apply this grammar in speaking and expository writing. Students will learn form, meaning, and pronunciation of all English verb tenses in contrast. They will learn restrictive and non-restrictive subject and object relative clauses. Students will practice this language in written and spoken controlled exercises, and apply it in freer written and spoken activities.

**ELI 034. Academic Writing Level 3. 0 Hours.**

Students will learn to write short academic essays. Students will complete 4 academic essays of at least 250 words in these genres: descriptive, comparison, opinion, and narrative. Essays will include introduction, body (1-2), and conclusion paragraphs. Students will follow the process of generating content, analyzing models, outlining, and writing 2 drafts with teacher, peer, and self-editing. Students will learn and practice Level 3 language, including adverb and adjective clauses, and functional language for essay genre.

**ELI 041. Academic Reading Level 4. 0 Hours.**

Students will develop reading skills to get meaning from non-fiction academic texts and fiction in English. Students will learn academic vocabulary. Students will read at least 12 texts, including non-fiction academic texts and fiction of 800-1200 words in English. Texts are authentic articles and excerpts. Students will develop their academic reading skills and strategies, text analysis, and vocabulary skills. Students will learn the form, meaning, and pronunciation of vocabulary in the readings.

**ELI 042. Speaking Listening Skills Level 4. 0 Hours.**

Students will develop their speaking skills to communicate spontaneously in groups, and give presentations on academic topics. Students will develop their listening skills to get meaning from and take notes on authentic conversations and academic lectures. Students will learn academic vocabulary contextualized in the listening and speaking topics. Speaking and listening skills and vocabulary will be integrated into 4 academic topics. Students will develop their communicative speaking skills in interactive activities. They will prepare and give at least 4 presentations, with attention to organization and basic visual aids. They will receive feedback on their grammar use and pronunciation. Students will listen to at least 4 authentic recorded conversations and academic lectures, and develop their lecture note-taking skills with guided outlines. Students will learn the form, meaning, and pronunciation of topic vocabulary.

**ELI 043. Grammar: Using English Accurately Level 4. 0 Hours.**

Students will learn and develop their ability to accurately use modals, gerunds and infinitives, articles and nouns, passives, and conditionals. Students will apply this grammar in speaking and expository writing. Students will learn form, meaning, and pronunciation of modals including past, gerunds and infinitives, nouns and article use, passives in all tenses, and conditionals. Students will practice this language in written and spoken controlled exercises, and apply it in freer written and spoken activities.

**ELI 044. Academic Writing Level 4. 0 Hours.**

Students will learn to write longer and more developed academic essays. Objectives: Students will complete 3 academic essays of at least 450 words in these genres: classification, cause/effect, and argument. Essays will include introduction, 3 or more body paragraphs, and conclusion paragraph. Students will follow the process of generating content, analyzing models, outlining, and writing 3 drafts with teacher, peer, and self-editing. Students will learn and practice Level 4 language, including adverb and adjective clauses, and functional language for essay genre.

**ELI 051. Academic Reading Level 5. 0 Hours.**

Goals: Students will expand their reading skills to get meaning from non-fiction academic texts in English. Students will learn academic vocabulary. Objectives: Students will read at least 12 non-fiction academic texts of up to 800-2000 words in English. Texts are authentic articles or excerpts. Students will expand their academic reading skills and strategies, text analysis, and vocabulary skills. Students will learn the form, meaning, and pronunciation of vocabulary in the readings.

**ELI 052. Oral Communication Level 5. 0 Hours.**

Goals: Students will expand their speaking skills to communicate spontaneously on academic topics in small groups, and give professional presentations on academic topics. Students will expand their listening skills to extract meaning from and take notes on authentic academic conversations and lectures. Students will learn academic vocabulary contextualized in the listening and speaking topics. Objectives: Speaking and listening skills and vocabulary will be integrated into 4 academic topics. Students will expand their communicative speaking skills in interactive activities with academic topics and tasks. They will prepare and give at least 4 presentations, with focus on organization and visual aids. They will receive feedback on their grammar and pronunciation. Students will listen to at least 4 authentic recorded conversations and 4 academic lectures, and generate their own lecture note-taking outlines. Students will learn the form, meaning, and pronunciation of contextualized vocabulary.

**ELI 053. Using English Accurately Level 5. 0 Hours.**

Goals: Students will expand their ability to use grammar common to academic contexts such as cause & effect, compare & contrast, narrative, problem & solution, and persuasion. They will apply new and revised grammar in speaking and expository writing in these contexts. Objectives: Students will learn new grammar, and expand on known grammar commonly used in specific academic contexts. They will focus on form, meaning, and pronunciation of various tenses, sentence structures, and functional language used to speak and write academically. Students will practice this language in spoken and written controlled exercises, and apply it in speaking in groups and presentations, and writing in academic contexts.

**ELI 054. Academic Writing Level 5. 0 Hours.**

Goals: Students will develop skills to write academic research papers. Students will develop their citing, quoting, paraphrasing, and summarizing skills, and learn APA format for external sources. They will learn to integrate source information into their essays. Objectives: Students will write 2 research papers of 500-750 words. For an expository essay, students will develop evaluative criteria, conduct on-line research, generate content, outline, and write 2 drafts with teacher, peer, and self-editing. For a reporting essay, students will read published sources on a medical problem, write a rough and detailed outline, and 2 drafts with teacher, peer, and self-editing. Students will expand their ability to quote, paraphrase, and summarize, and learn APA citation format. Students will expand their reading ability and use complex sentence structures.

**ELI 056. Speaking and Listening Assistantship. 0 Hours.**

In this course, students will assist the LRC manager in running Language Partners, which is a program for international students where they get to speak with native English speakers. Students will attend weekly sessions and give a report at the end of each session. As an outcome, students will be able to communicate easily and spontaneously with individuals and in small groups, lead and participate in conversations, ask clarification questions, and show active listening skills by appropriately responding to others.

**ELI 061. Reading. 0 Hours.**

Students will develop reading and vocabulary skills to understand general and academic articles. They will learn and practice taking notes, answering questions, and discussing the readings. They will also learn new vocabulary from the reading topics.

**ELI 062. Speaking and Listening. 0 Hours.**

Students will develop speaking skills in order to be able to participate in American University classes. They will practice speaking to their teacher and classmates. They will speak in small groups and give a short presentation to the class. They will develop listening skills that will enable them to understand conversations and lectures. They will learn vocabulary and practice speaking about these topics using new language and vocabulary.

**ELI 063. Grammar. 0 Hours.**

Students will increase their grammar accuracy and fluency. They will learn and review verb tenses and other grammar forms. They will practice using grammar in writing and speaking activities.

**ELI 064. Writing. 0 Hours.**

Students will develop their academic writing accuracy and fluency. They will learn and practice the content, organization, and language for writing academic paragraphs and essays in American universities.

**ELI 071. Pronunciation/Accent Training I. 0 Hours.**

This course focuses on improving your American English pronunciation and accent. The desired outcome of this course is that your speech will be more easily understood by speakers of English.

**ELI 072. Pronunciation/Accent Training II. 0 Hours.**

This course focuses on continuing to improve your American English pronunciation and accent through practicing previously studied skills in active conversation. The primary desired outcome of this course is that your accent will be more easily understood by speakers of English. The secondary outcome is that you will be more comfortable and fluent when speaking in English.

**ELI 075. Business Listening and Speaking. 0 Hours.**

This course is designed to improve students' business English skills. In particular, listening and speaking skills will be the focus of this course. Business professionals or persons presently working in the U.S. will benefit from the speaking and listening skills learned in this class. The class will also feature business-related vocabulary, idioms, and culture discussions.

**ELI 076. Business Writing Skills. 3 Hours.**

The following are objectives for this course: Improve understanding of the different types of business writing and appropriate use of each type (business letters, emails, memos, reports, cover letters, resumes, proposals); enhance familiarity with common business letter formats, the various parts of a business letter and the purpose of each part; create business English writing that is clear, concise and specific; learn techniques of self-editing; improve the following grammar skills: use of articles, prepositions, gerunds and infinitives, contractions, comma usage, punctuation, recognition of sentence fragments, and appropriate use of adjectives and adverbs; and improve the following language usage skills: formal vs. informal language, linking fragments, numbers in writing, and accuracy of vocabulary.

**ELI 091. Common Hour. 0 Hours.**

This course is designed to provide additional support to students in the Intensive English Program. This course serves as an extended orientation that will help students integrate into campus life and navigate through cultural adjustment while learning about the USA/State/Local/UAB cultures and procedures. The class is not a language learning class. The focus of the class is on knowledge. Translation help will be provided as needed.

**ELI 101. Academic Writing for Non-Native English Speakers I. 3 Hours.**

This course focuses on the development of various types of writing required in university courses. Becoming fluent in the organizational structure of writing in the American academic setting will be emphasized. In addition, grammar and mechanics are reviewed. Students will practice all aspects of the writing process: generating ideas, drafting, revising, and editing.

**ELI 102. Academic Reading for Non-Native English Speakers II. 3 Hours.**

This course expands academic reading skills and strategies, text analysis, and vocabulary skills for application in an academic environment. In addition, students will build academic vocabulary range through analyzing vocabulary contextualized in the readings. Students will expand their reading skills to extract meaning from non-fiction academic texts in English, which will feature authentic articles or excerpts.

**ELI 111. Pathways to Success at UAB. 2 Hours.**

This course is designed to provide additional support and extended orientation to students in the Academic English Program at UAB. Students will discover ways to integrate into campus life and navigate through cultural adjustment while learning about the USA/State/Local/UAB cultures and procedures.

**ELI 112. Pronunciation Training. 2 Hours.**

This course is designed to provide additional support to multi-lingual students learning English by focusing on the pronunciation of American English. Improvement in pronunciation will enable students to communicate more effectively in social and academic settings. Students will learn to identify and pronounce key vowel and consonant sounds that letter combinations in English make as well as the importance of sentence stress and rhythm in order to become more comprehensible to others.

**ELI 113. US Culture and Context. 2 Hours.**

This course will guide multi-lingual, adult learners of English through an exploration of cultural norms and US cultural contexts. Students will explore themselves as cultural beings and learn how to identify their own cultural values. Students will have opportunities to compare layers of US culture and contexts with their own cultures of origin. An emphasis on US academic culture will be included.

**ELI 114. International Student University Success. 2 Hours.**

This course is designed for international students new to UAB. The course will engage students in understanding US university life through the lens of national culture. Students will engage in activities and practices typical for American university students while examining the underlying cultural values.

**ELI 203. Academic Listening and Speaking for Non-Native English Speakers I. 3 Hours.**

This course emphasizes the development and practice of speaking and listening skills necessary for successful communication in the university environment. Specifically, this course focuses on effective strategies for listening to lectures, participating in classroom discourse, and giving presentations. In addition, students will engage in oral fluency practice and pronunciation improvement.

**ELI 205. Using English Skills for Academic Success. 3 Hours.**

This course will build on previous courses and will provide a venue for structured practice with all academic English language skills, including reading, writing, speaking, and listening, in an integrated format for second-semester, INTO UAB undergraduate standard pathway students. Students will employ a variety of English skills in ways that will mimic what is expected in an actual undergraduate classroom format. The course will feature much feedback from the instructor to facilitate improvement; content will take into account the other courses in the pathway to maximize learning.

**ELI 206. Accelerated English Skills for Academic Success. 3 Hours.**

This course will provide a venue for structured practice with all academic English language skills, including reading, writing, speaking, and listening, in an integrated format for INTO UAB undergraduate accelerated pathway students. Students will employ a variety of English skills in ways that will mimic what is expected in an actual undergraduate classroom format, with the intention of accelerating transfer of English language skills to the American academic environment. The course will feature much feedback from the instructor to facilitate improvement; content will take into account the other courses in the pathway to maximize learning.

**ELI 401. Academic Reading & Writing for the Graduate Student 1. 3 Hours.**

This two-semester, multi-skill course, designed for non-native English speaking graduate students needing English language skill improvement, will focus on reading and writing skill development, with additional outcomes in improved grammar usage and vocabulary expansion. The course will emphasize academic reading skills and strategies and text analysis, using non-fiction academic texts in English, and it will also build academic vocabulary range through analyzing vocabulary contextualized in the readings. Then, students will use readings to practice various types of writing. Becoming fluent in the organizational structure of writing in the American academic setting will be emphasized, and grammar instruction will be addressed as needed. Students will practice all aspects of the writing process: generating ideas, drafting, revising, and editing.

**ELI 402. Academic Speaking & Listening for the Graduate Student 1. 3 Hours.**

This two-semester, multi-skill course, designed for non-native English speaking graduate students needing English language skill improvement, will focus on the development and practice of speaking and listening skills necessary for successful communication in the university environment, with additional outcomes related to pronunciation training. Specifically, this course focuses on effective strategies for listening to lectures, participating in classroom and general academic discourse, and giving presentations. In addition, the course provides a focus on pronunciation and opportunities for oral fluency practice.

**ELI 403. Academic Reading & Writing for the Graduate Student 2. 3 Hours.**

The second part of a two-semester, multi-skill course for non-native English speaking graduate students needing English language skill improvement, this course will continue building skills in reading, writing, grammar, and vocabulary for use in graduate coursework. Reading passages from authentic texts, as well as summarizing and paraphrasing passages from texts, will be included.

**ELI 404. Academic Speaking & Listening for the Graduate Student 2. 3 Hours.**

The second part of a two-semester, multi-skill course for non-native English speaking graduate students needing English language skill improvement, this course will build on the previous course in focusing on the development and practice of speaking and listening skills necessary for success in a graduate academic environment. The course will provide a venue for structured practice with these English language skills in an integrated format, as students mimic in class what transpires in the graduate classroom. The course will feature much feedback from the instructor to facilitate improvement, as well as an emphasis on pronunciation practice.

**ELI 405. Academic Success and Research Skills for Intl Students. 3 Hours.**

This course will provide a venue for structured practice with all academic English language skills, including reading, writing, speaking, and listening, in an integrated format for INTO UAB accelerated graduate pathway students. Students will employ a variety of English skills in ways that will mimic what is expected in an actual graduate classroom format, with the intention of accelerating transfer of English language skills to the American academic environment. The course will feature much feedback from the instructor to facilitate improvement.

**ELI 495. Research & Success Skills for Intl Students. 1-3 Hour.**

This course will provide a venue for structured practice with all academic English language skills, including reading, writing, speaking, and listening, in an integrated format for INTO UAB accelerated graduate pathway students. Students will employ a variety of English skills in ways that will mimic what is expected in an actual graduate classroom format, with the intention of accelerating transfer of English language skills to the American academic environment. The course will feature much feedback from the instructor to facilitate improvement.

## Financial Information

### Tuition and Fees

#### Undergraduate Courses

The Detailed Tuition and Fee Schedule is available online <https://www.uab.edu/students/paying-for-college/detailed-tuition-and-fees>

#### Estimated Tuition and Fees

To ascertain Tuition and Fees Fee Schedule please visit BlazerNET located online at [www.uab.edu/blazernet](http://www.uab.edu/blazernet)

#### Deadlines

Student account payment deadlines are available on the Academic Calendar for each term at <http://www.uab.edu/academiccalendar>. Students who do not make the initial payment of 100 percent of the total account balance by the first payment deadline will automatically be enrolled in the Blazer Flex Plan which will include a \$25 enrollment fee. The Blazer Flex Plan allows students to make payments

in three equal installments. Payment deadline dates are available on the Academic Calendar and at <http://www.uab.edu/students/paying-for-college/when-to-pay>.

## Penalties

Students who fail to pay by the deadline are subject to substantial late fees. Students with delinquent accounts will not be allowed to register at UAB, and transcript requests will not be honored until all accounts are paid in full. The list of penalties is available online at <http://www.uab.edu/students/paying-for-college/when-to-pay/penalties>.

## How to Pay

Payments can be made via the web with a Blazer ID and Password at [www.uab.edu/blazernet](http://www.uab.edu/blazernet). The One Stop office also has a drop box where checks can be dropped off. Payments can also be made at the UAB Financial Operations Center. All fees are due by the published deadline, as indicated on the UAB Academic Calendar at <http://www.uab.edu/academiccalendar>. For tuition questions please call Student Accounting Services at (205) 934-3570.

## Contact

UAB Financial Operations Center  
Administration Building  
Room #160  
Birmingham, AL 35294  
(205) 934-4151

Student Accounting Services  
1700 University Blvd.  
LHL Ground Floor G10  
Birmingham, AL 35294  
(205) 934-3570

## Voluntary Medical Withdrawal Policy

The Voluntary Medical Withdrawal policy at The University of Alabama at Birmingham (UAB) establishes procedures to follow when a student suffers from a physical, emotional, or psychological condition that significantly impairs the student's ability to function successfully or safely as a student. The policy is primarily administered by the UAB's Student Health Services (SHS) according to the procedures described below.

### Academic Impact

Medical withdrawal, when approved, withdraws a student from all courses for a given semester/term. Students are not allowed to medically withdraw from individual courses, with the following exceptions:

1. When a student is enrolled in clinical, physical education, and/or other courses in which the student cannot meet the essential requirements of the course. For example, a student may be assigned to a clinical site that requires standing for an extended period of time and becomes unable to do so due to an injury. The student could medically withdraw from the clinical coursework and remain enrolled in other courses.
2. When parts of a term within a semester have unique start and end dates. For example, the summer semester at UAB includes five separate parts (May Session, Summer A, Summer B, Summer 10-week, and full Summer Term). It would be possible, if approved, for a student to complete

coursework in Summer A and to medically withdraw from Summer B. In this example, the student would not be medically withdrawn from the entire summer semester, but rather only from all courses for the Summer B.

*NOTE: a medical withdrawal may have an impact on financial aid. Students should discuss the consequences of a medical withdrawal with a Financial Aid Advisor.*

## Procedures

Medical withdrawal requests are to be used when a documented medical condition affected a student's ability to attend or successfully complete a course enrolled in during a previous semester/term. Students who need to withdraw during the current semester should request a Regular Term Withdrawal.

A timely medical withdrawal for a previous semester must be made within sixty (60) calendar days of the last day of class for the semester/term for which the withdrawal is requested, with any supporting documentation submitted within thirty (30) calendar days of initiating the medical withdrawal request. The student must submit the *Student Request for Voluntary Medical Withdrawal* form and the *Licensed Provider Recommendation for Medical Withdrawal* form (forms available at TBD website). For all approved retroactive medical withdrawals, the effective date shall be the last day of class for the semester/term in question.

***Voluntary Medical Withdrawal Requests submitted outside of the semester in question, and beyond the required sixty (60) day deadline must have clearly documented extraordinary circumstances in order for the request to be considered.*** Extensive documentation (such as extended hospitalization and/or extensive, required rehabilitation, etc.) must be submitted to the SHS and must be related to the reasons for the medical withdrawal and to the circumstances that prevented a timely request.

After appropriate SHS personnel have deemed a medical withdrawal request eligible for consideration, a designated SHS physician handles all medical withdrawal decisions on behalf of the University. The designated SHS physician, on behalf of the University and, where appropriate, in consultation with relevant University personnel, will conduct an individualized assessment of the student's situation before deciding to approve or deny the request and determining the effective date of the withdrawal. Once a decision is rendered, SHS will notify the Office of the University Registrar (for undergraduate students) or the Graduate School (for graduate students). Upon notification by SHS, the University Registrar/ Graduate School shall process the withdrawal (if approved) and notify the student of the outcome within ten (10) business days.

## Medical Withdrawal Documentation

A student **must** fully and accurately complete the *Student Request for Voluntary Medical Withdrawal* request via BlazerNET.

1. A student **must** have a licensed medical provider (physician, nurse practitioner or physicians assistant, or mental health professional) submit a completed *Licensed Provider Recommendation for Medical Withdrawal* form

(available at TBD website) via the Patient Portal, or if there is time by mail to UAB Student Health & Wellness Center, Medical Withdrawal, 1714 9<sup>th</sup> Avenue South, Birmingham, AL 35294. The licensed medical provider shall be a provider who is currently treating the student for the condition(s) prompting the withdrawal request and is responsible for obtaining permission from the student to provide the documentation and to discuss the medical conditions, if needed, with the appropriate University personnel. If the University, in its sole discretion, determines that an extraordinary or emergency situation exists, alternative documentation may be requested and considered.

2. A student **may** also attach to the student request form any further supportive documentation from the instructor of record for the courses within the semester/term for which a medical withdrawal is requested.
3. In the event that the student's medical condition so incapacitates the student that the student cannot act on his or her own behalf, the student's parent, legal guardian, or spouse should contact the UAB Student Health & Wellness Center at 205-934-3581 for further guidance.

## Handling of a Medical Withdrawal

Once a Medical Withdrawal has been approved, the Office of the University Registrar/Graduate School will assign a grade of "W" on the official transcript. The student is still responsible for any tuition and fees associated with the term/semester in which the medical withdrawal applies.

## Return to the University Following Medical Withdrawal

It is the responsibility of the student to ensure they are medically prepared to re-enroll. While eligible to return in a future term after requesting a medical withdrawal, subsequent medical withdrawal requests for the same condition will not be approved within 24 months of the initial request. Exceptions may be considered in situations where documented extraordinary circumstances are available. Students who do not return within one academic year will be made inactive and must reapply for admission. In cases where students need more than one year to return following a medical withdrawal, a Leave of Absence may be requested.

If a student voluntarily withdraws from the University while academic honor code, non-academic, or Title IX charges against him or her are pending, permission for readmission will be granted only after the charges have been resolved.

## Title IX Exception

The University of Alabama at Birmingham Division of Student Affairs oversees the University's compliance with Title IX of the Education Amendments of 1972. The Title IX Office is responsible for the Title IX Sexual Violence and Sexual Misconduct Policy and related procedures to foster a campus community free from sexual misconduct which includes gender-based assault, harassment, exploitation, dating and domestic violence, stalking, as well as discrimination based on sex, sexual orientation, gender identity, and gender expression, and related retaliation.

The Title IX Office provides reasonable protective measures and interim support, which may include a Medical Withdrawal. In Medical Withdrawal submissions involving the Title IX Sexual Violence and Sexual Misconduct Policy, the withdrawal will be handled outside of this policy and in conjunction with the Title IX Office. For more information, please visit <https://www.uab.edu/titleix/>.

## Questions

For clarification or more information, undergraduate students should contact the Office of the Registrar. Graduate Students should contact the Graduate School.

## Withdrawal Refund Policy

*Effective Fall 2019*

The University is required to contract for a substantial amount of goods and services in advance. Most of these expenses are fixed and are not subject to change on short notice. Under certain circumstances, refunds are available to students who officially withdraw from the University. A student desiring to withdraw from the University must complete the withdrawal process in BlazerNET.

This policy applies to all terms including Fall and Spring semesters, Fall and Spring 7-week sessions, and Summer terms.

If a student withdraws from all courses in a term, a portion of or all financial aid may be returned by the University to the original provider(s) of the funding. In such cases where the return of funds creates a balance due to UAB, the student will be required to reimburse the University for those returned funds and any associated fees.

The following schedules will dictate the amount of tuition refunded to the student when the student withdraws from all courses in a term. Fees will not be refunded after the last day of the add/drop period. <https://www.uab.edu/students/one-stop/classes/add-drop-and-withdrawal-policy>.

## Withdrawing from a Course

To avoid academic penalty, a student must withdraw from a course by the withdrawal deadline shown in the academic calendar and receive a grade of W (withdrawn). The withdrawal period ends at approximately 75% of the academic term. Failure to attend class does not constitute a formal drop or withdrawal.

Withdrawal from courses can only be accomplished using official procedures. The official withdrawal must be completed online in BlazerNET. In extraordinary circumstances, if it is impossible for the student to withdraw online the student may mail a withdrawal letter to the Office of the Registrar. The official date of withdrawal will be the date the letter is received in this office. If the official date of withdrawal is after the last day to drop without paying, no tuition or fees will be refunded.

For financial aid purposes, the date of last class attendance will be the official date of withdrawal unless otherwise documented. Note that individual schools may have withdrawal rules in addition to the above.

Withdrawal from a course while a possible violation of the Academic Honor Code is under review will not preclude the assignment of a course grade that appropriately reflects the student's performance prior to withdrawal if the violation is substantiated.

## Exceptions

All students are responsible for adhering to UAB's academic policies, as published in the UAB Undergraduate Catalog. The Provost may make exceptions to policies. Exceptions will only be made in extraordinary circumstances. Only in cases of a call to active military service, can a student qualify under this policy for either administrative or academic withdrawal from courses from that semester. In such instances, students requesting an exception to policy must provide the cause specific documentation in order for the request to be considered.

Requests are evaluated only from written documentation and not through appointments or telephone calls. Information and forms are available [online](#). (Please note that grievances of an academic nature are addressed through the Academic Grievance Policy). Requests for exceptions must be submitted at the earliest possible time. Consideration will not be given to any request submitted later than the term immediately following the term for which the exception is being requested. A full reduction in tuition and associated fees will be made for appropriately documented serious illnesses or military service activation, which preclude a student from continuing his/her studies at UAB. For students receiving refunds, such refunds will first be applied to any outstanding obligations and to any scholarship, grant, or loan the student has received for that term. A student who is receiving any form of Federal Title IV Financial Aid will be liable for any unearned funds received as determined by the Federal Return of Funds Policy (check with [Student Accounting Office](#) for details.)

Failure to adhere to the published drop and withdrawal deadlines (as outlined in the UAB Catalog and the UAB Class Schedule) does not qualify under this policy as an Academic Exception.

## Contact

Exceptions to Academic Policy • Office of the Registrar • Campbell Hall • 1300 University Blvd. CH 117A • Birmingham, AL 35294 • (205) 934-8228

## Financial Aid to Students

Students should apply for financial aid if they need assistance in paying for the cost of education. Students applying for financial aid are considered for all programs for which they are eligible. Assistance generally takes the form of a combination of grant, loan, and employment. The amount of the award is based on the financial need of the student, taking into consideration the student's total expenses and the family's financial circumstances. A nationally recognized method of analysis approved by the federal government is used to determine the family's ability to pay toward the cost of education.

## Applying for Financial Aid

Students are encouraged to complete the Free Application for Federal Student Aid (FAFSA) available online at <http://fafsa.gov/> in October. The earliest students can submit the FAFSA is October 1. Instructions and UAB forms are available online at <https://www.uab.edu/students/paying-for-college>. Since some of the aid programs have limited funding, students are encouraged to submit all required forms to the financial aid office by December 1 for financial aid for the following fall to ensure they receive aid from all programs for which they are eligible. In order to meet the tuition and fee deadlines, completed applications should be submitted

no later than 30 days prior to the tuition due date. Students must reapply for financial aid each academic year.

Since procedures and rules are subject to change, students interested in applying for financial aid can receive further information online at [www.uab.edu/financialaid](http://www.uab.edu/financialaid).

## Contact

Student Financial Aid  
[finaid@uab.edu](mailto:finaid@uab.edu)  
(205) 934-8223

## Mailing address:

UAB Student Financial Aid

1720 2nd Avenue South- LHL G20

Birmingham, AL 35294

## Financial Aid Programs

### Federal Pell Grants

The federal government has allocated funds that currently provide grants up to \$6,495 per year for eligible students. All undergraduate students needing financial assistance should apply.

### Federal Supplemental Educational Opportunity Grants

Federal Supplemental Educational Opportunity Grants provide assistance for undergraduate students who demonstrate financial need. The maximum annual grant at UAB is \$2,000.

### Federal College Work-Study Program

Eligible undergraduate and graduate students may work part time and earn money to help pay their educational expenses while attending school. On-campus and off-campus jobs are available in areas related to the student's educational interests.

### Federal Direct Subsidized Loan

The Federal Direct Subsidized Loan is a need-based loan for undergraduate students with a current fixed rate of 2.75%. Repayment begins six months after the student's enrollment level drops below half time. Annual loan limits are \$3,500 for freshmen, \$4,500 for sophomores and \$5,500 for juniors and seniors.

### Federal Direct Unsubsidized Loan

This is a non-need-based loan with a current fixed rate of 2.75% for undergraduate students. Interest must be paid while the student is in school or must be capitalized as agreed upon by the borrower and lender. Repayment of the principal and any capitalized interest begins when the student's enrollment status drops below half time. The annual loan limit combined with the Federal Direct Subsidized Loan is \$5,500 for freshmen, \$6,500 for sophomores and \$7,500 for juniors and seniors.

### Additional Federal Direct Unsubsidized Loan

Independent students or dependent students whose parents cannot borrow under the Federal Direct PLUS Program may borrow \$4,000 as freshmen and sophomores, \$5,000 as juniors and seniors.

The aggregate limits for Federal Direct Loans are \$31,000 for dependent undergraduates and \$57,500 for independent undergraduates. Students must be attending at least half-time to be eligible for the Federal Direct Loan Program.

## Federal Direct Parent Loan for Undergraduate Students

This is a non-need-based loan with a current fixed rate of 5.30%. Repayment of principal and interest begins immediately after the loan has been disbursed. Annual loan limits are the cost of attendance minus other aid.

## Scholarships and Merit-Based Awards Freshmen

To be eligible for a Freshman Merit Scholarship at UAB, Alabama residents must submit their undergraduate admission application and all required documentation (official high school transcript and official ACT and/or SAT scores) **by March 1**. Entering freshmen who have their admission documents postmarked by that date are automatically considered for ACT & GPA-based scholarships upon admission to UAB. If you choose to include your test scores for admission and scholarship consideration, February ACT and March SAT test scores from the senior year will be the last scores considered for scholarship purposes. The examined GPA will be the cumulative GPA at the time of admission. All scholarships are awarded on a first-come, first-served basis to qualified students. Scholarships from specific schools and departments may require additional applications, and their deadlines may be earlier than March 1. To view these opportunities, identify their deadlines, and access their application(s), log in to **BSMART**, UAB's Blazer Scholarship Management and Resource Tool, beginning September 1 of each year at [uab.edu/bsmart](http://uab.edu/bsmart).

### For Alabama Residents

UAB Merit Scholarships are 4-year (8-semester) awards ranging from **\$2,000-\$10,000** per year.

### For Out-of-State Residents

UAB Merit Scholarships are 4-year (8-semester) awards ranging from **\$6,000-\$20,000** per year.

### National Scholarships

Entering freshmen who are recognized as National Merit Finalists or National Hispanic, African American, Indigenous, or Rural/Small Town Recognition Program Scholars are eligible to receive additional stackable awards at the below levels of funding. Students are only eligible to receive **one** of the below awards.

- **National Merit Finalist\*** - \$4,000 per year (\$2,000 per semester)
- **National Hispanic Scholar, National African American Scholar, National Indigenous Scholar, National Rural/Small Town Scholar** - \$2,500 per year (\$1,250 per semester)
- **IB Diploma Holder** - \$2,500 per year (\$1,250 per semester)
- **IB Diploma Candidate** - \$1,000 per year (\$500 per semester)

National Merit Finalists must name UAB as their first choice with the National Merit Scholarship Corporation (NMSC).

National Recognition Program Scholars must upload a copy of their certificate or verification letter in the BSMART application by March 1 of their senior year in high school.

IB Diploma Candidates must upload a letter from their IB Coordinator confirming candidacy for the IB Diploma. Students who earn the diploma will automatically be moved to the IB Diploma Holder scholarship once grades are released by International Baccalaureate Organization.

### For International Students

**UAB International Scholarship:** This scholarship, valued at US \$7,500 per year, is available to international students who are enrolling as first-year, full-time, degree-seeking students in an undergraduate program at UAB. To be considered, applicants must meet the following requirements: graduate from a secondary or high school (up to 2 years prior to intake) with a minimum grade point average of 3.0/4.0, have not enrolled in post-secondary work, and anticipate holding an F-1 visa. Students must be accepted prior to May 1 for the August intake (April 1 for the June intake; November 1 for the January intake). The examined GPA will be the cumulative GPA at the time of admission. All scholarships are awarded on a first-come, first-served basis as funds are available and are renewable for a total of 4 years (8 academic semesters). Students who are receiving governmental scholarships or other external support are not eligible to receive this award.

### Other Scholarships for which Entering Freshmen May Apply

To apply for additional scholarship opportunities, students must first submit the General Application in **BSMART**, UAB's Blazer Scholarship Management and Resource Tool, at [uab.edu/bsmart](http://uab.edu/bsmart). Once the General Application is completed, students will be matched with scholarships for which they may qualify and prompted to answer additional questions, if necessary.

**Birmingham News-Clarence B. Hanson, Jr. Scholarship:** This renewable award is for incoming freshmen who are residents of Blount, Jefferson, Shelby, St. Clair, or Walker counties in Alabama. Consideration is based on financial need, leadership and academic achievement. Students must be admitted to UAB by March 1 of their senior year in high school, have a cumulative GPA of 3.5 or higher, have a composite ACT score of 25 or higher, and submit the Free Application for Federal Student Aid (FAFSA) by March 1. To receive this award, students must be enrolled full-time and be U.S. citizens or permanent residents. Up to two awards will be given each year.

**Blazer Presidential Scholarship:** This prestigious scholarship was established for high-achieving high school seniors from outside the state of Alabama. Selection is based on outstanding academic achievement and demonstrated leadership ability. This four-year scholarship will provide \$22,000 toward tuition charges each year (\$11,000 per semester; fall and spring only). If awarded, the scholarship will replace the student's merit scholarship. Students must be US citizens or permanent residents to receive this award.

**Carol Z. Garrison Endowed Presidential Scholarship:** This prestigious scholarship was established by friends, admirers, and colleagues of Carol Z. Garrison, Ph.D., who served as UAB's president from 2002-2012. Dr. Garrison emphasized the importance of providing scholarship support to deserving students in order to assist them in their educational pursuits and to attract and retain the best and brightest to UAB. Selection is based on outstanding academic achievement and demonstrated leadership

ability. Students must be U.S. citizens or permanent residents to receive this award.

**Charles William Ireland Presidential Honors Scholarship:** This renewable award annually provides \$12,000 toward tuition costs and an on-campus housing allotment of up to \$7,100 each year (fall and spring only). It also provides a one-time \$2,500 stipend to be used for experiential learning (education abroad, internships, co-ops, etc.). To be considered, students must submit the Presidential and Endowed Scholarship Application in **BSMART** by February 1. To access this online application, Alabama residents must apply to UAB for the upcoming summer or fall semester during their senior year in high school with an ACT of 33-36 and a cumulative GPA of 3.5 or higher. Qualified students who apply test optional will also be able to access this application. Applicants should demonstrate outstanding character and integrity, potential for leadership, and the promise of significant achievement in his or her chosen field. Approximately ten applicants will be selected to interview in late February or early March, and one entering freshman will be selected as the Charles William Ireland Scholar. Students must be U.S. citizens or permanent residents to receive this award..

**Distinguished Young Women Scholarship:** A one-year scholarship of \$750 is available to each Alabama resident who represents her county at the Distinguished Young Women of Alabama State Finals. Up to two participants may also be nominated by the Distinguished Young Women of Jefferson County Program (Alabama residents only). A one-year scholarship of \$1,000 is available to each state winner who participates in the Distinguished Young Women National Finals. To be considered, students must be admitted to UAB for the fall semester immediately following their high school graduation. They must also submit the General Application in **BSMART**, and complete four additional questions for the Distinguished Young Women Scholarship, one of which requires them to upload written verification of their participation/selection from Distinguished Young Women. The deadline for completing the scholarship application is June 1 of the senior year in high school.

**Dottie Monro Presidential Minority Scholarship:** This renewable award is for incoming freshmen who are minority students. Consideration is based on financial need and academic achievement. Students must be admitted to UAB by March 1 of their senior year in high school, have a cumulative GPA of 3.0 or higher, and submit the Free Application for Federal Student Aid (FAFSA) by March 1. To receive this award, students must be enrolled full-time and be U.S. citizens or permanent residents.

**George G. Seibels, Jr. Scholarship:** This one-year award is available to undergraduate students who are admitted to or currently enrolled in UAB. Preference will be given to entering freshmen, but other classes will be considered. Award amounts vary each year, but they typically range from \$500-\$2,000. To be considered, students must be admitted to an undergraduate program at UAB, complete the General Application in **BSMART**, and answer the supplemental essay question for the George G. Seibels, Jr. Scholarship by February 1. Consideration is based on leadership potential, solid academic promise, high moral character, and an expressed interest in civic affairs, public service, or patriotic affairs. To receive this award, students must be U.S. citizens or permanent residents.

**I Am My Brother's Keeper Scholarship:** UAB sponsors a scholarship opportunity for up to two entering freshmen who have participated in Birmingham's *I Am My Brother's Keeper* (IAMBK) Leadership Institute. (The institute is not directly affiliated with UAB.) To be considered, students must be admitted to UAB for the upcoming fall semester by March 1 of their senior year in high school, have an ACT composite

score of 24 or higher, submit the Free Application for Federal Student Aid (FAFSA) by March 1, and provide documentation from the IAMBK Institute, confirming fulfillment of all the IAMBK requirements. Selected recipients will receive a 4-year award that guarantees the cost of tuition and academic fees for up to 15 credit hours per semester (fall and spring only) will be met with gift aid. *Please note: This scholarship cannot be stacked on top of another tuition and fee scholarship.*

**Jane Knight Lowe Scholarship:** This renewable award is for entering freshmen who are graduates of a public or private high school in Madison County, Alabama. To be considered, students must be pursuing a degree in a health-related profession, demonstrate solid academic promise, and exhibit financial need, as determined by their FAFSA results. Students must be admitted to UAB by March 1 of their senior year in high school, have a cumulative GPA of 3.0 or higher, and submit the Free Application for Federal Student Aid (FAFSA) by March 1. To receive this award, students must be enrolled full-time and be U.S. citizens or permanent residents.

**Martha Corbin Scholarship:** This renewable scholarship is based on the academic achievements of entering freshmen who are residents of Alabama. To be considered, students must have a 3.0 overall grade point average and be admitted to an undergraduate program at UAB. Students must enroll full-time and be U.S. citizens or permanent residents to receive this award.

**McCallum Presidential Scholarship:** This renewable award annually provides \$12,000 toward tuition costs and an on-campus housing allotment of up to \$7,100 each year (fall and spring only). It also provides a one-time \$2,500 stipend to be used for experiential learning (education abroad, internships, co-ops, etc.). To be considered, students must submit the Presidential and Endowed Scholarship Application in **BSMART** by February 1. To access this online application, Alabama residents must apply to UAB for the upcoming summer or fall semester during their senior year in high school with an ACT of 33-36 and a cumulative GPA of 3.5 or higher. Qualified students who apply test optional will also be able to access this application. Applicants should demonstrate solid academic promise, diligence and the desire to be an effective citizen, as shown by participation and leadership in extracurricular and/or community activities. Approximately ten applicants will be selected to interview in late February or early March, and one entering freshman will be selected as the McCallum Presidential Scholar. Students must be U.S. citizens or permanent residents to receive this award.

**Natalie T. and James A. Garland Educational Assistance Fund:** This one-year award is for children of current, full-time, non-exempt employees of the UAB Women and Infants Center (including nursing and support staff, but excluding executive staff). To be considered, students must be admitted to, or enrolled in, an undergraduate program at UAB and have an overall grade point average of 3.0 or higher. First preference will be given to entering freshmen. Students must be eligible for and certified as a dependent for the UAB Educational Assistance Program in order to receive this award. Preference will be given to students who complete the Free Application for Federal Student Aid (FAFSA) by December 1 and demonstrate financial need, as determined by its results.

**RaiseMe Out-of-State Scholarship:** Entering freshmen who join RaiseMe and are currently enrolled in a U.S. high school outside of Alabama may earn up to \$500 in scholarships to be used in their first year of enrollment at UAB. RaiseMe is a website that provides students in grades 9-12 with an opportunity to earn "micro-scholarships" (small

scholarships tied to specific achievements) for actions that prepare them to succeed in college, such as taking honors, AP, or IB coursework, participating in extracurricular activities, and attending college-preparatory events. Students who have earned these micro-scholarships through RaiseMe must self-identify by completing the General Application in **BSMART** and answering the supplemental questions for the RaiseMe Out-of-State Scholarship by March 1. To be eligible, students must apply to UAB by February 1 of their senior year in high school, be following UAB on RaiseMe at [www.raise.me/join/uab](http://www.raise.me/join/uab), have a cumulative unweighted high school GPA of 3.0 or higher, and be verified against participation results from RaiseMe. The total amount earned will be disbursed over a two-semester period, allowing students to receive up to \$250 per semester. *Please note: If you qualify for in-state tuition due to military benefits, participation in the Academic Common Market, or submission and approval of an Application for Residency Reclassification, then your RaiseMe Out-of-State Scholarship will be cancelled.*

**Regions Academic Scholarship:** This renewable award annually provides \$12,500 toward tuition costs and an on-campus housing allotment of up to \$7,100 each year (fall and spring only). It also provides a one-time \$2,500 stipend to be used for experiential learning (education abroad, internships, co-ops, etc.). To be considered, students must submit the Presidential and Endowed Scholarship Application in **BSMART** by February 1. To access this online application, Alabama residents must apply to UAB for the upcoming summer or fall semester during their senior year in high school with an ACT of 33-36 and a cumulative GPA of 3.5 or higher. Qualified students who apply test optional will also be able to access this application. Selection is based on outstanding academic achievement and demonstrated leadership ability. Approximately ten applicants will be selected to interview in late February or early March, and one entering freshman will be selected as the Regions Academic Scholar. Students must be U.S. citizens or permanent residents to receive this award.

**Roberts and Mildred Blount Presidential Endowed Scholarship:** This four-year award, which annually provides \$5,000 toward tuition costs, is for an outstanding entering freshman who is graduating from an accredited high school in Elmore County, Alabama. To be considered, students must be admitted to an undergraduate program at UAB, have a cumulative GPA of 3.0 or higher, and complete the General Scholarship Application by February 1. Selected candidates may be invited to interview for this award in late February or early March. Students must be enrolled full-time and be U.S. citizens or permanent residents to receive this award.

**UAB SpeakFirst Award:** This UAB-sponsored scholarship is for entering freshmen who are selected and certified by the officials of Impact Alabama as having completed the requirements of the SpeakFirst initiative. This four-year award guarantees that the cost of tuition and academic fees for up to 15 credit hours per semester (fall and spring only) will be met with gift aid. Up to four awards may be made each year. To receive this award, Impact Alabama's candidates must be admitted to UAB for the upcoming fall semester by May 1 of their senior year in high school with a minimum ACT score of 20 and a cumulative GPA of 2.75 or higher. Students must also complete the Free Application for Federal Student Aid (FAFSA) and be U.S. citizens or permanent residents to receive this award. *Please note: This scholarship cannot be stacked on top of another tuition and fee scholarship.*

**W. Ann Reynolds Endowed Presidential Scholarship:** This award is for students who are admitted to, or currently enrolled in, an undergraduate degree-granting program at UAB. First preference will

be given to entering first-year students. Applicants should demonstrate solid academic promise and achievement, earning a composite ACT score of 25 or higher (or an equivalent SAT score) and an overall grade point average of 3.5 or higher in coursework completed prior to the time of application. Applicants should also demonstrate leadership ability and achievement in previous pursuits, whether of a scholastic or extracurricular nature.

**Youth Leadership Development Program Scholarship:** This renewable scholarship is available to students who are nominated by the Greater Alabama Council Youth Leadership Development Program. (Please see [www.alyldp.com](http://www.alyldp.com) for more information.) Up to four entering freshmen may receive this award each year. For scholarship consideration, nominees must be admitted to UAB by May 1 of their senior year of high school, earn a composite ACT score of 24 or higher, and have a cumulative high school grade point average of 2.5 or higher. Students must be U.S. citizens or permanent residents to receive this award. *(Please note: This scholarship may be stacked on an existing UAB scholarship; however, the student's total scholarship amount cannot exceed the monetary value of a Regions Academic, Charles William Ireland Presidential Honors, or McCallum Presidential Scholarship.)*

## Transfer Students

Incoming transfer students are automatically considered for one Transfer Academic Scholarships upon admission to UAB. All scholarships are awarded as funds are available. To be eligible, transfer students must be admitted to an undergraduate program at UAB by June 1 for the upcoming fall, or December 1 for the upcoming spring semesters and have a minimum GPA of 3.25. Students must send an updated, official transcript that contains their most recent grades by the scholarship deadline. Current high school seniors, former UAB students, students who have received a bachelor's degree, students pursuing a certificate-only program or students enrolled in a baccalaureate program that requires less than full-time enrollment in UAB coursework will not be considered.

Scholarships from specific schools and departments may require additional applications, and their deadlines may vary. To view these opportunities, identify their deadlines, and access their application(s), log in to **BSMART**, UAB's Blazer Scholarship Management and Resource Tool, beginning October 1 of each year at [uab.edu/bsmart](http://uab.edu/bsmart).

### Transfer Academic Scholarships

**Phi Theta Kappa Scholarship:** This two-year scholarship, valued at \$6,500 per year, is reserved for transfer students who are members of Phi Theta Kappa (PTK) and have a cumulative GPA of 3.5 or higher based on all transferable coursework. PTK membership must either be noted on their official college transcript or a letter must be received from their faculty sponsor by the scholarship deadline, confirming membership. May be received for up to a total of 3 academic years (6 semesters).

**UAB Transfer Excellence Scholarship:** This two-year scholarship, valued at \$3,000 per year, is reserved for transfer students who are not members of Phi Theta Kappa and have a cumulative GPA of 3.5 or higher, based on all transferable coursework. May be received for up to a total of 3 academic years (6 semesters).

**Transfer Pathway Scholarship:** This two-year scholarship, valued at \$1,000 per year, is reserved for transfer students who have a cumulative GPA of 3.25-3.49, based on all transferable coursework. May be received for up to a total of 3 academic years (6 semesters).

### Other Scholarships for which Entering Transfer Students May Apply

**All-Alabama Academic Team Scholarship:** This two-year scholarship, valued at \$1,000 per year, is available to entering transfer students who are All-Alabama Academic Team (AAAT) members. To be considered, students must be admitted to UAB for the summer or fall semester that immediately follows the receipt of their AAAT honor. They must also submit the General Application in **BSMART**, and complete three additional questions for the All-Alabama Academic Team (AAAT) Scholarship, one of which requires them to upload their AAAT letter from the Alabama Community College System. The deadline for completing the scholarship application is May 1. *Please note: this award cannot be stacked on top of the Transfer Presidential Scholarship.*

**Transfer Presidential Scholarship:** A limited number of entering transfer students will be selected to receive this prestigious scholarship, which will pay \$10,000 towards the cost of tuition and academic fees for up to two years (four semesters) for each student, beginning Fall 2022. Students must be recommended to the UAB Scholarship Committee by a community college in the state of Alabama. To be considered, students must be admitted to UAB by March 1 for the upcoming fall semester with a cumulative GPA of 3.5 or higher based on all transferable coursework. Students must also earn an associate's degree at the end of the spring semester that immediately precedes their term of enrollment at UAB, and they cannot have earned credit from a four-year institution, unless they did so while enrolled in high school. Students must be Alabama residents and U.S. citizens or permanent residents to receive this award. *(Please note: This scholarship cannot be stacked on top of the Phi Theta Kappa, Transfer Excellence, or UAB All-Alabama Academic Team Scholarships.)*

## Current UAB Students

To apply for scholarship opportunities, currently enrolled students must first submit the General Application in **BSMART**, UAB's Blazer Scholarship Management and Resource Tool, at [uab.edu/bsmart](http://uab.edu/bsmart) beginning September 1 each year. Once the General Application is completed, students will be matched with scholarships for which they may qualify and prompted to answer additional questions, if necessary. All applications and supporting documentation must be submitted by 11:59pm (CST) on **February 1**. Most scholarship decisions are made in the spring term and will go into effect the following academic year. Please be aware that all scholarships are not awarded every year and are dependent on availability of funds.

Scholarships from specific schools and departments may require additional applications, and their deadlines may vary. To view these opportunities, identify their deadlines, and access their application(s), log in to **BSMART**.

### Scholarships for Current UAB Students

**Academic Affairs Scholarship:** Selection for this renewable award is based on the financial need and academic achievements of current full-time UAB students who are currently enrolled in, or admitted to, a degree-seeking program in the College of Arts and Sciences, Collat School of Business, School of Education, or School of Engineering at UAB. Students must have a grade point average of 3.0 or higher and be U.S. citizens or permanent residents to receive this award.

**African American Faculty Association Endowed Scholarship:** Selection for this one-year award is based on the academic promise and achievements of current full-time UAB students who are graduates of a public high school in the Birmingham metropolitan area. Preference will be given to students who demonstrate financial need and a commitment to public service within African American communities either in the

Birmingham metropolitan area or in the state of Alabama. Public service should be performed while the student is enrolled at the University of Alabama at Birmingham. Students must be U.S. citizens or permanent residents to receive this award.

**Birmingham Racing Commission Scholarship:** Selection for this one-year award is based on the academic achievements of current full-time UAB students who are residents of Jefferson County, Alabama. To be considered, students must be enrolled in a regular undergraduate program at UAB. Students must be U.S. citizens or permanent residents to receive this award.

**Charles "Charlie" Campbell Endowed Memorial Scholarship:** This one-year scholarship is based on the academic achievements of current full-time UAB students who are residents of Alabama. To be considered, students must have an overall grade point average of 3.0 or higher and be enrolled in a regular undergraduate program at UAB. Students must be U.S. citizens or permanent residents to receive this award. Preference will be given to students who reside in Bessemer, Alabama.

**Crawford T. and Virginia Johnson Scholarship:** A two-year scholarship based on the academic achievement, leadership, and extracurricular activities of current sophomore students who are residents of the Birmingham Metropolitan Statistical Area (Bibb, Blount, Chilton, Jefferson, Shelby, St. Clair or Walker counties). To be considered, students must have a cumulative UAB grade point average of 3.5 or higher, have completed a minimum of 48 semester hours of coursework by the scholarship deadline, and be enrolled in a regular undergraduate program at UAB. Students must be enrolled full-time and be a U.S. citizen or permanent resident to receive this award.

**Enhney A. Camp Jr., Endowed Scholarship:** A renewable award based on financial need, leadership, and the academic achievements of current full-time UAB students. To be considered, students must have earned a 3.25 cumulative UAB grade point average and be enrolled in a regular undergraduate program at UAB. Students must be U.S. citizens or permanent residents to receive this award.

**Ferniany Endowed Scholarship:** This one-year award is for students who are currently enrolled in or admitted to a degree-granting program at UAB. Applicants must be a graduate of a high school within the Birmingham City Schools. The scholarship will provide support to students for whom affordability may be an obstacle. To be considered, students must be admitted to an undergraduate program at UAB, complete the General Application in **BSMART**, and answer the supplemental questions for the Ferniany Endowed Scholarship by February 1. Preference will be given to members of the Birmingham City School Career Academy, participants in Birmingham Education Foundation programming, or students who completed an internship sponsored by the Birmingham Education Foundation during their senior year of high school. Recipients are eligible to apply for the award in subsequent years, as long as they continue to meet the requirements.

**George G. Seibels, Jr. Scholarship:** This one-year award is available to undergraduate students who are admitted to or currently enrolled in UAB. Preference will be given to entering freshmen, but other classes will be considered. Award amounts vary each year, but they typically range from \$500-\$2,000. To be considered, students must be admitted to an undergraduate program at UAB, complete the General Application in **BSMART**, and answer the supplemental essay question for the George G. Seibels, Jr. Scholarship by February 1. Consideration is based on leadership potential, solid academic promise, high moral character, and an expressed interest in civic affairs, public service, or patriotic affairs.

To receive this award, students must be U.S. citizens or permanent residents.

**Goodfellow Scholarship:** A one-year scholarship based on the financial need of current full-time UAB students who are residents of Blount, Jefferson, Shelby, St. Clair, and Walker counties of Alabama. Students must be U.S. citizens or permanent residents to receive this award.

**Helping Other People Excel (HOPE) Scholarship:** This one-year scholarship is based on the financial need, academic achievement, and extracurricular activities of current full-time UAB students who are residents of Alabama. To be considered, students must demonstrate a successful history of employment, active participation in community activities and be enrolled in a regular undergraduate program at UAB. Students must be U.S. citizens or permanent residents to receive this award.

**Jack Edwards Alabama Power Scholarship:** A one-year award that is based on the academic achievements of current full-time UAB students who are residents of Alabama. To be considered, students must be enrolled in a regular undergraduate program at UAB. Students must be U.S. citizens or permanent residents to receive this award.

**Joseph F. Volker Memorial Scholarship:** A one-year scholarship based on the academic achievements of current full-time UAB students who are residents of Alabama. To be considered, students must have an overall grade point average of 3.0 or higher and be enrolled in a regular undergraduate program at UAB. Students must be U.S. citizens or permanent residents to receive this award.

**Mary Elizabeth Adams Endowed Scholarship:** This one-year award is for students who self-identify as having type I diabetes and are currently enrolled in, or admitted to, a degree-granting program at UAB. Applicants must have earned at least an overall 3.5 grade point average, earned at least a 25 on the ACT (or an equivalent score on the SAT) along with academic achievement, financial need, and demonstration of personal responsibility through work, community or family activities. Students must be Alabama residents and U.S. citizens or permanent residents to receive this award. Preference will be given to students who plan to pursue a degree in the sciences, or have declared a pre-medicine track.

**Memorial Fund for the Four Children Scholarship:** This scholarship is given in honor of Denise McNair, Cynthia Wesley, Carole Robertson, and Addie Mae Collins, the four girls who died in the 1963 bombing of the Sixteenth Street Baptist Church in Birmingham, Alabama. Growing out of that tragedy, the Memorial Fund for the Four Children Scholarship has awarded more than \$250,000 in scholarships to over 70 exceptional students since the first grants were made for the 1984-85 school year. By raising funds and awarding scholarships annually, the Fund helps deserving students fulfill their dream of getting a college education – an opportunity swept away from Addie Mae, Denise, Carole and Cynthia in 1963. It is the hope that this award will further the understanding of the principles of human and civil rights and to enhance the quality of life of all area citizens. This award is reserved for currently enrolled UAB Students and is based on financial need and academic achievement.

**Natalie T. and James A. Garland Educational Assistance Fund:** This one-year award is for children of current, full-time, non-exempt employees of the UAB Women and Infants Center (including nursing and support staff, but excluding executive staff). To be considered, students must be admitted to, or enrolled in, an undergraduate program at UAB and have an overall grade point average of 3.0 or higher. First preference will be given to entering freshmen. Students must be eligible for and certified as a dependent for the UAB Educational Assistance Program

in order to receive this award. Preference will be given to students who complete the Free Application for Federal Student Aid (FAFSA) by December 1 and demonstrate financial need, as determined by its results.

**Nellie Whitworth Flaherty and Lula McCord Whitworth Endowed Scholarship:** A one-year scholarship based on the academic achievements of current female UAB students who have been or are in the work force and are returning to school to complete their education on either a part-time or full-time basis. To be considered, students must have at least an overall grade point average of 2.5 or higher, demonstrate financial need and be admitted to a regular undergraduate program at UAB. Students must be U.S. citizens or permanent residents to receive this award.

**Samuel Ullman Scholarship:** This renewable scholarship is based on the leadership, academic and individual achievements of current full-time UAB students who are residents of Alabama. To be considered, students must have earned at least a 3.0 grade point average and be admitted to a regular undergraduate program at UAB. Students must be U.S. citizens or permanent residents to receive this award.

**The Alliance for LGBT Equality at UAB Scholarship:** To be considered for this award, students must be currently enrolled in, or admitted to, a degree-granting program at UAB and demonstrate solid academic promise and achievement, earning at least a 3.0 grade point average in any coursework completed prior to the time of application. Preference will be given to applicants who can demonstrate service to the Lesbian, Gay, Bisexual, Transgender, and Queer (LGBTQ) community. Applicants are evaluated on the totality of their situation: academic achievement, financial need, demonstrated service to the LGBTQ community, demonstrated leadership skills, and present and future goals.

**The Howlin' Mad Smith Detachment of the Marine Corps League Sponsored Scholarship:** This scholarship is based on the academic achievement of current full-time UAB students who are current or former members of the U.S. Marine Corps. To be considered, students must demonstrate leadership in their community, have a cumulative UAB grade point average of 2.5 or higher and be enrolled in a regular degree-granting program at UAB. Students must be U.S. citizens or permanent residents to receive this award. This award is in tribute to Roy Hassenback, Lee Whitmire, and Ryan Winslow.

**UAB Affinity Cardholders Scholarship:** Selection for this one-year award is based on the financial need, academic achievement, and extracurricular activities of current full-time UAB students. To be considered, students must have earned at least a 2.5 cumulative UAB grade point average and be enrolled in a regular undergraduate program at UAB. Students must be U.S. citizens or permanent residents to receive this award.

**UAB General Scholarship:** A one-year award based on the financial need, academic achievements, and extracurricular activities of current full-time UAB students. To be considered, students must have achieved Junior or Senior standing in a degree-seeking program at UAB, have a minimum 3.0 cumulative UAB grade point average and be U.S. citizens or permanent residents.

**UAB Leadership Council Scholarship:** A one-year award based on the academic achievement and extracurricular activities of current sophomore students who are residents of the Birmingham Metropolitan Statistical Area (Bibb, Blount, Chilton, Jefferson, Shelby, St Clair or Walker counties). To be considered, students must have a cumulative UAB grade point average of 3.0 or higher, have completed a minimum of

60 semester hours of coursework at the time the award is received, and be enrolled in a regular undergraduate program at UAB. Students must be enrolled full-time and be a U.S. citizen or permanent resident to receive this award.

**UAB Women's Club Scholarship:** A one-time award for women who are considered either full- or half-time undergraduate students currently enrolled in or admitted to a degree-granting program. Selection is based on academic merit and financial need. Preference is given to students with a cumulative UAB GPA of 3.0 or higher, and priority is given to students who have returned to school to complete their degree. Applications are evaluated on recommendations, communication skills and career goals.

**Vettes-4-Vets Endowed Scholarship:** This scholarship is based on the academic achievement, leadership, and community involvement of students who are currently enrolled in, or admitted to, a degree-granting program at UAB. Students must also be a current or former members of a branch of the United States Military or the immediate family member of a current or former member of a branch of the United States Military. To be considered, students should have earned at least a 2.5 cumulative UAB grade point average (on a 4.0 scale) in any coursework completed prior to the time of application.

**Virginia and Anna Praytor Scholarship:** A renewable scholarship that is based on the academic achievements of current UAB students who are graduates of a high school in the Birmingham Public School system. To be considered, students must have earned at least a 3.0 cumulative UAB grade point average. Students must be U.S. citizens or permanent residents to receive this award.

**W. Ann Reynolds Endowed Presidential Scholarship:** This award is for students who are admitted to, or currently enrolled in, an undergraduate degree-granting program at UAB. First preference will be given to entering first-year students. Applicants should demonstrate solid academic promise and achievement, earning a composite ACT score of 25 or higher (or an equivalent SAT score) and an overall grade point average of 3.5 or higher in coursework completed prior to the time of application. Applicants should also demonstrate leadership ability and achievement in previous pursuits, whether of a scholastic or extracurricular nature.

## Program-Related Scholarships

The following are Honors College and Honors College Program-Related Scholarships. Please contact the Honors College or individual program listed for more information on the application process.

### Honors College:

**Andrea Foard annual scholarship:** Reserved for female students in underrepresented groups such as African American, Hispanic, Native American in Honors College. Currently enrolled in or admitted to a STEM degree.

**Britt and Susan Sexton Endowed Honors Scholarship:** Applicants must be in a degree-granting program through the Honors College. Preference given to first year undergraduate students. Applicants should show solid academic promise and have earned a 3.5 grade point average. Applicants should also display a wide variety of artistic, cultural, and extracurricular activities and academic pursuits and have passionately explored these pursuits. Preference will also be given

to those with fervor for community involvement and service-related volunteer activities.

**Woman's Club House of the Third District of the Alabama Federation of Women's Clubs, Inc., Endowed Honors Scholarship:** Applicants must be in a degree-granting program through the Honors College. Preference given to first year, female students. Applicants should show solid academic promise and have earned a 3.5 grade point average. This award is based on merit and need; however, applicants do not have to qualify for federal financial assistance to be considered. Applicants should also display a wide variety of artistic, cultural, and extracurricular activities and academic pursuits and have passionately explored these pursuits. Preference will also be given to those with a fervor for community involvement and service-related volunteer activities.

**Edith and Franklyn Zimmerman Endowed Honors Scholarship:** Applicants must be in a baccalaureate degree-granting program through the Honors College. Preference given to first year undergraduate students. Applicants should demonstrate solid academic promise and achievement and have earned at least an overall 3.5 (on a 4.0 scale) grade point average in coursework completed prior to the time of application and have earned a score of at least 25 on the ACT or an equivalent score on the SAT. Applicants should also demonstrate leadership ability and achievement in previous pursuits, whether of a scholastic or extracurricular nature.

### University Honors Program (UHP):

**Boman-Powell Student Travel Award:** Established by Daphne and Richard Powell in honor of their mothers to enable students in the University Honors Program to travel to regional and national conferences or for education abroad. This fund allows UHP students to expand their educational experience through travel that would not otherwise be possible because of financial constraints. There is no formal application form, but any UHP student may apply by contacting the UHP Director and providing Documentation of the program/conference and costs associated with participation.

**Hess-Abroms Honors Scholarship Endowment:** Applicants must be students in the University Honors Program. This four-year scholarship is typically awarded to incoming freshmen accepted to the University Honors Program. Applicants should demonstrate superior academic achievement (as reflected in grades, test scores, and class rank), creativity or talent (as in the sciences, fine arts, leadership, or independent study), strong motivation, exemplary character, and intellectual promise. All applicants for the University Honors Program are encouraged to apply for this scholarship. Applications due mid-February.

**Steven C. Smith Discovery Award:** Applicants must be currently enrolled in, or admitted to, a degree-granting program at UAB and accepted to the University Honors Program. First preference will be given to entering first-year students in the program. Applicants should demonstrate solid academic promise and achievement and have earned at least a 3.0 grade point average in any coursework completed prior to the time of application. The award of this scholarship will be based on both merit and need. Applicants should display interest in a wide variety of artistic, cultural, and extracurricular activities and academic pursuits and must have a passion for exploring these pursuits as avenues of opportunity present themselves. Preference will also be given to applicants with fervor for community involvement, particularly service-related volunteer activities. Financial need will be determined by the scholarship selection committee based on the information provided by the student when applying for the award. Applicants do not have to qualify

for federal financial assistance in order to be considered for this award. Applications for all one-year scholarships are due May 1. Applicants are automatically considered for all one-year scholarships for which they are eligible.

**William J. Rushton III/Alabama Power Foundation Scholarship**

**Endowment:** Applicants must be incoming or current members of the University Honors Program in good standing and be residents of Alabama. This award is based on merit and need. Applicants should have a strong academic background, a strong commitment to academic achievement and extracurricular activities. Financial need will be determined by the scholarship selection committee based on the information provided by the student when applying for the award. Applicants do not have to qualify for federal financial assistance in order to be considered for this award. Applications for all one-year scholarships are due May 1. Applicants are automatically considered for all one-year scholarships for which they are eligible.

**William M. Spencer III Endowed Honors Scholarship:** Applicants must be admitted to or be current members of the University Honors Program. This award is based on merit and need. Applicants should have a strong academic background and a strong commitment to academic achievement and extracurricular activities. Financial need will be determined by the scholarship selection committee based on the information provided by the student when applying for the award. Applicants do not have to qualify for federal financial assistance in order to be considered for this award. Applications for all one-year scholarships are due May 1. Applicants are automatically considered for all one-year scholarships for which they are eligible.

**Nelson and Maye Hill Honors Fund:** Applicant must be a student in the University Honors Program and be accepted to an academic Study Abroad program. This award is based on merit and need. Applicants should have a strong academic background and a strong commitment to the academic and extracurricular activities of the University Honors Program. No application deadline.

**Marilyn Williams Elmore & John Durr Elmore Honors Scholarship**

**Endowment:** Applicants must be admitted to or be current members of the University Honors Program. This award is based on merit and need. Applicants should have a strong academic background and a strong commitment to academic achievement and extracurricular activities. Financial need will be determined by the scholarship selection committee based on the information provided by the student when applying for the award. Applicants do not have to qualify for federal financial assistance in order to be considered for this award. Applications for all one-year scholarships are due May 1. Applicants are automatically considered for all one-year scholarships for which they are eligible. Two awards are made annually to students in each class level.

**Donna Andrews Honors Scholarship:** This scholarship is awarded to an African American student admitted to, or currently in, the University Honors Program of the Honors College of the University of Alabama at Birmingham (UAB). Applicants must have financial need and come from a rural or underserved urban community in Alabama. Financial need will be determined by the scholarship selection committee based on the information provided by the student when applying for the award. Applicants do not have to qualify for federal financial assistance in order to be considered for this award. Applications for all one-year scholarships are due May 1. Applicants are automatically considered for all one-year scholarships for which they are eligible. One award is made annually.

**Ada Long Honors Scholarship:** This scholarship is awarded to a student admitted to, or currently in, the University Honors Program in the

Honors College of the University of Alabama at Birmingham (UAB). The scholarship is awarded on the basis of merit and need. Applications for all one-year scholarships are due May 1. Applicants are automatically considered for all one-year scholarships for which they are eligible. One award is made annually.

**UHP Dr. Doom Book Award Scholarship :** This scholarship is awarded to a student admitted to, or currently in, the University Honors Program in the Honors College of the University of Alabama at Birmingham (UAB). Applicants must be majoring in a discipline within the natural sciences or mathematics. The number of awards and the amount of an individual award depend on funds available. Applications for all one-year scholarships are due May 1. Applicants are automatically considered for all one-year scholarships for which they are eligible. Typically, one award is made annually.

## Science and Technology Honors Program (STHP):

**SciTech Summer Scholars Academic Enrichment Awards:** This program awards scholarships of up to \$2,500 to current STHP students. These competitive, merit-based awards are used to support summer research and academic activities. A call for applications for each scholarship opportunity will be announced to all current students each year (typically in late February) along with the application instructions and deadlines (typically mid-March).

## Student Academic Engagement

### Education Abroad

Education Abroad currently offers a robust portfolio of scholarships for students seeking international study abroad experiences. Listed below are donor-funded scholarships available for Education Abroad students.

**Pushpamala Deosthale Scholarship for Study Abroad:** This scholarship, established in 1999, was named in the memory of Ms. Pushpamala Deosthale and was established by contributions coming in part from her son, Dr. Duleep C. Deosthale, a former director of a predecessor office to UAB Education Abroad. This scholarship awards funds to be used for tuition and fees for a UAB Education Abroad-approved fall or spring program.

**Dr. John Downey Jones Scholarship for Study Abroad:** This scholarship, established in 1993, was named in the honor of Dr. John Downey Jones, Jr., a former director of a predecessor office to UAB Education Abroad. This scholarship awards funds to be used for tuition and fees for a UAB Education Abroad-approved fall or spring program.

**Lydia C. Cheney Scholarship for Study Abroad:** This scholarship, established in 2016, is named for Lydia C. Cheney in honor of her support for the UAB Office of Education Abroad. Ms. Cheney earned a bachelor's degree in history from Birmingham-Southern College and a master's degree in health education from UAB. Her parents were great supporters of travel as education and made such opportunities possible. Ms. Cheney's trip to France as an undergraduate made a lifelong impression on her; she hopes to share this experience with deserving UAB students. This scholarship pays tribute to Ms. Lydia Cheney's commitment to serving those in her community through philanthropy and volunteerism while also sharing her own deep conviction that study abroad programs foster personal growth, intercultural development, and transformational experiences.

**Dora & Sanjay Singh Study Abroad Scholarship:** Sanjay Singh helped establish the first study-abroad program for UAB's Collat School of Business in the mid-1990's. He and his wife, Dora, continue to help student enjoy similar experiences through the Education Abroad Scholarship Match Initiative.

**President Watts and Donors Education Abroad Scholarship:** President Watts has challenged UAB supporters to create an Education Abroad scholarship fund which begins in fall 2019 as a challenge to increase accessibility to Education Abroad credit-bearing opportunities. The donations received will be match by President Watts to double its impact for Education Abroad students over the next 5 years.

**UAB International Education in Wales Scholarship:** This scholarship is supported by the UAB Office of International Education. By supporting students in their studies at [Aberystwyth University in Wales](#), International Education is underlining its mission to "create and foster global partnerships with the aim of developing innovative, collaborative, and interdisciplinary educational programs and establish UAB as a leader in the training of students."

**UAB National Alumni Society Education Abroad Endowed Scholarship:** The UAB National Alumni Society Education Abroad Endowed Scholarship was established through the UAB National Alumni Society to be used for the purpose of creating a sponsored student award at the University of Alabama at Birmingham.

To explore additional scholarships, visit [UAB Education Abroad's scholarship page](#).

## ROTC

**Kelly Ingram VFW Post 668 Distinguished Army ROTC Cadet Scholarship:** Non-renewable Award to the most outstanding student selected from among the incoming senior class of ROTC. Applicants must have a 3.0 GPA. Determined by the Army ROTC program and the Office for Student Financial Aid.

## College and School Scholarships

### College of Arts & Sciences

The UAB College of Arts and Sciences offers over 50 scholarships. In order to be considered for a scholarship you must have a declared College of Arts and Sciences major and submit a scholarship application. While most of these scholarships require you to already be enrolled in the College, there are some awards available for incoming students. Important information, including the application process, eligibility requirements, and deadlines, are available on the UAB College of Arts and Sciences website: <http://www.uab.edu/cas/home/scholarships>

In addition some departments offer their own scholarships. If you are interested in a scholarship or award offered by a specific department, please visit its website for more information.

### Art and Art History

*For More Information, Please contact the Department of Art and Art History (205) 934-4941.*

**Art Department Senior Scholarship:** This scholarship is awarded annually to a rising senior concentrating in studio art chosen by vote of the Department of Art and Art History faculty.

**Bernice Cook Thomas Endowed Scholarship:** This scholarship is awarded annually to a student majoring in art. Preference shall be given to applicants from underrepresented, low-income, and minority populations.

**John Dillon Endowed Scholarship:** This scholarship is awarded annually to a student concentrating in studio art and doing significant work in printmaking.

**Edith B. Frohock Memorial Endowed Scholarship:** This scholarship is awarded annually to a junior concentrating in studio art.

**Incoming Freshman Art Scholarships:** Scholarships awarded annually to new high school graduates planning to major in art. Application requires portfolio.

**Kluge/Langley Endowed Scholarship:** This scholarship is awarded annually to a student concentrating in studio art.

**The Betty Loeb Endowed Scholarship:** Applicants for the Loeb Endowed Scholarship must be enrolled in the Department of Art and Arts History's Painting Program and must maintain at least a 3.0 grade point average.

**John Schnorrenberg Endowed Scholarship:** This scholarship is awarded annually to an undergraduate concentrating in art history.

**Ellen Shizuko Takahashi Endowed Scholarship:** This scholarship is awarded annually to a student concentrating in studio art and doing significant work in painting.

**Dr. Klaus Urban Endowed Scholarship for the Department of Art and Art History:** Applicants for the Urban Scholarship must be enrolled in the Department of Art and Art History's Art History Program, must submit a transcript, portfolio of recent work and one-page artist's statement with their application and must have at least a 3.0 grade point average.

**Marie Weaver and Steve Harvey Endowed Scholarship:** This Graphic Design scholarship is awarded annually to a student concentrating in studio art and doing significant work in graphic design.

### Biology

*For More Information, Please Contact the Department of Biology (205) 934-9685.*

**Biology Scholars Fellowship:** Freshmen who will be enrolled in full-time study as a Biology major at UAB are eligible for consideration for the Biology Scholars award. Awards are highly competitive and will be given to students who have an overall High School GPA of 3.5 or greater, a score of 26 or greater on the ACT, and show leadership skills and academic potential for research. Student finalists will be personally interviewed by representative members of the Biology faculty.

**Anne Moreland Cusic Endowed Scholarship:** Applicants must be currently enrolled in an undergraduate program in the Department of Biology and have completed BY 123 and BY 124 at UAB. Applicants should demonstrate academic promise and have at least a 3.0 grade point average overall and in their biology courses. Recipients may not apply for scholarship in subsequent years.

**Luke Gallagher Memorial Biology Scholarship:** Applicants must be currently enrolled as a Biology major and have completed BY 124. Applicants should demonstrate academic promise and have at least a 3.0 grade point average overall and in their biology courses. Preference will be given to applicants who deserve financial assistance. Recipients may not apply for scholarship in subsequent years.

**Ken R. Marion Endowed Scholarship:** Applications for the Ken R. Marion Endowed Scholarship must be enrolled in the Department of Biology as an undergraduate student and must maintain at least a 3.0 grade point average.

## Chemistry

*For More Information, Please Contact the Department of Chemistry (205) 975-7821.*

**Chemistry Scholars Fellowships:** Qualified incoming freshmen are eligible to apply to be a fellow in the Chemistry Scholars Program. Students must declare Chemistry as their major and have a composite ACT score of 26 or above.

## Communication Studies

*For More Information, Please Contact the Department of Communication Studies (205) 943-3877.*

**Mary Anne Amsbary Endowed Award:** This award commemorates outstanding community service for any communication studies student.

**Victoria and Ralph Johnson Endowed Scholarship:** Applicants for the Johnson Endowed Scholarship must be enrolled in the Department of Communication Studies. Preference will be given to first generation college students who are over the age of 22 years of age and who are a current or previous union member or are a spouse or child of a current union member.

**James E. Mills Scholarship:** This scholarship is reserved for the best junior or senior journalism major.

**Dr. William R. Self Memorial Endowed Scholarship:** This scholarship is reserved for a student in Communication Studies.

**Byron St. Dizier Endowed Journalism Scholarship:** This scholarship is reserved for a junior or senior student in print or broadcast journalism.

**Trotter Endowed Scholarship:** This scholarship is reserved for the outstanding Communication Management graduate or undergraduate student.

**John W. Wittig Public Relations Alumni Endowed Presidential Scholarship:** This scholarship is reserved for a junior or senior student majoring in public relations.

## Computer & Information Sciences

*For More Information, Please Contact the Department of Computer and Information Sciences (205) 934-2213.*

**Joseph M. Fontana Scholarship Endowment Fund for Computer and Information Sciences:** Applicants must be junior or senior student with a major in the Computer & Information Sciences program, should demonstrate academic promise, and have earned at least a 3.0 GPA in any course work completed prior

to application. Additionally, a grade point average of 3.5 must have been achieved in all computer science courses taken up to the time of selection. Preference is given to U.S. citizens and permanent residents. Recipients may apply for renewal for a second year.

**Joyce Iannuzzi Endowed Presidential Scholarship for Computer Science and Technology:** Applicants must be currently enrolled as Computer Science majors at the time of application, should have demonstrated solid academic promise, and have earned a 3.0 overall GPA. Applicants should submit a one page essay, which emphasizes his/her CS academic accomplishments, extra-curricular activities, and career goals. A cover sheet with student name, address, phone, and email must accompany the essay. Applicants can be freshman, sophomore, junior, or senior status.

## English

*For More Information, Please Contact the Department of English (205) 934-4250.*

**Barksdale-Maynard Endowed Creative Writing Prize:** Established in honor of Mrs. Maynard completing the first M.A. thesis in Creative Writing at UAB, the Barksdale-Maynard Endowed Creative Writing Prize is given out annually to students who achieve excellence in fiction and poetry in the Department of English.

**English Recruiting Endowed Scholarship:** Established by the English Advisory Committee. Applicants for the English Recruiting Endowed Scholarship must be entering freshmen to UAB and enrolled in the Department of English and must maintain at least a 3.0 grade point average.

**Gloria Goldstein Howton Scholarship Endowment:** This annual award is reserved for undergraduate or graduate students enrolled in the Department of English and interested in pursuing a career in creative writing.

**Phillips Scholarship in English:** This annual award is reserved for junior English majors with a GPA of 3.0 or better.

**Grace Lindsley Waits Scholarship:** This annual award is reserved for junior English majors with a GPA of 3.0 or better.

## Government

*For More Information, Please Contact the Department of Government (205) 934-8674.*

**Voytek Zubek Memorial Endowed Scholarship:** This scholarship is open to students currently enrolled in the Department of Government in the College of Arts and Sciences, and they must be Political Science majors. The scholarship recipient must have demonstrated solid academic promise and leadership qualities, and have at least an overall 3.0 grade point average and a 3.3 grade point average in Political Science.

## Justice Sciences

*For More Information, Please Contact the Department of Justice Sciences (205) 934-2069.*

**Justice T. Eric Embry Scholarship:** Applicants for this scholarship must be enrolled in, or admitted to, the Master of Science in Forensic Science (MSFS) program and have earned at least a 3.0 GPA in coursework completed prior to the time of application.

The number and amount of the awards to be granted from this scholarship fund shall be left to the discretion of the scholarship committee and based on the spendable income earned.

**Pre Law Advisory Board Scholarship:** To be eligible the student must demonstrate solid academic credentials and be involved with the UAB undergraduate Pre-Law Program and/or Mock Trial Team as well as maintain a 3.0 minimum grade point average.

## Mathematics

*For More Information, Please Contact the Department of Mathematics (205) 934-2154.*

**Robert M. Kauffman Memorial Endowed Award Fund:** This award may be given for cumulative achievement for an individual's outstanding work. Work done outside of the normal curriculum, such as projects and contributions to seminars, may also be considered. Preference is given to students who demonstrate outstanding ability, potential and interest in pursuing studies in Mathematics.

**Travis Wood Memorial Mathematics Scholarship:** Applicants must be currently enrolled as Mathematics majors and have completed Calculus III. Candidates must have a 3.0 GPA overall and in their mathematics courses. Preference will be given to full-time undergraduates with dependent(s) who are in need of financial aid. Special consideration is given to mature candidates who have suffered an interruption in their education.

**Mathematics Fast Track Scholarships:** Students in this program are expected to complete both a BS and Master's degree in mathematics. Many students do this in four years. Freshmen must be able to start in Calculus I. All students must maintain a 3.5 GPA in mathematics courses. The program provides for office space, support to attend mathematical meetings, participation in a seminar and individual weekly meetings with a faculty member.

**O'Neil Endowed Scholarship in Mathematics:** Applicants must be currently enrolled, or admitted to, UAB with the declared intent to pursue a major in mathematics. Applicants should demonstrate academic promise and have earned at least a 3.0 grade point average in coursework completed prior to application. Preference will be given to applicants who demonstrate outstanding ability, potential and interest in pursuing studies in mathematics.

**James C. and Carol Warner Endowed Scholarship:** First preference will be given to entering first-year students. Applicants should demonstrate solid academic promise and have an overall 3.0 GPA completed prior to application.

## Music

*For More Information, Please Contact the Department of Music (205) 934-7376.*

**Band Scholarships:** Students are required to participate in various ensembles as determined by the director(s). Open to students of all disciplines.

**Choral Scholarships:** Students are required to participate in various ensembles as determined by the director(s). Open to students of all disciplines.

**James Darrell McAnnally Piano Scholarship:** For a music major in piano performance.

**Music Technology Scholarships:** Scholarships are available for students majoring in Music Technology.

**Myrtle Jones Steele Piano Scholarship Endowment:** For music majors in piano performance.

**Alys Robinson Stephens Alumni Scholarship for the Performing Arts:** For a music major in any instrument or voice.

**Stevie Wonder Music Scholarship Endowment:** For music majors in the Music Technology Program.

**UAB Music Scholarships:** Music majors in any instrument or voice.

## Physics

*For More Information, Please visit <http://www.uab.edu/cas/home/scholarships>.*

**Robert and Edith Bauman Endowed Scholarship in Physics:** Applicants must be currently enrolled in, or admitted to, a degree-granting program in the Department of Physics at UAB. Applicants should demonstrate academic promise and have earned at least a 3.0 grade point average in coursework completed prior to application. This is an annual award. Although preference will be given to entering first-year students, recipients of the scholarship may apply for the award in subsequent years.

## Psychology

*For More Information, Please visit <http://www.uab.edu/cas/home/scholarships>.*

**The Passey Psychology Prize Endowment:** The Passey Psychology Prize Endowment goes to the student who is judged to have shown the best overall level of accomplishment in psychology – both in terms of course grades and also research and other department activities.

## Sociology and Social Work

*For More Information, Please Contact the Department of Sociology and Social Work (205) 934-3307.*

**Ferris S. and Annie Pharo Ritchey Endowed Scholarship in Sociology:** Applicants must be deserving undergraduate students in the Department of Sociology. This scholarship was named by Dr. Ferris Ritchey, former Chair and faculty member in the Department of Sociology, and his family in memory of grandparents.

## Theatre

*For More Information, Please Contact the Department of Theatre (205) 934-3236.*

**Ruby Lloyd Apsey Scholarships:** These scholarships are awarded annually and are renewable for promising students majoring in theatre.

**Fannie Flagg/Kathy Waites Endowed Scholarship:** Applicant must be a deserving student majoring in dance or Theatre Arts at UAB.

**David Lloyd Memorial Scholarship Endowment:** These scholarships are awarded annually and are renewable for outstanding students majoring in theatre.

**William C. Ozier Memorial Scholarship:** Applicants must be residents of Alabama. Applicants must show financial need and demonstrate talent in theatre arts.

## College Wide Scholarships

For More Information, please visit <http://www.uab.edu/cas/home/scholarships>.

**College of Arts and Sciences Dean's Scholarship:** Applicants must be currently enrolled in a degree-granting program in the College of Arts and Sciences. Applicants should demonstrate leadership qualities and academic promise and have earned at least a 3.0 grade point average in coursework completed prior to application. This is an annual award. Recipients of the scholarship may not apply for the award in subsequent years.

**Edward H. Atchison Endowment Fund for Scholarships in the Visual and Performing Arts:** A four-year scholarship which covers full tuition and fees for an undergraduate student enrolled in a full-time program in the Visual and Performing Arts or for undergraduate students enrolled in the School of Education's Art Education or Music Education Programs. Students must maintain a 2.5 overall grade point average.

**Gladys Davies and George F. Brockman IV Endowed Scholarship:** Applicants must be currently enrolled in a degree-granting program in the Departments of Biology, Chemistry, Computer and Information Sciences, Mathematics or Physics. Applicants should demonstrate academic promise and have earned at least a 3.0 grade point average in coursework completed prior to application.

**The God at the Speed of Light Endowed Scholarship:** Applicants must be currently enrolled, or admitted to, a degree-granting program in the Departments of Biology, Chemistry, Computer and Information Sciences, Mathematics or Physics. Applicants should demonstrate academic promise and have earned at least a 2.5 grade point average in coursework completed prior to application. Preference will be given to applicants who are deserving of financial assistance. This is an annual award and recipients may apply for the award in subsequent years. Applicants must be residents of Alabama.

**Lauren McLellan Sanders Endowed Scholarship:** The Sanders Scholarship is open to students currently enrolled in the Departments of Government, History, Anthropology, Justice Sciences, Psychology and Sociology and Social Work who have demonstrated solid academic promise and have at least an overall 3.0 grade point average. The Lauren McLellan Sanders Scholarship is an annual award. Recipients of the scholarship may apply for the award in subsequent years.

**Jane White Mulkin Endowed Scholarship:** This scholarship is awarded annually to a student enrolled in, or admitted to the Departments of Art and Art History, Communication Studies, English, Foreign Languages and Literatures, Music, Philosophy or Theatre. Preference given to applicants in need of financial assistance, particularly non-traditional students who are attending school while working. Applicants must be residents of Alabama.

**NASA-Alabama Space Grant Program Scholarships:** Scholarships are available to science and engineering students

through the NASA-Alabama Space Grant Program. Apply through the Department of Physics.

**National Alumni Society Dean's Scholarship:** The National Alumni Society Dean's Scholarship is a college-wide scholarship and is open to students currently enrolled in or admitted to a degree-granting program in the College of Arts and Sciences who have demonstrated solid academic promise and leadership qualities, and have at least an overall 3.0 grade point average.

**Tennant and Susan McWilliams Endowed Scholarship:** This fund provides scholarship support to students currently enrolled in the Departments of Government, History and Anthropology, Justice Sciences, Psychology and Sociology and Social Work.

## School of Education Scholarships

All Scholarships and Awards are for students in good standing and pursuing degrees from the School of Education. Other stipulations and requirements are noted with each Award or Scholarship listing.

### Dr. Lydia L. Alexander Endowed Student Award in Education

Dr. Lydia L. Alexander was a long-time faculty member and served six years as Assistant Dean in the School of Education. She retired in 1998, but continues to work in and give back to the community through Alpha Kappa Alpha sorority and other charitable organizations. Dr. Alexander received the Lifetime Achiever award from the Oliver Robinson Foundation in 2012 and remains an ardent proponent of quality education.

Criteria:

- Applicant must be a Junior or Senior student seeking a degree in Secondary Education from the School.

### Beta Chi ESG Clint Bruess Health Education Scholarship

In 2009 and in recognition of his long years of service to UAB and the School of Education, the Eta Sigma Gamma Beta Chi chapter Executive Board at UAB established this Scholarship in honor of Dr. Clint E. Bruess. Dr. Bruess was a School faculty member, and served as Chair of the Department of Human Studies from 1981 through 1987 and subsequently as Dean of the School of Education from 1988 until 1999.

Criteria:

- Applicants must be pursuing a degree in a Health Education-related major.
- Applicants should demonstrate solid academic promise and have earned at least a 3.3 grade point average.
- Preference will be given to members of the Beta Chi Chapter of Eta Sigma Gamma.

### The Catharine Comer Friend Endowed Scholarship

Catharine Comer Friend was very active in the Birmingham community, serving as Executive Director of the Birmingham Kiwanis Club and Chair of the International Association of Kiwanis Secretaries, and was a member of The Junior League of Birmingham, the Linly Heflin Unit, and the Women's Fund. She was an ardent supporter of UAB and the Greater Birmingham area, and deeply committed to education. This Scholarship was created in 2006 by Mr. and Mrs. Edward M. Friend III.

## Criteria:

- Preference will be given to students who wish to teach in schools that serve predominantly disadvantaged students and/or in an urban setting in Alabama.
- Applicants should have earned at least an overall 3.0 GPA (based on a 4.0 scale) in coursework prior to the time of application.
- Preference will be given to those deserving financial assistance as determined by the UAB Office of Student Financial Aid.

**The Early Childhood Education Graduate Student Award**

A thoughtful donor and friend of the UAB School of Education has created an award to assist deserving students who are enrolled in the UAB School of Education Early Childhood Education program.

## Criteria:

- Applicants must be enrolled in or admitted to a graduate degree-granting program in Early Childhood Education.
- Preference will be given to students pursuing a doctoral degree.
- The Award is not renewable.

**The Layla Ghabayen Education Scholarship**

Layla Ghabayen was an education major at the UAB School of Education. She was involved in a fatal auto accident in 2010, and her loving parents, Waleed and Cynthia Ghabayen, and family wanted a way to keep her spirit alive and create a lasting tribute to her and the joy she derived from helping others learn. The oldest of four, Ms. Ghabayen was industrious, intelligent, enthusiastic, curious, and committed to working with children – her dream was to be a teacher and mother. Each year, a student recipient is chosen who best exemplifies the selfless and energetic qualities of Ms. Ghabayen.

## Criteria:

- Applicants must be enrolled in or admitted to the Early Childhood Education/Elementary Education Program in the School.
- Applicants should have at least a 3.0 GPA.

**The Virginia Horns-Marsh Scholarship**

Dr. Virginia Horns-Marsh began her UAB career in 1969, when the University was first designated as an autonomous institution. She worked tirelessly to promote early childhood education and served as the Director of the School's Early Childhood Education Program, Early Childhood Education Doctoral Program and Metropolitan Education Studies, as Chair of the Department of Curriculum and Instruction. A gift from Dr. Horns-Marsh and gifts from family, friends and colleagues created this Scholarship to provide opportunities for success to future Early Childhood Educator candidates.

## Criteria:

- Preference will be given to students enrolled in Early Childhood Education and Development of Health Education/Health Promotion in the School.
- In the absence of such applicant, consideration may be given to exceptional doctoral students in the School of Education, then exceptional graduate students in Early Childhood Education, Elementary Education or Secondary Education.
- Recipients must maintain a 3.0 GPA in all coursework.

**The Dr. Delbert H. and Dr. Roberta Long School of Education Endowed Scholarship**

As long-time UAB faculty, Dr Delbert Long and Dr. Roberta Long distinguished themselves by their commitment to educating future teachers and education administrators. Before coming to UAB, Doctors Long taught in Nepal, Indonesia, Czechoslovakia and Germany, among other places, sharing their love of learning and passion for education. They created this Scholarship in order to make access to an education degree easier for students and thereby fostering opportunities to train quality teachers for future generations.

## Criteria:

- Applicants must be an undergraduate enrolled in or admitted to TEP;
- In the absence of such an applicant, consideration may be given to students enrolled in the Alternative Master's Program.
- Recipients must maintain a 3.0 GPA.
- Applicants must demonstrate a successful work and/or leadership experience.
- Recipients must demonstrate financial need as determined by the UAB Office of Student Financial Aid.

**The Artie Manning Memorial Scholarship**

Artie Manning was a unique young man with a special blend of skills and empathy for individuals, particularly children, who faced physical and learning challenges. Artie had cerebral palsy but didn't let that hinder his interest in and love for athletics, and managed the Lady Blazers basketball team and worked at the Blazers' summer basketball camps while working on his master's degree in special education. After graduation, he taught special education at Barrett Elementary School until his death in 1991. What Artie wanted most in life was to serve people, and this scholarship, created by family in his memory, helps preserve that passion.

## Criteria:

- Applicants must be learning and/or physically challenged.
- In the absence of such applicants, recipients must be preparing to teach learning and/or physically challenged individuals.
- Recipients must be accepted into TEP or a degree-seeking education program in the graduate school of the School of Education,
- Candidates must be full-time and have completed 24 hours (undergraduate) or 18 hours (graduate)
- Recipients must demonstrate financial need as determined by the UAB Office of Student Financial Aid.

**The Maryann Manning Endowed Literacy Scholarship**

Upon Dr. Maryann Manning's retirement from UAB, friends, colleagues and admirers created this scholarship as a tribute to her many years of service and passion to enhance literacy learning around the world.

## Criteria:

- Preference will be given to those involved with quality literacy instruction in pre-K through 6<sup>th</sup> grade.
- Applicants should have at least a 3.0 GPA.
- Preference will be given to those who show financial need as determined by UAB Office of Student Financial Aid.

**The Kathryn Cramer Morgan Memorial Scholarship**

A long-time resident of Birmingham, Mrs. Morgan was an esteemed employee at UAB, serving as administrative assistant to Dr. S. Richards Hill, Jr., UAB's second president. She and her husband, Mr. Thomas Henry Morgan, were active participants in University life for over four decades, hosting numerous international students pursuing degrees at UAB. Her loving husband created this scholarship after her death in 1990 as a way to memorialize and honor her life and passion to improve our education systems with enhanced teaching and scholarship.

**Criteria:**

- In the absence of qualified student candidates, visiting scholars or professors may be funded.

**The National Alumni Society Dean's Scholarship**

The National Alumni Society Dean's Scholarship is a school-wide scholarship given by the National Alumni Society.

**Criteria:**

- Students should be able to demonstrate solid academic promise and leadership qualities
- Applicants should have at least a 3.0 GPA.

**The Dr. Eddie P. Ort Endowed Award**

Dr. Eddie P. Ort spent is career training educators, both in UAB classrooms and with in-service education programs for elementary and middle school teachers in the greater Birmingham area. He was a recognized leader in social studies education. Dr. Ort and his family created this Scholarship to assist deserving students conducting their final Research Project in the Educational Specialist Degree program.

**Criteria:**

- Applicants must have a faculty advisor's approval to begin an Educational Specialist Research Project.
- Preference will be given to students beginning their research project.
- If no first-time research students apply, students already engaged in a research project may be eligible.
- Recipients should have a strong academic record of performance, and evidence of continued professional excellence will be expected.
- Preference will be given to applicants with teaching or other professional experience commensurate the goals of their respective program field(s).
- Preference will be given to applicants currently employed in their respective field(s).

**The Frances M. Owens Endowed Scholarship**

A native of Birmingham and UAB alumna, Frances M Owens taught English and social studies at Mountain Brook Junior High School. She is a member of the UAB National Alumni Society and remains a faithful supporter of many programs across the UAB campus. Mrs. Owens created this Scholarship to provide assistance and greater opportunity to those diagnosed with ADD/ADHD become educators, and thereby better serve and positively impact students in our K-12 school systems.

**Criteria:**

- Preference will be given to entering freshmen students with ADD/ADHD registered through UAB Disability Support Service.
- Applicants must be a full-time undergraduate student.

**Dr. Mabel C. Robinson Memorial Endowed Scholarship**

This Scholarship was created by the friends and family of Dr. Mabel C. Robinson, and in tribute to her life-long work in physical and health education. Dr. Robinson spent her life advocating for greater opportunities for girls and women in athletics and physical and health education. Her efforts were assisted by passage of Title IX legislation and by the health and wellness and education faculty at UAB. This Scholarship will help foster opportunities for students to earn a degree from UAB and be better prepared to enter the profession.

**Criteria:**

- Applicants must be pursuing an undergraduate degree in health or exercise education-related degrees.
- Preference shall be given to females.

**The Mildred, Mack & Blanche Stewart Teacher Education Endowed Scholarship**

Mildred Stewart Snipes was the first elementary guidance counselor in the Jefferson County Public School System, working 36 years at Gardendale Elementary School. Her firm belief when women have access to education, their cultural influence will permeate their families as well as the children they teach. Mrs. Snipes created this scholarship to create opportunities to assist students in becoming strong, passionate and well-trained educators who will positively impact students' lives. The Scholarship was created as a memorial to her parents Mack and Blanche Stewart who fostered a love of learning and sense of giving back to the community.

**Criteria:**

- Applicants must have graduated from the **Jefferson County Public School System, or Spain Park, Leeds, Hewitt-Trussville, or any high school in Bibb, Blount, Cullman, St. Clair, Shelby, Tuscaloosa or Walker Counties.**
- Preference will be given to entering freshman
- If no freshmen apply, consideration may be given to transfer students from community colleges that attended previously mentioned schools.
- Recipients must maintain a 3.0 GPA.
- Applicants who are transfer students from a community college must apply and be accepted into TEP and be seeking certification from the State Department of Education.

**The Ruth M. Strong Scholarship**

Dr. Ruth M. Strong spent her professional life helping children find a brighter tomorrow. She began her teaching career at McCaw Elementary School, where she implemented a reading program which grew into the Birmingham City Schools Right-to-Read Program. She was named Director of this reading initiative. She also served as Program Specialist for Reading, Director of the Magnet School Program, and Assistant Superintendent for Instruction for the Birmingham City School System. This Scholarship is provided annually by a generous gift from Dr. Strong, and supports a student who will carry forward Dr. Strong's proud legacy.

**Criteria:**

- Applicants must be accepted in the TEP as an undergraduate
- In the absence of undergraduate candidates, students accepted into the Alternative Master's Program may be considered.
- Recipients must demonstrate financial need as determined by the UAB Office of Student Financial Aid.
- Preference will be given to underrepresented, low-income and minority students.

#### **The Tevendale Family Scholarship**

Jackie and William Alan "Bill" Tevendale are long-time supporters of education and educational opportunities in the greater Birmingham area. Both remain active volunteers, and Mr. Tevendale was the first Alabamian recognized with the National Operation School Bell Award by the Assistance League. The entire Tevendale family equally values educational opportunities, and with this Scholarship intends to create opportunity for future educators who will, in turn, leave a positive impact on the community.

##### **Criteria:**

- Recipient must maintain a 3.0 GPA.
- Recipients must demonstrate financial need as determined by the UAB Office of Student Financial Aid.
- Preference will be given to first generation college students.
- Preference will be given to students who are active in their communities, including the UAB community.

#### **School of Education Alumni Scholarship**

This Scholarship is provided annually through the generosity of School of Education alumni and friends who contribute to the School's Scholarship efforts and/or Area of Greatest Need.

##### **Criteria:**

- Recipients must maintain a 3.0 GPA.
- Preference will be given to those who show financial need as determined by UAB Office of Student Financial Aid.

#### **Glenda R. Elliott Endowed Scholarship**

The Glenda R. Elliott Endowed Scholarship was created by faculty in the Counselor Education Program in the School of Education and members of the UAB Zeta Chapter of Chi Sigma Iota in honor and tribute to her and her years of service to UAB. Dr. Elliott is a licensed professional counselor, certified counselor supervisor, and has more than 40 years of experience as a counselor educator. She retired from UAB in 1994, is adjunct faculty for the Counselor Education Program, and Associate Professor Emerita.

##### **Criteria:**

- Applicants must be enrolled in the counselor education program as graduate students.

#### **The Joyce G. Sibley Educational Computing Award**

Dr. Joyce Sibley and her husband Dr. William Sibley have long supported educational opportunities for students. Knowing that learners benefit greatly when using the right tools, Dr. Sibley wanted to put a computer into the hands of an outstanding future teacher. This Award provides a desktop, tablet, or other personal computer for a deserving student.

##### **Criteria:**

- Preference is given to students that do not own a computer.
- Applicants must be a junior or senior admitted to the teacher education program.
- In the absence of such applicants, students admitted to the Alternative Master's Program may be considered.
- Recipients must maintain a 3.25 GPA.

#### **Jack Tribble Scholarship**

Mr. Jack Tribble was an ardent supporter of UAB and a long-time fan of football. Although Mr. Tribble did not have an opportunity himself to attend college, he had a strong desire to make a college education affordable and an option for worthy students. At his death, UAB learned of Mr. Tribble's generous bequest meant to support students who need financial assistance and are physical education majors. Each year, the Kinesiology Program selects a student recipient who best exemplifies Mr. Tribble's interests and passion.

##### **Criteria:**

- Recipients must be majoring in physical education.
- Preference will be given to must demonstrate financial need as determined by the UAB Office of Student Financial Aid.

#### **National Alumni Society**

The UAB National Alumni Society (NAS) provided \$750,000 in scholarships, grants, and gifts to the university last year. The society is very proud to offer much-needed scholarship assistance to incoming freshman, transfer students, graduate students, upperclassmen and international students.

#### **The Instructional Design and Development Program Scholarship**

The Instructional Design and Development (IDD) scholarship will be used to assist deserving students who are enrolled in the IDD Program in the School of Education at UAB. Recipients are eligible to apply for the award in subsequent semesters as long as they continue to meet the requirements.

##### **Criteria:**

- Applicants must be currently enrolled in the Instructional Design and Development program.
- Applicants should be second-semester or beyond students with a GPA in the program of 3.0 or higher.
- Applicants must submit a personal statement of 500 words or less describing their career aspirations that display dedication to the instructional design and development field and their academic and personal merit.
- Additional consideration may be given to an applicant's financial need.

Contact the IDD Program Coordinator for additional information and deadlines ([idd@uab.edu](mailto:idd@uab.edu))

#### **Dr. Julia S. Austin Scholarship**

The Dr. Julia S. Austin Scholarship was created by Dr. Austin's family, friends, colleagues, and students to recognize her role in having started the School of Education's English as a Second Language (ESL) teacher education program and her decades of service to the ESL profession.

This scholarship will be used to assist deserving students who are pursuing the ESL Master of Arts in Education degree with preference for students in its TESOL concentration (i.e., non-certification).

Criteria:

- Applicants should demonstrate solid career promise based on an interview with the ESL graduate faculty in the Department of Curriculum and Instruction.
- This scholarship shall be awarded on the basis of merit and character, as well as the potential of the applicant(s) for success in the program.
- Preference will be given to applicants who are deserving of financial assistance as determined by the UAB Office of Student Financial Aid.
- Preference will also be given to those applicants who have been involved with their communities, including the UAB community, and especially with immigrant and English learner communities.
- Preference will be given to career changers or, in the absence of such applicants, to students seeking a first career.
- Email [Dr. Susan Spezzini](mailto:Dr. Susan Spezzini) ([spezzini@uab.edu](mailto:spezzini@uab.edu)) for more information.

## School of Business

**Accounting Advisory Council Scholarship:** A scholarship(s) is awarded to a student with an accounting major with a 3.0/4.0 minimum GPA who is enrolled in or has completed AC300. The value of the award and the number of awards are variable.

**Thomas McClurg Acheson Endowed Memorial Scholarship:** A one-year scholarship awarded to an incoming or current student pursuing a major in the Collat School of Business. Applicants should demonstrate solid academic promise and achievement and must have earned a minimum 3.0 / 4.0 GPA in coursework completed prior to the time of application. Financial need is a consideration. The scholarship will be equally divided between the fall and spring semesters of the year awarded. The amount of the award is variable based on availability of funds.

**American Society of Women Accountants:** A scholarship, valued at \$1,000, is awarded to a senior in accounting with at least a 3.0/4.0 GPA overall and in accounting. The recipient must have completed 60 hours of coursework and have completed AC 300. Need is considered. For information, contact the Collat School of Business at (205) 934-8813.

**Association of Certified Fraud Examiners (ACFE) Scholarship:** Student must be enrolled or admitted to the Collat School of Business and be an accounting major with an interest in forensic accounting. Recipient must demonstrate involvement in student or community activities and have a minimum 2.5/4.0 GPA. The value of the award and the number of awards are variable.

**Barfield, Murphy, Shank & Smith Scholarship in Accounting:** A scholarship, valued at \$1,000, is awarded to a senior in Accounting who has an interest in public accounting and who is enrolled in or completed AC300. GPA is important.

**Becker CPA Review Scholarship:** Free Becker CPA Review Course is awarded to a graduating senior planning a career in public accounting. GPA is important. The Accounting Scholarship Committee must receive a letter of interest by February 1. The number of awards is variable.

**Maggie Bencina Endowed Memorial Scholarship:** This award was established to offer financial support to a continuing Collat undergraduate degree-seeking student who has demonstrated solid academic promise and achievement by earning a minimum of 3.0 in coursework completed at time of application. Financial need is considered. Preference is given to a student who has stated that they experienced the death of a parent or primary caretaker prior to high school graduation, or who is a single parent. This is a one year scholarship. Students are encouraged to apply for continued consideration each year.

**Birmingham Chapter of the Alabama Society of CPA's Scholarship:** A scholarship, valued at \$2,000, is awarded to a full-time accounting major entering his/her senior year. Recipient must have earned and maintain a 3.0/4.0 GPA in all coursework.

**Birmingham Chapter of the IMA Scholarship:** One scholarship, valued at \$2,500 each, is awarded to an undergraduate accounting major or a Master of Accounting student. Recipient must have a 3.0/4.0 GPA in his/her accounting coursework and overall. He/She should intend to pursue a career in managerial accounting and show an interest in attaining the CMA or CFM designation.

**Julian Watts Banton Endowed Scholarship:** A one-year scholarship of varying amount awarded to an entering freshman student with a major in the Collat School of Business. Preference is given to applicants with strong academic qualifications.

**John F. Breyer Endowed Scholarship:** A scholarship of variable value is awarded to a student enrolled or admitted to The Collat School of Business with a 3.0/4.0 or better GPA. Financial need and academic promise are considered.

**Collat Scholars:** Renewable for up to four years, this scholarship valued at \$5000 per year, is available to incoming freshmen and transfer students. Entering freshmen, who have selected a major in the School of Business, must have a minimum GPA of 3.25/4.0 and at least a 24 ACT score. Transfer students, who have selected a major in the Collat School of Business, must have a minimum GPA of 3.0/4.0 in all college courses and have completed at least 24 semester hours of college credit. Preference will be given to students who bring diversity to the Collat School of Business student body.

**Charles & Patsy Collat Endowed Scholarship in Industrial Distribution:** Annual scholarships are awarded to entering freshman, transfer or currently enrolled student who designate Industrial Distribution as their major. High school GPA, ACT or SAT scores, participation in extra-curricular activities, financial need, and career goals will be considered. Currently enrolled ID students with good academic standing, commitment to completing degree requirements in ID, participation in extracurricular activities and community service will be considered for the scholarship.

**Charles & Patsy Collat Endowed Support Fund Industrial Distribution Scholarship:** The Charles and Patsy Collat Endowed Support Fund Industrial Distribution Scholarship is awarded each year to students majoring in Industrial Distribution who demonstrate exemplary performance in the ID major and commitment to the industry. Entering freshman and currently enrolled students are eligible for this scholarship. For entering freshman, ACT or SAT scores as well as high school GPA, extracurricular activities and career goals are considered. Currently enrolled students must have achieved high academic performance, involvement in

extracurricular activities, and demonstrate commitment to Industrial Distribution. This scholarship, as well as all ID scholarships, are awarded for one year. Scholarship recipients and all scholarship applicants are eligible to re-apply each year.

**Consolidated Electrical Distributors (CED) Industrial Distribution Scholarship and the Consolidated Electrical Distributors (CED) Endowed Industrial Distribution**

**Scholarship:** The Consolidated Electrical Distributors (CED) ID Scholarship and the Consolidated Electrical Distributors (CED) Endowed ID Scholarship are awarded each year to students majoring in Industrial Distribution who demonstrate exemplary performance in the ID major and commitment to the industry. Entering freshman and currently enrolled students are eligible for this scholarship. For entering freshman, ACT or SAT scores as well as high school GPA, extracurricular activities and career goals are considered. Currently enrolled students must have achieved high academic performance, involvement in extracurricular activities, and demonstrate commitment to Industrial Distribution. This scholarship, as well as all ID scholarships, are awarded for one year. Scholarship recipients and all scholarship applicants are eligible to re-apply each year.

**Cooper Industries Industrial Distribution Scholarship:**

Scholarships of variable amounts are awarded to entering freshmen, transfer or currently enrolled students who designate Industrial Distribution as their major. High school GPA, ACT or SAT scores, participation in extra-curricular activities, financial need, and career goals will be considered. Currently enrolled ID students with good academic standing, commitment to completing degree requirements in ID, participation in extracurricular activities and community service will also be considered for the scholarship.

**Tommie G. Cummings Endowed Scholarship in Accounting:** A scholarship of variable value is awarded to an entering freshman or currently enrolled student or MAC student who demonstrates solid academic performance or achievement.

**W. Jack Duncan Endowed Presidential Scholarship:** A scholarship of variable value is awarded to a graduate student enrolled The Collat School of Business with a 3.5/4.0 or better GPA. Financial need and academic promise are considered.

**Thomas & Betts Endowed Industrial Distribution Scholarship:**

The Thomas & Betts Endowed Industrial Distribution Scholarship is awarded each year to students majoring in Industrial Distribution who demonstrate exemplary performance in the ID major and commitment to the industry. Entering freshman and currently enrolled students are eligible for this scholarship. For entering freshman, ACT or SAT scores as well as high school GPA, extracurricular activities and career goals are considered. Currently enrolled students must have achieved high academic performance, involvement in extracurricular activities, and demonstrate commitment to Industrial Distribution. This scholarship, as well as all ID scholarships, are awarded for one year. Scholarship recipients and all scholarship applicants are eligible to re-apply each year.

**Thomas & Betts T. Kevin Dunnigan Endowed Scholarship in Industrial Distribution:** Annual scholarships are awarded to entering freshman, transfer or currently enrolled student who designate Industrial Distribution as their major. High school GPA, ACT or SAT scores, participation in extra-curricular activities,

financial need, and career goals will be considered. Currently enrolled ID students with good academic standing, commitment to completing degree requirements in ID, participation in extracurricular activities and community service will be considered for the scholarship.

**Eaton Corporation Endowed Industrial Distribution**

**Scholarship:** Annual scholarships are awarded to entering freshman, transfer or currently enrolled student who designate Industrial Distribution as their major. High school GPA, ACT or SAT scores, participation in extra-curricular activities, financial need, and career goals will be considered. Currently enrolled ID students with good academic standing, commitment to completing degree requirements in ID, participation in extracurricular activities and community service will be considered for the scholarship.

**Ernst and Young/John L. Rhoads Scholarship in Accounting:**

Scholarships, of variable value, are awarded to either undergraduate accounting majors entering their senior year or accounting equivalent majors. The recipients must have a minimum 3.25/4.0 accounting GPA and minimum 3.0/4.0 overall GPA. Must be involved in professional and other activities and have an interest in public accounting. Equivalent majors must have completed AC 310.

**Faculty Scholarships in Management:** A scholarship, valued at \$500, is awarded to a student majoring in Management. The recipient must have at least a 3.25/4.0 GPA overall and have taken between 60-90 semester hours of coursework. Previous recipients are not eligible to reapply.

**Fetherston Scholarship in Finance:** A scholarship, of variable value, is awarded to a currently enrolled or admitted finance major. The recipient must have at least a 3.0/4.0 GPA, demonstrate leadership, and be active in student activities.

**Roy S. Fogas Memorial Scholarship:** At least one scholarship, valued at \$1,000, is awarded annually to a currently enrolled UAB Collat School of Business student entering his/her junior or senior year. Selection is based upon academic promise, leadership potential and financial need. Award is renewable so long as the recipient maintains a minimum overall GPA of at least 3.0/4.0 and an average 3.0/4.0 in his or her major. Number of awards is variable.

**Katherine Bridges Freeland Endowed Scholarship:** A variable value scholarship is awarded to student enrolled or admitted to UAB. Recipient must have a major in FN or IS with a minimum 3.0/4.0 or better GPA. Low income or minority given priority.

**Edward M. Friend III School of Business Endowed Scholarship:**

A variable value scholarship is awarded to a new or currently enrolled student in the Collat School of Business. Applicants must have a minimum 3.0/4.0 overall GPA.

**A.G. Gaston Endowed Memorial Scholarship:** A scholarship is awarded to an African American student enrolling as a freshman or currently enrolled in the UAB Collat School of Business. Recipient is eligible to re-apply in following years with total awards limited to no more than four years. Financial need and superior academic achievement are considered.

**GE Industrial Distribution Endowed Scholarship:** Scholarship(s) is awarded to an entering freshman with an Industrial Distribution

major. High school GPA, ACT or SAT scores, participation in extra-curricular activities, financial need, and career goals will be considered. Currently enrolled ID students with good academic standing, commitment to completing degree requirements in ID, participation in extracurricular activities and community service will also be considered for the scholarship. Recipients may re-apply in following years but will be limited to four academic years. The value of the award and the number of awards are variable.

**Green and Gold Student Managed Investment Fund**

**Scholarship:** These scholarships are funded by earnings from the Green and Gold Student Managed Investment Fund and vary in amount according to fund performance. The scholarships are awarded to those students involved in the Green and Gold fund.

**Hackney Family Endowed Scholarship in Business:** Preference given to entering freshman who demonstrate solid academic promise and have at least a 3.0 overall GPA.

**Nancy Collat Goedecke Endowed Scholarship:** The Nancy Collat Goedecke Endowed Industrial Distribution Scholarship is awarded each year to students majoring in Industrial Distribution who demonstrate exemplary performance in the ID major and commitment to the industry. Entering freshman and currently enrolled students are eligible for this scholarship. For entering freshman, ACT or SAT scores as well as high school GPA, extracurricular activities and career goals are considered. Currently enrolled students must have achieved high academic performance, involvement in extracurricular activities, and demonstrate commitment to Industrial Distribution. This scholarship, as well as all ID scholarships, are awarded for one year. Scholarship recipients and all scholarship applicants are eligible to re-apply each year.

**Tommy and Anne Hagwood Endowed Scholarship in**

**Commercial Real Estate:** Must be a junior or senior currently enrolled or admitted to the UAB Collat School of Business Finance Department with plans to pursue a career in commercial real estate. Must have a 3.25 GPA. Must also demonstrate a commitment to community service and exhibit outstanding involvement in extracurricular activities.

**Hammond Power Solutions Industrial Distribution Scholarship:**

The Hammond Power Solutions Industrial Distribution Scholarship is awarded each year to students majoring in Industrial Distribution who demonstrate exemplary performance in the ID major and commitment to the industry. Entering freshman and currently enrolled students are eligible for this scholarship. For entering freshman, ACT or SAT scores as well as high school GPA, extracurricular activities and career goals are considered. Currently enrolled students must have achieved high academic performance, involvement in extracurricular activities, and demonstrate commitment to Industrial Distribution. This scholarship, as well as all ID scholarships, are awarded for one year. Scholarship recipients and all scholarship applicants are eligible to re-apply each year.

**Robert E. and Diane M. Holmes Endowed Scholarship:** A variable value scholarship is awarded to a new or currently enrolled student in the School of Business. Applicants must have a 3.0/4.0 overall GPA.

**Institute of Internal Auditors/Debbie Tanju/UAB Scholarship:**

One scholarship, valued at \$1,500, is awarded to an accounting major with an interest in internal auditing. GPA is important.

**Ave P. Jack Endowed Scholarship in Business:** A one-year scholarship awarded to a currently enrolled African American female student. The awarded student must have a minimum 2.5 overall GPA. Preference is given to first generation college students and students active in Collat School of Business student organizations.

**Eric P. Jack Endowed Scholarship in Business:** A one-year scholarship awarded to a currently enrolled student in the Collat School of Business. The awarded student must have a minimum 2.5 overall GPA. Preference is given to non-traditional students, especially those active in Collat School of Business student organizations.

**Jackson Endowed Scholarship in Industrial Distribution:**

Scholarship(s) is awarded to a transfer or currently enrolled student majoring in Industrial Distribution. The recipient must complete a minimum of 24 hours during the academic year and maintain a 3.0/4.0 GPA. The recipient must show active participation in extracurricular and/or community service activities. The value of the award and the number of awards are variable.

**Chris L. Jones Industrial Distribution Scholarship:** Annual scholarships are awarded to entering freshman, transfer or currently enrolled student who designate Industrial Distribution as their major. High school GPA, ACT or SAT scores, participation in extra-curricular activities, financial need, and career goals will be considered. Currently enrolled ID students with good academic standing, commitment to completing degree requirements in ID, participation in extracurricular activities and community service will be considered for the scholarship.

**L. Paul Kassouf & Co. Endowed Scholarship:** Two scholarships with variable values are awarded to rising seniors in accounting. Recipients must earn a minimum of 27 semester hours in the academic year, have completed AC 300 and have demonstrated professional awareness and involvement. Recipients must have a minimum overall and accounting 3.0/4.0 GPA. Need is considered if there are equally deserving students.

**L. Paul Kassouf Endowed Industrial Distribution Scholarship:**

Annual scholarships are awarded to entering freshman, transfer or currently enrolled student who designate Industrial Distribution as their major. High school GPA, ACT or SAT scores, participation in extra-curricular activities, financial need, and career goals will be considered. Currently enrolled ID students with good academic standing, commitment to completing degree requirements in ID, participation in extracurricular activities and community service will be considered for the scholarship.

**Kinder Morgan Excellence in Accounting Scholarship:** A scholarship, of variable value, is awarded to a minority accounting undergraduate, graduate, or equivalent student. Recipient must have and maintain a 3.0/4.0 GPA and have a year of coursework remaining.

**Legrand Endowed Industrial Distribution Scholarship:** Annual scholarships are awarded to entering freshman, transfer or currently enrolled student who designate Industrial Distribution as their major. High school GPA, ACT or SAT scores, participation in

extra-curricular activities, financial need, and career goals will be considered. Currently enrolled ID students with good academic standing, commitment to completing degree requirements in ID, participation in extracurricular activities and community service will be considered for the scholarship.

**Lighting Solutions Kristen Craig Endowed Industrial**

**Distribution Scholarship:** The Lighting Solutions Kristen Craig Endowed Industrial Distribution Scholarship is awarded each year to students majoring in Industrial Distribution who demonstrate exemplary performance in the ID major and commitment to the industry. Entering freshman and currently enrolled students are eligible for this scholarship. For entering freshman, ACT or SAT scores as well as high school GPA, extracurricular activities and career goals are considered. Currently enrolled students must have achieved high academic performance, involvement in extracurricular activities, and demonstrate commitment to Industrial Distribution. This scholarship, as well as all ID scholarships, are awarded for one year. Scholarship recipients and all scholarship applicants are eligible to re-apply each year.

**MBA Alumni Association Graduate Support Fund:** A scholarship of variable value is awarded to a student pursuing an MBA with at least a 3.5/4.0 GPA.

**David E. Mackle Sr. Endowed Memorial Scholarship in**

**Accounting:** A scholarship of variable value is awarded to a currently enrolled or entering freshman accounting major. The recipient should demonstrate solid academic promise or achievement.

**Katherine L. McCarl Maisel Memorial Scholarship:** A scholarship of variable value is awarded to a senior student majoring in Accounting or Information Systems (with an interest in auditing or computer auditing). Applicants must have a 3.0/4.0 GPA in any completed coursework and demonstrate strong leadership skills and human management skills. It is preferred that accounting majors have completed AC 300, and all applicants must be courageous and positive in their attitude toward life.

**Medical Properties Trust and Holmes Endowed Scholarship:** A one-year scholarship awarded to incoming freshmen. Merit based, minimum 3.0 GPA.

**NABA President's Scholarship:** A scholarship, valued at \$500, is awarded to the NABA President.

**M. Gene Newport Business Scholarship Endowment:** A scholarship, valued at \$1,000, is awarded to a regular, full-time entering freshman or transfer student in the Collat School of Business for one academic year and is renewable for up to three consecutive years. The recipient must complete a minimum of 27 hours in one academic year and maintain a 3.0/4.0 GPA.

**O'Neal Steel Industrial Distribution Scholarship:** Annual scholarships are awarded to entering freshman, transfer or currently enrolled student who designate Industrial Distribution as their major. High school GPA, ACT or SAT scores, participation in extra-curricular activities, financial need, and career goals will be considered. Currently enrolled ID students with good academic standing, commitment to completing degree requirements in ID, participation in extracurricular activities and community service will be considered for the scholarship.

**OSRAM Sylvania Scholarship:** Scholarship(s) is awarded to an entering freshman or currently enrolled student with an Industrial Distribution major. High school GPA, ACT, or SAT scores, participation in extracurricular activities and career goals will be considered. Currently enrolled ID students must maintain a 3.0/4.0 GPA, be committed to the degree requirements of the ID program and participate in community service. The value of the award and the number of awards are variable.

**Pearce, Bevill, Leesburg & Moore Scholarship:** A scholarship, valued at \$2,000, is awarded to either an undergraduate accounting major entering his/her senior year, an accounting equivalent major, or a Master of Accounting student. Recipient must have a minimum 3.25/4.0 accounting GPA, have completed AC 310, and be actively involved in at least one professional organization. Need is considered if there are equally deserving students.

**Perry Supply Industrial Distribution Scholarship:** The Perry Supply Industrial Distribution Scholarship is awarded each year to students majoring in Industrial Distribution who demonstrate exemplary performance in the ID major and commitment to the industry. Entering freshman and currently enrolled students are eligible for this scholarship. For entering freshman, ACT or SAT scores as well as high school GPA, extracurricular activities and career goals are considered. Currently enrolled students must have achieved high academic performance, involvement in extracurricular activities, and demonstrate commitment to Industrial Distribution. This scholarship, as well as all ID scholarships, are awarded for one year. Scholarship recipients and all scholarship applicants are eligible to re-apply each year.

**Philips Industrial Distribution Scholarship:** Annual scholarships are awarded to entering freshman, transfer or currently enrolled student who designate Industrial Distribution as their major. High school GPA, ACT or SAT scores, participation in extra-curricular activities, financial need, and career goals will be considered. Currently enrolled ID students with good academic standing, commitment to completing degree requirements in ID, participation in extracurricular activities and community service will be considered for the scholarship.

**Pizitz Endowed Scholarship:** Scholarships, valued at \$2,500 for four years, are awarded to at least one entering freshman that intends to pursue a degree in the UAB School of Business, earns at least 27 hours per academic year and maintains a 3.0/4.0 GPA. Selection is based on grades, ACT or SAT scores, extracurricular activities and career goals. The number of awards is variable.

**Ollie S. Powers Endowed Scholarship in Accounting:** A scholarship of a variable amount is awarded to an entering freshman or currently enrolled student or MAC student with an accounting major in the Collat School of Business who demonstrates solid academic promise or achievement.

**PricewaterhouseCoopers Scholarship/Jimmy Bent Memorial Scholarship:** A scholarship of variable value is awarded to a currently enrolled student with an accounting major or a Master of Accounting student. Recipient must have and maintain a 3.0/4.0 GPA and preferably have completed AC 300.

**Protective Life Corporation/NABA Scholarship:** A scholarship, valued at \$1,500, is awarded annually to an undergraduate accounting major at any level in the Collat School of Business with a minimum 3.0/4.0 GPA in his/her accounting coursework. The

recipient must have completed at least one semester at UAB prior to receiving the scholarship and be an active member and heavily involved in the UAB student chapter of the National Association of Black Accountants. The recipient will be eligible to intern at Protective Life Corporation based on availability of an opportunity and the company interview process.

**Protective Life Corporation/Beta Alpha Psi Scholarship:** A scholarship, valued at \$1,500, is awarded annually to an involved Beta Alpha Psi member.

**Protective Life Corporation Information Systems Scholarship:** A scholarship, valued at \$2,500, is awarded to student with an information systems major in Collat School of Business with a minimum 2.5/4.0 GPA. Must be a junior or senior. Internship is encouraged. Low income and minority encouraged to apply/given priority.

**Regions Bank Endowed Scholarship in Business:** Scholarships are awarded to students currently enrolled as finance majors in the Collat School of Business. Selection is based upon academic promise, leadership potential, merit and high moral character. Applicants must have and maintain a 3.0/4.0 GPA. Recipients are eligible to reapply in subsequent years as long as they continue to meet the requirements. The value of the award and the number of awards are variable.

**Roberta M. and John L. Rhoads Accounting Scholarship:** Scholarships of variable value are awarded to rising seniors majoring in accounting. Recipients must have at least a 3.25/4.0 accounting GPA and a minimum 3.0/4.0 overall GPA. Financial need, extracurricular, civic and professional activities will be considered. The recipient must have completed AC 310.

**Rime Endowed Scholarship:** A scholarship, valued at \$2,500 for four years, is awarded to an entering freshman that intends to pursue a degree in the UAB Collat School of Business. Recipient must earn at least 27 hours per academic year and maintain a 3.0/4.0 GPA. Selection is based upon grades, ACT or SAT scores, extracurricular activities and career goals.

**Harvey C. Smith Scholarship in Marketing, presented by the AMA, BI Chapter:** A scholarship, valued at \$500, is awarded to a junior or senior level student with a designated major in Marketing. Recipient must have a 3.2/4.0 overall GPA. Leadership and membership in the UAB chapter of AMA is considered.

**Southern Pulp and Paper Industry Labor Management Endowed Scholarship (SPPILMC):** A scholarship of variable value is awarded to an undergraduate student with a 3.0/4.0 GPA. Preference will be given to Human Resource Management majors and students who have worked in the paper industry or who have a parent or guardian who has worked in a primary mill within the paper industry.

**Bernard S. Steiner Jr. Endowed Memorial Scholarship:** Scholarships of variable value are awarded to students enrolled in degree-granting programs in the Collat School of Business. Accounting major is preferred, although the scholarships may be awarded to finance, economics and information systems majors also. Minimum 3.0/4.0 GPA required.

**Thomas & Betts Endowed Industrial Distribution Scholarship:** Annual scholarships are awarded to entering freshman, transfer

or currently enrolled student who designate Industrial Distribution as their major. High school GPA, ACT or SAT scores, participation in extra-curricular activities, financial need, and career goals will be considered. Currently enrolled ID students with good academic standing, commitment to completing degree requirements in ID, participation in extracurricular activities and community service will be considered for the scholarship.

#### **Juanita and William H. Van Matre Endowed**

**Scholarship:** Awarded to at least one entering freshman or transferring junior college student who intends to pursue a degree in the UAB Collat School of Business. The recipient is preferred to be from a rural community. They must earn at least 27 hours per academic year and maintain a 3.0 GPA. Recipients are chosen based upon academic promise and need.

**Warren, Averett, Kimbrough & Marino Scholarship:** A scholarship, valued at \$2,000, is awarded annually to a senior accounting major or Master of Accounting student in the Collat School of Business with a minimum 3.0/4.0 GPA.

**Wells Fargo Endowed Scholarship in Business:** A one-year scholarship awarded to a currently enrolled student with financial need. Academic success, extracurricular activities, leadership potential also considered.

**Young Men's Business Club Scholarship:** At least one scholarship valued at \$2,000 is awarded annually to a currently full time enrolled UAB student in the Collat School of Business who will be entering their junior or senior year. Selection is based on high academic standing, financial need, and community service.

## School of Engineering

### Entering Freshman Scholarships

Entering freshmen in the School of Engineering are automatically considered for all school-wide academic scholarships after being accepted to UAB. The admissions application to the University serves as the application for engineering scholarships. No additional scholarship application materials are required. Students who wish to be considered for engineering scholarships should be admitted to the University no later than December 1 of their senior year.

All scholarships are merit based, and most are renewable for a total of four years. School of Engineering Scholarship Awards range from \$1,000 to \$5,000 per year and may be combined with other scholarship offers.

## School of Health Professions

### **Dr. Edward Darrell and Sandra Dunning Huechtker Endowed**

**Memorial Award:** It is the desire of the donors that these funds be used to support education in the field of health professions at UAB by providing financial assistance to deserving students in the School of Health Professions in need of financial support to continue in the pursuit of their goal of a career in the health professions, and this award will enable them to put their financial concerns aside while concentrating fully on their academic pursuits.

### **Carol E. Medders Endowed Scholarship in Health Professions:**

This scholarship was established by Carol Medders, former Director of Admissions at UAB Student Services. Ms. Medders spent more than 27 years helping students with admissions and enrollment at UAB School

of Health Professions. After retiring in 1998, she chose to create a scholarship to support the needs of students in the school. Applicants must be currently enrolled in or admitted in a full-time degree-granting program in the School of Health Professions. The award recipient should be enrolled in a program that has a competitive application process and academic course load that prohibits them from holding a professional position.

**SHP Junior Advisory Board Endowed Scholarship:** It was the desire of the SHP Junior Advisory Board to establish an endowment to reward the professional success of the graduates from the School of Health Professions through financial awards to assist with the completion of professional licensing and certification exams necessary to practice in their fields and/or the costs associated with professional development and job preparation. The number and amount of the annual award is determined by the committee based upon the availability of funds.

**SHP Endowed Scholarship:** These scholarships are funded through a combination of allocated budget monies from the Dean and proceeds from the SHP Endowed Scholarship fund, which was established in 1988 through gifts from faculty, staff, and friends of the School. These scholarships are used to recruit or retain students who will enhance the diversity of SHP programs or who have outstanding academic credentials, including but not limited to, grade point average and standardized test scores. The number and amount of awards are determined by the SHP Student Scholarship and Awards Committee based upon available funds.

**Lettie Pate Whitehead Foundation Scholarship:** These scholarships are made possible by an annual grant from the Lettie Pate Whitehead Foundation, based in Atlanta, Georgia. The Whitehead family was the first to secure an exclusive contract to bottle and sell Coca-Cola throughout most of the United States. Applicants must be young women from the Southeastern states who are pursuing an undergraduate or graduate degree in one of the SHP programs and who demonstrate financial need.

**Ethel M. and Jessie D. Smith Endowed Nursing and Allied Health Scholarship:** This endowment provides scholarships for both the School of Health Professions and the School of Nursing. SHP applicants must be admitted to or enrolled in a SHP baccalaureate program and be a resident of the state of Alabama at the time of enrollment.

#### Department of Clinical and Diagnostic Sciences

**Patricia Ann Amos Endowed Scholarship (Clinical Laboratory Sciences):** The Patricia Ann Amos Scholarship endowment was established in 2002 through gifts given by Ms. Amos and other donors. Ms. Amos retired from UAB in 1988 after 28 years of service as a medical technology faculty member, department chair, and assistant dean. Applicants must be accepted into the professional phase of the Clinical Laboratory Sciences Program and have satisfactory academic performance. Selection is made by a committee comprised of the Clinical Laboratory Sciences faculty. The number and amount of the awards given each year is determined based upon the availability of funds.

**Delores D. Bush Sponsored Scholarship in Clinical Laboratory Sciences:** This scholarship was established by Delores Bush, alumna of the Medical Technology program. Applicants must be currently enrolled in or admitted to the Clinical Laboratory Sciences program in the School of Health Professions. It is used to provide scholarships to students for whom affordability may be an obstacle and who might otherwise be unable to attend the University, and will also consider the merit of the students. The fund provides support for students who graduated from

a public university. Applicants must have graduated from an accredited undergraduate college or university in the United States. The number and amount of awards granted is based upon the availability of funds.

**Mary Henderson Caruthers Sponsored Scholarship in Biomedical and Health Sciences:** This scholarship was established in 2018 by Kara Caruthers, a MSPAS, PA-C and PhD in Nutrition Sciences alumna honoring her mother who passed away in 2011. This scholarship represents her mother's passion (and tenacity) for learning and higher education and will provide support to students who struggle with the affordability of earning an advanced degree. The number and amount of the award is determined based upon the availability of funds.

**The Comer Foundation Scholarship for Physician Assistant Studies:** This scholarship was established in 2021 to support the education of outstanding graduate students enrolled on a full-time basis. It is the intent of the Foundation that the annual awards from this fund be split equally among two Physician Assistant students – one new incoming Physician Assistant student meeting The Foundation's criteria, and one Physician Assistant student whose previous award is being renewed. Applicants should demonstrate financial need as determined by the UAB Office of Student Financial Aid. Preference will be given to applicants who are residents of Alabama and who plan to live and practice within Alabama upon completion of their studies. Selection will be made by a selection committee in accordance with these guidelines.

**Cooperative Clinical Laboratories of Huntsville Endowed Scholarship/Loan (Clinical Laboratory Sciences):** The CCLH Scholarship/Loan Fund endowment was created in 1991 by the Huntsville Cooperative School of Medical Technology, Huntsville Hospital, Crestwood Hospital, Huntsville Diagnostic Laboratory and Humana Hospital Huntsville. Applicants must be full-time students in the UAB Clinical Laboratory Sciences Program with preference given to those who reside in northern Alabama or who wish to obtain employment as a clinical laboratory scientist at a Huntsville institution. Scholarship awards are an amount equal to 25% of UAB tuition and fees; loan recipients may receive an amount equal to the total of tuition and fees for the duration of the program. The loan is repaid subsequent to graduation; however, recipients who are employed as clinical laboratory scientists for one year at a designated Huntsville institution are forgiven the total. Selection is made by a committee comprised of the CCLH representatives and a UAB Clinical Laboratory Sciences faculty member.

**Wm. John Gill PA-C Sponsored Scholarship for the Physician Assistant Studies:** In honor of long-time President, Mr. Wm. John Gill PA-C and his many accomplishments, The National Association of Rural Health Clinics has established this sponsored scholarship to benefit the UAB Physician Assistant Studies Program. This fund will benefit students wishing to practice in a rural community or a rural health professional shortage area. The number and amount of the award is determined by committee based upon the availability of funds.

**Bill Parker Endowed Scholarship in Physician Assistant Studies:** Bill Parker, a 1972 graduate of the UAB Physician Assistant Studies program, established the first endowed scholarship for the program. Parker has worked as an orthopaedic PA for more than 44 years. His career includes more than 28 years of active service in the military – he credits his four years in the U.S. Air Force for his love of surgery. The scholarship is awarded to a student enrolled in the PA program; the number and amount of the annual award is determined by committee based upon the availability of funds.

**Michael A. Thompson Endowed Award (Nuclear Medicine & Molecular Imaging Sciences):** The scholarship was established to honor Michael A. Thompson, his contributions to UAB, the community, and the nuclear medicine profession. Mr. Thompson was a professor in medical physics at UAB for 27 years. The scholarship provides support to students in the Nuclear Medicine and Molecular Imaging Sciences program. The number and amount of the annual awards are determined by committee based upon the availability of funds.

**Susan L. Perkins Endowed Student Award in Clinical and Diagnostic Sciences:** This award honors the service of Susan L. Perkins to the School, in addition to her devotion to scholarly pursuits and higher education, and her contributions toward the advancement of the University. It is awarded to students in the Department of Clinical and Diagnostic Sciences. The number and amount of the annual award is determined by committee based upon the availability of funds.

**Mr. and Mrs. Elbert H. Purser Endowed Scholarship (Physician Assistant Studies):** The Purser Scholarship was established in 1979 and subsequently endowed in 1983 through a gift from the Elbert H. Purser Trust. Applicants must be admitted to or enrolled in the UAB Physician Assistant program and must be natives of the state of Alabama. Selection is made by a committee of the Physician Assistant program faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**M. May Williams Memorial Endowed Scholarship (Nuclear Medicine & Molecular Imaging Sciences):** The scholarship was established to honor M. May Williams. Ms. Williams served as a mentor and guide to a multitude of students and was highly regarded in the field of radiologic technology. The scholarship provides support to students in the Nuclear and Molecular Imaging Sciences program. The number and amount of the annual awards are determined by committee based upon the availability of funds.

#### Department of Health Services Administration

**Alabama Chapter of HIMSS Sponsored Travel Award:** This scholarship will provide support for registration fees, travel, and lodging for UAB HI students attending the HIMSS Annual Conference & Exhibition or HIMSS International Conference. Emphasis is placed on those students who have had posters selected to present at either conference. The award will be given to students based on merit, academic promise, and achievement in the field.

**Alabama HIMSS President's Endowed Award in Health Informatics:** The Alabama HIMSS Endowed Award Fund was established in 2004 by a generous gift from the Alabama chapter of the Healthcare Information and Management Systems Society to be awarded annually to recognize and provide financial support to an outstanding senior student enrolled in the UAB Master of Science in Health Informatics program as determined by a committee of the MSHI faculty and the President of Alabama HIMSS or his or her chosen representative. The number and amount of the annual award is determined by committee based upon the availability of funds.

**The Beasley-Hall Family Endowed Scholarship in Health Administration:** Ken Beasley, MSHA Class 19, established the scholarship after the 50th anniversary celebration of HSA and recognizing the global impact alumni are having as a result of UAB HSA. The scholarship is named after both sides of his family to honor the support they gave him to pursue his education and for instilling the importance of hard work in his family members. Selection is made by a committee of the Department of Health Services Administration faculty;

the number and amount of the annual awards are determined by the committee based upon the availability of funds.

#### Neeysa Davis Biddle Endowed Scholarship in Health

**Administration:** This scholarship was created in 2017 by Neeysa Biddle, MSHA Class 26. Neeysa was the first female to endow her own scholarship for the MSHA program. When Neeysa entered the MSHA program, she was working full-time and remembered hearing of scholarships established by alumni of the program during her time in school. She knew then supporting students was something she wanted to do – she did this throughout her career as a mentor and leader. Selection is made by a committee of the Department of Health Services Administration faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Borkowski Family Endowed Scholarship:** Dr. Nancy Borkowski, a Distinguished Professor in the SHP Department of Health Services Administration, established this scholarship in 2020 to provide support for students in the Doctor of Philosophy (PhD) in Administration-Health Services Program. Selection is made by a committee of the program's faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**James R. and Tina D. Burkhart Endowed Support Fund (Health Administration):** This fund was established in 2019 through a generous gift from James R. (Jim) Burkhart, an alumnus of the M.S. in Health Administration program and long time-supporter and preceptor for the program. The fund will support professional development activities for students in the MSHA program, including but not limited to conference fees and associated travel costs as well as expenses

**John T. Casey Endowed Scholarship:** This fund was established in 2020 through a generous gift by MSHA alumnus, John Casey. Selection is made by a committee of the MSHA program faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Robert C. Chapman Endowed Scholarship (Health Administration):** The Robert C. Chapman Endowed Scholarship was established in 2003 through a generous gift from Robert C. (Bob) Chapman, an alumnus of the M.S. in Health Administration program and a long-time supporter and preceptor for the program. Applicants must be enrolled in or admitted to the MSHA program, demonstrate solid academic promise, financial need, leadership potential, and high ethical standards. Selection is made by a committee of the MSHA program faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

#### Pat and Don Currie Sponsored Scholarship in Health

**Administration:** The Pat and Don Currie Sponsored Scholarship in Health Administration is named for both Pat and her husband Don, as she is thankful for his support of her career. Pat is an alumna of the MSHA program, Class 15, and has helped pave the way for women in health care. Selection is made by a committee of the MSHA program faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Executive Doctoral Endowed Scholarship for Diversity and Inclusion in Healthcare Leadership:** This scholarship endowment was established through generous gifts made by faculty and alumni of the DSc program as a way to enhance diversity and inclusion in senior healthcare leadership. Applicants must be enrolled in or admitted to the DSc

program and demonstrate solid academic promise. Scholarships will be awarded at the discretion of the program director.

**William W. Featheringill Endowed Scholarship (Health Informatics):**

Established by his daughter Elizabeth Pharo, this scholarship was endowed by SuccessEHS to honor Featheringill's legacy as a visionary in health informatics. The endowment will support students in the UAB School of Health Professions' Master of Science in Health Informatics program. The award will be given on the basis of merit as well as financial need and, in a nod to Featheringill's inventiveness, the student must demonstrate academic promise and achievement in health informatics. Selection is made by a committee of program faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Myron D. and Carol A. Fottler Endowed Support Fund for the PhD Program in Administration-Health Services:**

Myron Fottler, former director of the PhD Administration-Health Services program, and his wife, Carol, saw an opportunity to give back by establishing a scholarship and support fund to help full-time PhD-Health Administration students with tuition, fees and professional development experiences. During his time as program director, Fottler saw many PhD students making sacrifices financially during their studies and wanted to help aspiring PhD's pursue their professional goals. Myron and his late wife Carol made the decision to support this fund by creating an endowment and through an estate gift. The number and amount of the annual awards is determined by the committee based upon the availability of funds.

**Michael E. Garrigan Endowed Scholarship (Health Administration):**

The Michael E. Garrigan Endowed Scholarship was established in 2000 by a generous gift from Mike Garrigan, an alumnus of the MSHA program and long-time supporter and preceptor for the program. Applicants must be enrolled in or admitted to the MSHA program and demonstrate solid academic promise as well as financial need. Selection is made by a committee of the MSHA program faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Sara S. Grostick Endowed Award (Health Informatics):** Family, friends, colleagues, and admirers of Ms. Sara S. Grostick have given gifts toward an endowed fund at The University of Alabama at Birmingham (UAB) to pay tribute to Ms. Grostick and her more than 35 years of service to the UAB School of Health Professions. This award will be used annually to recognize and reward an outstanding student in the UAB Department of Health Services Administration interested in data analytics and health information management. Selection is made by a committee of program faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Randa and Steve Hall Endowed Scholarship in Health**

**Administration:** The Randa and Steve Hall Endowed Scholarship was established in 2018 by Randa Hall and her husband Steve. Randa is an alumna of the MSHA program, Class 24, and has also served the program for many years as program director and now as vice chair of external relations and alumni affairs for the Department. Selection is made by a committee of the MSHA program faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Health Services Administration Endowed Scholarship** This scholarship was established in 2000 through the generosity of an anonymous donor. Applicants must be enrolled in or admitted to the MSHA program and demonstrate solid academic promise as well as

financial need. Selection is made by a committee of the MSHA program faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Health Services Administration 25th Anniversary Endowed**

**Scholarship:** This scholarship endowment was established through generous gifts made by faculty, alumni, and friends of the MSHA program given to commemorate the 25th anniversary of the Health Administration program. Applicants must be enrolled in or admitted to the MSHA program and demonstrate solid academic promise as well as financial need. Selection is made by a committee of the MSHA program faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Health Services Administration 35th Anniversary Endowed**

**Scholarship:** This scholarship was established to commemorate the 35<sup>th</sup> anniversary of the MSHA program. Funds for this scholarship were generously donated by alumni and friends of the program to honor the success of the program to date and support the success of the future. Selection is made by a committee of the Department of Health Services Administration faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Health Services Administration 50th Anniversary Endowed**

**Scholarship:** This scholarship was established in 2018 to commemorate the 50<sup>th</sup> anniversary of the MSHA program and to celebrate the success of both the alumni and the program to date. Funds for this scholarship were generously donated by numerous faculty, staff, alumni and friends of the program. Selection is made by a committee of the Department of Health Services Administration faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Hernandez Family Endowed Scholarship:** Dr. S. Robert Hernandez established the endowed scholarship for support of students in the Executive Doctor of Science (DSc) in Healthcare Leadership program in the Department of Health Services Administration. It is the donor's preference that the award will support diversity within the program, including but not limited to race and first generation college students. Selection is made by a committee of the program's faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Terrell W. Herzog Endowed Award in Health Informatics:** Terrell W. Herzog was a beloved faculty member who passed away unexpectedly in 2012. To honor his commitment to training leaders in health informatics and security, a collective group of alumni and friends of the university established this scholarship award in his memory. Selection is made by a committee of program faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Kim and Ellen Hollon Endowed Scholarship for Safety and Quality in Healthcare Leadership:**

This scholarship was established in 2019 through the generosity of MSHA alumnus, Kim Hollon. The donor recognizes that hospital and health system leaders must be knowledgeable and passionate about improving safety and quality in patient care. This scholarship will support future leaders who have a desire to transform health care systems to eliminate harm and suffering to patients and improve quality – gaining deep understanding in safety and management systems, learning best practices in reducing errors from cognitive biases and cultural influences, understanding employee engagement strategies to standardize, measure and improve work toward

sig sigma levels of performance, teaching boards how to hold executives and organizations accountable for safety and quality. Leadership excellence requires a passionate commitment to safety and quality and a strong knowledge and understanding of concepts and mechanisms for driving change. Selection is made by a committee of the MSHA program faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Howard W. and Shannon H.S. Houser Endowed Scholarship in Health Services Administration:** This scholarship was established by Drs. Shannon and Howard Houser, both long-time faculty members of our department. Howard Houser, Ph.D., Professor Emeritus, and Shannon Houser, Professor, (HIM 1993) have elected to support this fund by creating an endowment and through an estate gift from Dr. Howard Houser. Howard has more than 50 years of experience in health services administration education. Selection is made by a committee of the Department of Health Services Administration faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Chen Hua Endowed Scholarship in Honor of Dr. Howard W. Houser (Health Administration):** This scholarship was created in 2016 by Chen Hua, MSHA Class 23, also known as Trevor Chen. Dr. Howard Houser, a long-time faculty member and director of the MSHA program, was a mentor to Trevor and he chose to honor Dr. Houser by endowing this scholarship at the time of the 50<sup>th</sup> Anniversary of the MSHA program in 2016. Selection is made by a committee of the Department of Health Services Administration faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Richard A. Lind Endowed Scholarship (Health Administration):** This scholarship endowment was established in 2000 by a very generous gift from MSHA alumnus and healthcare entrepreneur Michael E. Stephens in honor of his friend and fellow alumnus, Richard A. Lind. Applicants must be enrolled in or admitted to the MSHA program and demonstrate solid academic promise as well as financial need. Selection is made by a committee of the MSHA program faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Medical Group Management Association Endowed Scholarship (Health Administration):** The MGMA Scholarship Endowment was established in 1987 through gifts from the Medical Group Management Association of Alabama and the MGMA Birmingham Chapter to support students who are committed to entering the profession of medical practice management. Applicants must be residents of the state of Alabama, have completed two terms of study in the MSHA program and demonstrate academic promise as well as an interest in the area of medical group practice management. Selection is made by a committee of the MSHA program faculty in consultation with the immediate past presidents of the Birmingham and Alabama chapters of MGMA; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Tom and Mary Miller Endowed Support Fund for Health Services Administration:** This support fund was established in 2021 by MSHA alumnus, Tom Miller, to support the faculty and students in the Department of Health Services Administration as a possible intermediary step to establish and endowed professorship to recruit an expert faculty member. Selection is made by a committee of the Department of Health Services Administration faculty; the number and amount of the annual

awards are determined by the committee based upon the availability of funds.

**MSHA Class 41 Sponsored Scholarship (Health Administration):** This scholarship was established in 2017 by John Kueven, MSHA Class 41, to highlight the impact classmates have made and continue to make on one another, their successes thus far and the notable impact UAB played in the entire class' development as healthcare leaders. This gift was made to recognize the 10<sup>th</sup> anniversary of their graduation, their current success, and their future success. Selection is made by a committee of the Department of Health Services Administration faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**MSHI Endowed Professional Development Award in Honor of Military Veterans:** This endowed award was established through gifts made by faculty and military veteran alumni of the MSHI program. Applicants must be enrolled or admitted to the MSHI program and demonstrate solid academic promise. This scholarship will support student participation in the HIMSS annual case competition – or other equally worthy academic events – by providing funds for conference related expenses such as registration fees, travel and lodging. Selection is made by the MSHI program director.

**One MSHA Endowed Scholarship (Health Administration):** This scholarship endowment was established through generous gifts made by faculty, alumni, and friends of the MSHA program given to celebrate their #1 ranking by U.S. News & World Report. Applicants must be enrolled in or admitted to the MSHA program and demonstrate solid academic promise as well as financial need. Selection is made by a committee of the MSHA program faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Dr. Marion Wallace Parris Endowed Award in Health Administration:** This endowed award was established through gifts made by EMSHA Class 51 alumni, as well as family and friends of Dr. Marion Parris, to honor the dreams, aspirations, and legacy of the late Dr. Marion Wallace Parris. Applicants must be enrolled or admitted to the EMSHA program. Funds will be used to award professional development scholarships to students for expenses related to registration fees, travel, meals, and lodging for their attendance at the National Association of Health Services Executives Conference. Selection is made by the program director.

**PhD Administration-Health Services Endowed Scholarship:** Our dear friend, Myron Fottler, PhD, who served as director of the PhD program from 1983-1999, established the first-ever endowed scholarship for the PhD program and also initiated the fundraising efforts for the PhD in Administration-Health Services Alumni Endowed Scholarship Fund. The scholarship was funded by alumni, faculty, and former faculty of the program and will provide financial support to current and future students based on their progress toward degree and financial need. Selection is made by a committee of the program's faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**J. Kenneth Roan Memorial Endowed Scholarship (Health Administration):** This scholarship endowment was established in 1985 in memory of J. Kenneth Roan, a native of Decatur, Alabama and a pioneer in the field of psychiatric care facilities. Applicants must be enrolled in or admitted to the MSHA program and demonstrate solid academic promise as well as financial need. Preference is given to students interested in pursuing a career in the administration of mental

health facilities. Selection is made by a committee of the MSHA program faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Scott Braxton Ryland Memorial Endowed Scholarship (Health Administration):** The Scott Ryland Memorial Scholarship endowment was established in 2004 through gifts made by family, friends, and colleagues of Mr. Ryland, an alumnus of the MSHA program and a student in the Administration-Health Services Ph.D. program at the time of his death at age 33. Applicants must be enrolled in or admitted to the MSHA program and demonstrate solid academic promise as well as financial need. Selection is made by a committee of the MSHA program faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Debbie and Jim Shmerling Endowed Scholarship in Honor of Tee Hiatt (Health Administration / Health Informatics):** This scholarship was established by Jim Shmerling, MSHA Class 14, and his wife Debbie in honor of Dr. Tee Hiatt, longtime faculty member within the UAB Department of Health Services Administration. Mr. Shmerling noted that information technology has played such a large part in his career and it was Dr. Hiatt who was always on the forefront of technology and teaching them how important technology would be to them in their field of health administration. Selection is made by a committee of the Department of Health Services Administration faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Jessica Grundt Stefaniak Endowed Scholarship (Health Administration):** The Jessica Grundt Stefaniak Memorial Endowed Scholarship was created in 2009 as a tribute to Jessica, a member of the MSHA Class 35, who passed away from cancer. Classmates, friends and family of Jessica contributed to this fund as a way to memorialize her and assist deserving health administration students who exhibit a commitment to volunteerism and improving the quality of healthcare services. Selection is made by a committee of the Department of Health Services Administration faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Chuck and Judy Stokes Endowed Scholarship for Diversity and Inclusion in the Department of Health Services Administration:** This scholarship was established by Chuck Stokes, alumnus of MSHA Class 17, and his wife Judy. Chuck and Judy both have health care backgrounds and have played integral roles in developing leaders in health care throughout their lives. They established this scholarship to support students in both the MSHA and Healthcare Quality and Safety programs. They recognize the value that diversity and inclusion has on providing quality health care and established this scholarship in an effort to bring the issue to light among students and others. Selection is made by a committee of the Department of Health Services Administration faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Jon E. Vice Scholarship (Health Administration):** This scholarship was established in 2005 in honor of MSHA alumnus Jon E. Vice and in recognition of his financial support and volunteer leadership for both the Department of Health Services Administration and the School of Health Professions. The scholarship is funded by a portion of the proceeds from the Health Services Administration 25th Anniversary Scholarship endowment, which was established through a fund-raising drive chaired by Mr. Vice. Applicants must be enrolled in or admitted to the MSHA program and demonstrate solid academic promise as well as financial

need. Selection is made by a committee of the MSHA program faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Dr. and Mrs. Samuel D. Williams Endowed Scholarship (Health Administration):** This scholarship was created in 2011 by Mr. David W. Williams, a member of the MSHA Class 33, in honor of his parents as a tribute to their lives and also to commemorate the influence they have had on him. The number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Williams Family Endowed Scholarship in Health Administration:** This scholarship was established in 2013 by Michael D. Williams, MSHA Class 14, and his wife, Susan to assist deserving students in the MSHA program with their graduate education. Selection is made by a committee of the Department of Health Services Administration faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Robert J. Zasa Endowed Scholarship (Health Administration):** The Robert J. Zasa Scholarship endowment was established in 2000 through a generous gift by Mr. Zasa, an alumnus of the MSHA program who has provided long-time support to the program as a student mentor and guest lecturer. Applicants must be enrolled in or admitted to the MSHA program and demonstrate solid academic promise as well as financial need. Selection is made by a committee of the MSHA program faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

#### Department of Nutrition Sciences

**Rebecca L. Bradley Endowed Scholarship (Dietetic Internship):** This scholarship endowment was established in 2005 in honor of Rebecca L. Bradley for her many years of dedicated service as a faculty member and director of the UAB Dietetic Internship program, a position she retained until her retirement in 1998. Applicants must be admitted to or enrolled in the UAB Dietetic Internship Program. Selection is made by the Dietetic Intern program faculty; the number and amount of the awards are determined annually by the faculty based upon the availability of funds.

**Carol Brewster Craig Endowed Scholarship (Dietetic Internship/ Nutrition Sciences):** The Carol Brewster Craig Endowed Scholarship was established 1992 by gifts made in honor of Ms. Craig, professor and director of the Division of Human Nutrition and Dietetics until her retirement, to commemorate the occasion of the 25th anniversary of the Dietetic Internship program at UAB. Applicants must be admitted to or enrolled in the professional phase of either the Dietetic Internship or the M.S. Nutrition Sciences degree programs and demonstrate solid academic promise. Selection of the recipients is made by a departmental scholarship committee; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Howerde E. Sauberlich Endowed Award for Excellence in Nutrition Sciences Research:** The Sauberlich Award endowment was established in 2003 in memory of Dr. Howerde E. Sauberlich, longtime nutrition sciences faculty member and a pioneer in the study of macro- and micronutrients, through a generous gift from his wife, Irene, along with gifts from other donors. The award is used to recognize and financially support students for superior performance in research of an area of the nutrition sciences. Selection is made by departmental committees for the Clinical Nutrition master's program and the Nutrition Sciences Ph.D. program; the number and amount of the awards are determined by the committees based upon the availability of funds.

## Department of Occupational Therapy

### **Caroline Amari Endowed Scholarship (Occupational Therapy):**

The Caroline "Cat" Amari Endowed Scholarship was established in 2006 in honor of Cat Amari for her many years of service as a faculty member, program director and mentor to many OT students. It is the first endowed scholarship to have been established for Occupational Therapy students at UAB. Selection is made by a committee of the Department of Occupational Therapy faculty; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

### **Encompass Endowed Scholars Fund for Diversity in Rehabilitation**

**Sciences:** The Encompass Scholarship for Diversity in Rehabilitation Sciences is an academic scholarship that is awarded to a student(s) in the first or second year of the UAB DPT program. The student must be enrolled in the DPT or entry-level OT program, come from a disadvantaged background and have the desire to meet the health-care needs of underrepresented populations in Alabama. Applicants must be an Alabama resident. The number and amount of the annual award is determined by committee based upon the availability of funds.

### **Helping Occupational Therapy Students Succeed (HOTSS)**

**Sponsored Scholarship:** The HOTSS Sponsored Scholarship was established by OT alumna, LaShonda Peoples, to provide assistance with the fees and expenses associated with launching an occupational therapy career such as registration for the National Board Certification Exam. The number and amount of the annual awards are determined by the committee based upon the availability of funds.

### **Mary Warren Endowed Scholarship in Occupational Therapy- Low**

**Vision Rehabilitation:** This scholarship endowment was established through generous gifts made by Dr. Mary Warren and Mr. Craig Warren, as well as by faculty, alumni, and friends of the UAB Graduate Certificate in Low Vision Rehabilitation program, in honor of Dr. Mary Warren and her dedication to teaching, mentoring and advancing the field of occupational therapy. Scholarships will be awarded to students enrolled in the Graduate Certificate in Low Vision Rehabilitation program and will be applied to a student's tuition at the discretion of the program director.

## Department of Physical Therapy

### **Adams Denton Travel Award for Physical Therapy Clinical**

**Education:** A generous gift from an anonymous donor has been used to establish a travel award for UAB DPT students participating in long-term clinical education experiences. The award was named in honor of two Emeritus PT faculty members, Cara Adams and Betty Denton. These funds are intended to support cost associated with participating in long-term clinical education experiences (e.g., travel expenses, room and board, and other school-related expenses). Recipients of this scholarship must be enrolled in their final year of the DPT program, demonstrate solid academic promise, have an overall GPA of at least 3.0 in coursework prior to application, and the potential for completing the course of study in Physical Therapy, and demonstrate financial need. The award will be given annually with the number and amount of awards granted at the discretion of the selection committee.

**Barnes Family Endowed Scholarship:** PT alumni, Rocky and Amelia Barnes, established the Barnes Family Endowed Scholarship in 2019. Applicants must be enrolled or admitted to the DPT program and demonstrate solid academic promise and achievement. It is a preference of the donor that the recipient demonstrate leadership skills and abilities.

The scholarship will be awarded annually with the number and amount of awards granted at the discretion of the selection committee.

**Encompass Health Corporation Endowed Scholarship:** This scholarship endowment was established in 1991 by a gift from Encompass Health Corporation. Applicants must be Alabama residents, must be enrolled in the Doctor of Physical Therapy program at UAB and should demonstrate solid academic progress. Selection is made by the Department of Physical Therapy Financial Aid Committee; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

### **Encompass Endowed Scholars Fund for Diversity in Rehabilitation**

**Sciences:** The Encompass Scholarship for Diversity in Rehabilitation Sciences is an academic scholarship that is awarded to a student(s) in the first or second year of the UAB DPT program. The student must be enrolled in the DPT or entry-level OT program, come from a disadvantaged background and have the desire to meet the health-care needs of underrepresented populations in Alabama. Applicants must be an Alabama resident. The number and amount of the annual award is determined by committee based upon the availability of funds.

**Cecilia Graham Endowed Scholarship:** Friends and colleagues of Dr. Cecilia Graham have made generous gifts for the purpose of creating an award in her memory. Dr. Graham had a passion for physical therapy education and service. She was a creative teacher and a lifelong learner who was never afraid to try new ideas in order to better reach and further educate her students. She will be remembered for the difference she made both here at UAB and in the physical therapy profession. It is most fitting this scholarship will be awarded in perpetuity to students, who like Dr. Graham, highly value and wish to participate in professional development opportunities. Spendable earnings from the endowment will be awarded to most deserving students who have an interest in physical therapy education and service and are enrolled in the Doctor of Physical Therapy Program in the School of Health Professions at UAB. The award will be given annually with the number and amount of awards granted at the discretion of the selection committee.

**Shirley Shaddeau Memorial Endowed Scholarship:** The Shirley Shaddeau Memorial Scholarship endowment was established through a generous gift from Sue Shaddeau to honor the memory of her sister, Shirley Shaddeau, and her dedication to the profession of physical therapy. The fund has received additional contributions from family, alumni and friends. Applicants must be enrolled in the first professional degree program in Physical Therapy, demonstrate solid academic promise, financial need and be of high moral character. Selection is made by the Department of Physical Therapy Financial Aid Committee; the number and amount of the annual awards are determined by the committee based upon the availability of funds.

**Sharon E. Shaw Endowed Scholarship:** Sharon E. Shaw, PT, DrPH was a long-time faculty member and Chair of the UAB Department of Physical Therapy from 1998-2013 when she retired. Dr. Shaw was passionate about community service and participated in AIDS related charities in Alabama for many years. In honor of her service to UAB, the PT profession, and the community, an endowed scholarship was established in her honor in 2015. Recipients of this scholarship must be enrolled in the program as a 2nd or 3rd year DPT student (Spring Semester), demonstrate solid academic promise and the potential for completing the course of study in Physical Therapy, demonstrate financial need, and demonstrate a passion and aptitude for community service.

The scholarship will be awarded annually with the number and amount of awards granted at the discretion of the selection committee.

**TherapySouth Sponsored Scholarship:** This scholarship was established by TherapySouth. It is awarded to a physical therapy student in the second year of their studies. The application consists of a maximum two-page reflection on the student's desire to be an outpatient orthopedic physical therapist after graduation along with professional goals for the first five years' post-graduation including strategies to obtain their professional goals. The scholarship will be awarded annually with the number and amount of awards granted at the discretion of the selection committee.

## School of Nursing

The School of Nursing at UAB has an excellent scholarship program in which many students participate. Because of the size of some of these scholarship endowments, the school is able to award multiple students scholarships from the same endowed fund. The scholarship application process is simple. One application is needed to be considered for all undergraduate or graduate scholarships. Please call the School of Nursing Office of Student Affairs at 205-934-5483 or visit the website at: <http://www.uab.edu/nursing/home/son-scholarships> for complete details regarding eligibility and application deadlines.

*The following is a listing of scholarships at the University of Alabama School of Nursing at UAB.*

**Alice L. McCallum Endowed Nursing Scholarship:** Established by family and friends of Dr. Charles A. McCallum, Jr., and the late Alice L. McCallum. Criteria: admission to or current full-time enrollment in the School of Nursing, a cumulative grade point average of at least a 3.0 on a 4.0 scale, and must demonstrate financial need as determined by the UAB Office of Student Financial Aid. Preference will be given to first year students enrolled in the undergraduate or graduate pre-licensure programs.

**Alma B. McMahon Endowed Nursing Scholarship:** Established by family and friends of Alma B. McMahon. Criteria: admission to or current full-time enrollment in the School of Nursing, a cumulative grade point average of at least a 3.0 on a 4.0 scale, and must demonstrate high moral character. Preference will be given to financial need as determined by the UAB Office of Student Financial Aid.

**Barbara and Emmet O'Neal Endowed Nursing Scholarship:** Established with gifts from friends of Barbara O'Neal and the late Emmet O'Neal. Mr. O'Neal left a legacy as a generous benefactor and supporter of the people of Birmingham, and Mrs. O'Neal is a member of the School of Nursing's Board of Visitors. Criteria: admission to or current full-time enrollment in study leading to a degree at the School of Nursing, a cumulative grade point average of at least a 3.2 on a 4.0 scale, and must demonstrate financial need as determined by the UAB Office of Student Financial Aid. Preference will be given to students who have a desire to pursue a career in community-based nursing.

**Benjamin and Roberta Russell Nursing Scholarship:** Established with funds received from the Benjamin and Roberta Russell Foundation. Criteria: admission to or current full-time enrollment in study leading to a degree in nursing at the University of Alabama School of Nursing at UAB, cumulative grade point average of at least a 3.0 on a 4.0 scale, and must demonstrate financial need as determined by the UAB Office of Student Financial Aid. Preference will be given to those who are residents of

Alabama or who express a desire to live and work in an underserved area of the state following graduation.

**Board of Visitors Endowed Veterans Nursing Care Scholarship:** Established by the UAB School of Nursing Board of Visitors with proceeds from the 2009 MASH fundraising event. Criteria: admission to or current full-time enrollment in study leading to a degree in the School of Nursing at UAB, a cumulative grade point average of at least 3.0 on a 4.0 scale, and applicants must demonstrate financial need as determined by the UAB Office of Financial Aid. First preference will be given to students who demonstrate an interest in and commitment to providing nursing care for veterans and their families.

**Board of Visitors Endowed Nursing Scholarship:** Established with funds raised by the UAB School of Nursing Board of Visitors. Criteria: admission to or current full-time enrollment in study leading to a degree in the School of Nursing at UAB, and a cumulative grade point average of at least 3.0 on a 4.0 scale. Preference will be given to those who are residents of Alabama, and who express a desire to live and work in Alabama following graduation.

**Board of Visitors Endowed Scholarship in Doctoral Nursing:** Established with funds raised by the UAB School of Nursing Board of Visitors to support deserving doctoral nursing students. Criteria: Must be currently enrolled in or admitted to a doctoral degree-granting program in the School of Nursing and have earned at least an overall 3.0 grade point average in coursework completed prior to the time of application.

**Brock Family Endowed Nursing Scholarship:** The Harry B. and Jane H. Brock Foundation has made generous gifts to create an endowed scholarship at the School of Nursing, in recognition of the nursing career of their daughter, Barrett Brock MacKay (MSN 1979), who is a member of the School's Board of Visitors. Criteria: admission to or current full-time enrollment in a degree-seeking program in the School of Nursing. Applicants must have at least an overall 2.8 grade point average on a 4.0 scale at the time of the scholarship application. Preference will be given to applicants that demonstrate financial need as determined by the UAB Office of Financial Aid.

**Carolyn Farrior Boone Endowed Nursing Scholarship:** Established by Mr. and Mrs. James B. Boone, Jr., of Tuscaloosa, Alabama. Mr. Boone serves as Chairman of the Board and Director of Boone Newspapers, Inc. His wife, Carolyn, is a retired nurse and a member of the UAB School of Nursing Board of Visitors. Criteria: admission to or current full-time enrollment in the School of Nursing. Applicants must demonstrate financial need as determined by the UAB Office of Financial Aid.

**Catherine S. and Lee J. Styslinger, Jr., Endowed Nursing Scholarship:** Established by Catherine and Lee Styslinger, Jr., well known residents of Birmingham and throughout the state of Alabama for their leadership and generous philanthropic support. Catherine is member of the UAB School of Nursing Board of Visitors. Criteria: admission to or current full-time enrollment in study leading to a degree at the School of Nursing, and a cumulative grade point average of at least a 3.0 on a 4.0 scale, and must demonstrate financial need as determined by the UAB Office of Student Financial Aid. Preference will be given to students enrolled in the undergraduate and/or graduate pre-licensure programs.

**Curry Bordelon and Christopher Hickman Endowed Nursing Scholarship:** Established by Dr. Curry J. Bordelon and Mr. Christopher A. Hickman to honor their dedication to advancing the education of nurses and increasing the number of men in nursing. Criteria: admission to or current enrollment in the School of Nursing and must demonstrate

financial need as determined by the UAB Office of Financial Aid. Preference is given to male students.

**Delia and John Robert Endowed Nursing Scholarship:** Established with funds from the Delia and John Robert Trust to support students seeking a professional nursing career. Criteria: current full-time enrollment in study leading to a degree in nursing at the UAB School of Nursing and a cumulative grade point average of at least 3.0. Preference will be given to those for whom the decision to return to school is a second life choice; or who may have pursued a degree in nursing earlier in life and been forced by circumstances to stop that education; or who are returning to school in order to seek an advanced degree in nursing.

**Donna and Jim Reddinger Endowed Nursing Scholarship:** Established by Donna Cunningham Reddinger in honor of her late husband Jim Reddinger and their shared resilience, selflessness, and dedication to advancing education. Criteria: admission to or current full-time enrollment in a undergraduate program at the UAB School of Nursing and must demonstrate financial need as determined by the UAB Office of Financial Aid.

**Dorothy G. Sterne Nursing Scholarship Fund:** Established with funds received from the Dorothy Sterne estate through the provisions of her will. Preference will be given to Calhoun County, Alabama, residents enrolled full-time in study leading to the BSN degree at the UAB School of Nursing.

**Dr. Charles E. Flowers, Jr. Endowed Nursing Scholarship:** Established by Dr. Flowers' widow, Dr. Juanzetta S. Flowers, and family, colleagues and friends of Dr. Charles E. Flowers, this scholarship was created to assist deserving students who are enrolled in the UAB School of Nursing. Criteria: admission to or current full-time enrollment in a degree-seeking program in the School of Nursing. Applicants should demonstrate solid academic promise and have earned a cumulative 2.8 (on a 4.0 scale) grade point average in coursework prior to the time of application.

**Dr. Constance Smith Hendricks Endowed Scholarship in Nursing:** Established by Dr. Constance Smith Hendricks along with her friends and colleagues. Criteria: enrolled in or admitted to a degree-granting program in the School of Nursing, a cumulative grade point average of at least a 2.8 - 3.0 on a 4.0 scale, and demonstrate that affordability may be an obstacle and who might otherwise be unable to attend the University.

**Dr. Elwynn "Chick" Hale Endowed Nursing Scholarship:** Established by family and friends of the late Dr. Elwynn "Chick" Hale in her memory to assist deserving nursing students at the UAB School of Nursing. An alumna of the School, Dr. Hale was also a beloved faculty member from 1974 to 1990, and served as a member of the School's Board of Visitors until her death. Criteria: admission to or current full-time enrollment in a degree-seeking program in the School of Nursing, and a cumulative grade point average of 3.0 on a 4.0 scale. Preference given to students who are citizens of Alabama or who express a desire to work in Alabama following graduation.

**Dr. Margaret Millsap Memorial Endowed Award in Nursing:** Established by alumni of the UAB School of Nursing and members of the Nu Chapter of Sigma Theta Tau International, the Honor Society of Nursing, and colleagues of Dr. Margaret Israel Millsap to provide financial support for deserving advanced practice nursing students. Criteria: must be enrolled in, or admitted to, a degree-granting program in the School of Nursing. Both full-time and part-time students are eligible and should

have earned at least an overall 3.0 grade point average in foundational and overall coursework completed prior to the time of application.

**Dr. Paul W. Scokel III and Mary Lou Scokel and William A. Honeycutt and Christine R. Honeycutt Endowed Scholarship:** Established by Mr. and Mrs. Paul S. Scokel in honor and memory of their parents Dr. Paul W. Scokel III and Mary Lou Scokel and William A. Honeycutt and Christine R. Honeycutt. Criteria: must demonstrate financial need as defined by the UAB Financial Aid Office, earned at least an overall 3.0 grade point average, and be currently enrolled in, or admitted to a degree-granting program at UAB School of Nursing.

**Eileen Marie Mahan Endowed Scholarship in Nursing Scholarship:** Established in memory of Eileen Marie Mahan (MSN 1980), who died in an automobile accident. This memorial scholarship is to enable deserving graduate students in the School of Nursing. Criteria: admission to or current full-time enrollment in a degree-seeking graduate program at the UAB School of Nursing, a cumulative grade point average of 3.0 out of 4.0, and must demonstrate financial need as determined by the UAB Office of Financial Aid.

**Eileen S. Meyer Endowed Nursing Scholarship:** Established by Dr. Bruce Burns in honor of his wife, Eileen S. Meyer, CRNP as a surprise for her 40<sup>th</sup> birthday. Criteria: Must be currently enrolled in, or admitted to, a degree-granting program in the School of Nursing and should demonstrate solid academic promise in foundational and overall coursework completed prior to the time of application. Applicants must demonstrate excellent skills in physical diagnosis, as attested to by letters of recommendation from faculty. Applicants must demonstrate excellent skills in communication and interpersonal relationships as attested to by letters of recommendation from faculty and I or employers. Students do not have to qualify for federal assistance to be considered for this award.

**Elizabeth Jane Harper Memorial Scholarship:** Established by family members as a memorial to Elizabeth Jane Harper, who was a student at the UAB School of Nursing. Criteria: must be currently enrolled as a full-time student in study leading to the BSN degree at the UAB School of Nursing, be in good standing, and show financial need as defined by the UAB Financial Aid Office.

**Elizabeth Stullenbarger Endowed Nursing Scholarship:** Established by UAB School of Nursing Professor Emerita, Dr. Elizabeth Stullenbarger together with other friends of the School of Nursing to provide financial support to deserving nursing students. Criteria: Must be currently enrolled in, or admitted to, a degree-granting program in the School of Nursing, with first preference given to full-time students in the undergraduate and graduate pre-licensure programs. Applicants should have earned at least an overall 3.0 grade point average in foundational and overall coursework completed prior to the time of application.

**Emmet and Mary Anne O'Neal Endowed Nursing Scholarship:** Established with gifts from family and friends of the late Mary Anne and Emmet O'Neal, who, during their lifetime, set an example of grace and benevolence for their family and for the Birmingham community. Criteria: admission to or current full-time enrollment in study leading to a degree in nursing at the UAB School of Nursing, cumulative grade point average of at least a 3.0 on a 4.0 scale, and a demonstrated financial need as determined by the UAB Office of Student Financial Aid.

**Ethel M. and Jesse D. Smith Nursing and Allied Health Scholarship:** Established by Dr. Bettye Jane Smith as a memorial to her parents, Ethel McCarty Smith and Jesse Doswell Smith. Criteria: must demonstrate financial need as defined by the UAB Financial Aid Office, reside in the state of Alabama, have a cumulative grade point average of at least a 3.0

on a 4.0 scale, and be admitted to or enrolled in full-time study leading to the BSN degree at the UAB School of Nursing.

**Fay B. Ireland Endowed Nursing Scholarship:** Established by Mrs. William R. Ireland, Sr., to support native Alabama students pursuing a degree at the UAB School of Nursing. Criteria: applicants must demonstrate financial need as determined by the UAB Office of Financial Aid.

**Florence A. Hixson Endowed Nursing Scholarship:** Established by family, friends, and colleagues of Dr. Florence Alberta Hixson, the first Dean of the UAB School of Nursing. Criteria: current full-time enrollment in study leading to an advanced degree at the UAB School of Nursing and a cumulative grade point average of at least 3.0 on a 4.0 scale.

**Francis S. Falkenburg Endowed Nursing Scholarship:** Established by the family of Francis S. Falkenburg, former member of the State Legislature of Alabama and lobbyist for UAB and the Alabama State Nurses Association. Criteria: admission to or current full-time enrollment in the undergraduate program in the School of Nursing and applicants for this scholarship must also demonstrate financial need as determined by the UAB Office of Student Financial Aid.

**Gladys F. Colvin Memorial Scholarship Fund:** Established by Mr. Roland Colvin in memory of his wife Gladys Farmer Colvin, who was a nurse for many years at the Jefferson County Department of Public Health. Criteria: admission to or current full-time enrollment in the PhD program in the UAB School of Nursing and have a cumulative grade point average of 3.0 or above on a 4.0 scale.

**Governors Lurleen B. and George C. Wallace Memorial Fund:** Established by James T. Parsons and his late wife, Bobbie Parsons, to honor her parents, Governor Lurleen Burns Wallace and Governor George Corley Wallace. Bobbie served as a member of the UAB School of Nursing Board of Visitors for 18 years. Gov. Lurleen Wallace respected and admired the work of nurses, and Gov. George Wallace was a strong supporter of UAB and provided significant support through funding and legislation. This fund is used for scholarships and many other worthy purposes within the UAB School of Nursing.

**Helene Fuld Health Trust Endowed Scholarship in Nursing:** Established by the Helene Fuld Health Trust. Criteria: enrolled in the Accelerated Masters in Nursing Pathway, demonstrates strong leadership characteristics, proven successful in the AMNP program, demonstrates interest in service and potential to contribute to society, and demonstrates potential to contribute to the nursing profession upon graduation.

**Hill Crest Foundation Endowed Nursing Scholarship:** Established by the Hill Crest Foundation to provide financial assistance to deserving students who are admitted to the UAB School of Nursing. Criteria: Students must be currently enrolled in, or admitted to, a degree-granting program in the School of Nursing. First preference will be given to students seeking a second degree in the Accelerated Masters in Nursing Pathway (AMNP). Applicants must have at least an overall 3.0 grade point average in foundational and overall coursework completed prior to the time of application.

**James Coleman Lee, Sr., Endowed Nursing Scholarship:** Established by the late James C. Lee, Jr. and his wife Rose, through the Buffalo Rock Company to honor the memory of Mr. Lee's father, James Coleman Lee, Sr., this scholarship was created to encourage students to enter the nursing profession and to make it possible for many future nurses to focus on their studies without the burden of financial pressure. Criteria:

admission to the UAB School of Nursing. Applicants should demonstrate solid academic promise and have earned at least a cumulative 2.8 grade point average on a 4.0 scale in coursework prior to the time of application. Preference will be given to applicants who are deserving of financial assistance as determined by the UAB Office of Financial Aid.

**Jean Riley Tomlinson Endowed Nursing Scholarship:** Established by Mrs. Jean Riley Tomlinson, longtime member and former chair of the UAB School of Nursing Board of Visitors. This scholarship pays tribute to the nurses and physicians specializing in cardiovascular illnesses that provided excellent care to her late husband, Jack O. Tomlinson, Sr. It is the Tomlinson's intent that this scholarship make a significant difference for students in need of financial assistance for higher education. Criteria: admission to or current full-time enrollment in study leading to a degree at the School of Nursing, a cumulative grade point average of at least a 3.0 on a 4.0 scale, and must demonstrate financial need as determined by the UAB Office of Financial Aid. Preference will be given to those who have demonstrated an interest in cardiovascular nursing.

**Jernigan Endowed Nursing Scholarship:** Established by the late Thomas E. Jernigan, Sr. and his wife Donna. Mrs. Jernigan is a member of the UAB School of Nursing Board of Visitors. Criteria: must have a cumulative grade point average of at least 3.0 on a 4.0 scale, and be eligible to enroll full-time in a junior level clinical nursing course at the University of Alabama School of Nursing at UAB. Preference will be given to those who demonstrate leadership potential or ability through participation in extracurricular activities or similar experiences.

**Jo Ann Barnett Endowed Nursing Scholarship:** Established with funds from friends, colleagues and family of the late Jo Ann Barnett (BSN 1987, MSN 1990), this scholarship was created to honor Ms. Barnett's memory and to benefit students in the School of Nursing. Criteria: admission to or current full-time enrollment in the UAB School of Nursing MSN program, with preference given to those students pursuing a career in neonatal nursing or oncology nursing. Applicants must demonstrate financial need as determined by the UAB Office of Financial Aid.

**John Wilson Rodgers Endowed Memorial Scholarship:** Established by Dr. Marguerite Rodgers Kinney Handlin (BSN 1961, MSN 1967), a former faculty member at the UAB School of Nursing, as a memorial to her father. Criteria: good academic standing, current full-time enrollment in study leading to the MSN degree. Preference will be given to applicants who are pursuing, or their program of study shows that they plan to pursue, advanced study in cardiovascular nursing and demonstrate financial need as determined by the UAB Office of Student Financial Aid.

**Junior Board of Visitors Endowed Nursing Scholarship:** Established by the UAB School of Nursing Junior Board of Visitors with proceeds from the No-Show Ball fundraisers. Criteria: admission to or current full-time enrollment in a degree-seeking program in the School of Nursing, have earned a cumulative 3.0 grade point average on a 4.0 scale, and deserving of financial assistance as determined by the UAB Office of Financial Aid. First preference will be given to students demonstrating an interest and commitment to providing pediatric nursing care.

**Larry G. and Carol C. Hornsby Family Endowed Scholarship in Nurse Anesthesia:** Established by Larry G. and Carol C. Hornsby along with their family. Criteria: currently enrolled in a nurse anesthesia degree-granting program in the School of Nursing, a cumulative grade point average of at least 3.0 on a 4.0 scale, demonstrate professionalism and leadership ability. Preference will be given to students entering the final year of the Nurse Anesthesia program.

**Lois and Barry Luther National Alumni Society Endowed Nursing Scholarship:** Established by UAB School of Nursing alumna and former faculty member, Lois Luther and her husband, Barry Luther to provide financial assistance to undergraduate nursing students. Criteria: Must be admitted to a degree-granting program at the School of Nursing and have earned at least a 2.5 in coursework completed prior to the time of application. Students do not have to qualify for federal assistance to be considered for this award.

**Lois Drolet Luckie Endowed Nursing Scholarship:** Established in memory of Mrs. Lois Luckie by her loving husband, Robert Luckie, Jr. This scholarship is awarded in honor of Holli Kemper (BSN 1985), one of Mrs. Luckie's oncology nurses. According to the late, Mr. Luckie, Ms. Kemper constantly "went the extra mile" during his wife's terminal illness, carrying out her duties with great professionalism, cheerfulness and sympathetic skill. Criteria: must be admitted to or enrolled full-time in the School of Nursing, a cumulative grade point average of at least 3.0 on a 4.0 scale. Preference will be given to applicants who express an interest in oncology nursing.

**Mable E. Lamb Endowed Nursing Scholarship:** Established with funds from a planned gift to honor Dr. Lamb's commitment to educating the nurses of the future. Criteria: must have a cumulative grade point average of at least 2.8 on a 4.0 scale, and must demonstrate financial need as determined by the UAB Office of Financial Aid.

**Margaret and Bradford Kidd Endowed Nursing Scholarship:** Established by Margaret and the late, William Bradford Kidd. Mrs. Kidd is a member of the UAB School of Nursing Board of Visitors. Criteria: admission to or current full-time enrollment in a degree-seeking program in the School of Nursing, must have a cumulative grade point average of at least 3.0 on a 4.0 scale, and applicants must demonstrate financial need as determined by the UAB Office of Financial Aid.

**Margaret P. Hanrahan Endowed Scholarship in Nurse Anesthesia:** This endowed scholarship was established by Dr. Jeff Hanrahan in memory of his mother, Margaret P. Hanrahan. Margaret was a nurse anesthetist who spent her career helping others. It is Dr. Hanrahan's wish to give a student a chance to impact the patients they serve, much like Margaret did. Criteria: currently enrolled in a nurse anesthesia degree-granting program at the School of Nursing and demonstrated solid academic promise and achievement.

**Margaret Parks Kendrick Nursing Scholarship:** Established by Dr. Marvin Hayne Kendrick as a memorial to his mother, Margaret Parks Kendrick. Criteria: must show financial need as defined by the UAB Financial Aid Office, be admitted to or enrolled in full-time study leading to the BSN degree at the University of Alabama School of Nursing at UAB, and have a cumulative grade point average of at least 3.0 on a 4.0 scale. Preference will be given to residents of Crenshaw County, Alabama.

**Marie Carter Bonner Memorial Scholarship:** established by friends and associates as a memorial to Mrs. Bonner, who worked as a nurse at UAB Hospital for more than 20 years and served as Director of Psychiatric Nursing. Criteria: admission to or current full-time enrollment in study leading to a degree in the School of Nursing at UAB, and a cumulative grade point average of at least 3.0. Preference will be given to applicants who express an interest in psychiatric-mental health nursing.

**Marie L. O'Koren School of Nursing Alumni Association Endowed Scholarship:** Established with funds received from the late, Dr. Marie L. O'Koren and members of the alumni association of the UAB School of Nursing, in honor of Dr. O'Koren's many years of service as dean of the School. Criteria: admission to or current full-time enrollment in study

leading to a degree in nursing at the UAB School of Nursing, cumulative grade point average of at least a 3.0 on a 4.0 scale, and a demonstrated financial need as determined by the UAB Office of Student Financial Aid.

**Marie S. Ingalls Endowed Nursing Scholarship:** Established by funds from the estate of Marie S. Ingalls, a noted civic leader and philanthropist, who was a member of the UAB School of Nursing Board of Visitors. Criteria: admission to or current full-time enrollment in a degree-seeking program in the School of Nursing. Applicants must have at least an overall 3.0 grade point average on a 4.0 scale at the time of the scholarship application.

**Martha F. Tilt Endowed Nursing Scholarship:** Established by Mrs. Tilt's three sons, family, and friends - with the intent that nursing students be given a helping hand into a profession through this scholarship, and in memory of one inspirational role model who lived and defined the profession - a lady who gained her rewards in life through befriending, comforting and caring for others. Mrs. Tilt had the heart of a nurse and shared it freely with everyone she met. Criteria: admission to or current full-time enrollment at the School of Nursing, and a cumulative grade point average of at least a 2.5 on a 4.0 scale. First preference will be given to mature, non-traditional, first-year nursing undergraduate students, as defined by the University, and to those applicants who plan to practice nursing either in a clinical or a hospital setting upon graduation. Preference will be given to applicants who are deserving of financial assistance as determined by the UAB Office of Student Financial Aid.

**Mary G. Nash Endowed Nursing Scholarship:** Established by colleagues and friends to pay tribute to Dr. Mary G. Nash and her service to the School of Nursing, University Hospital, and UAB. Criteria: admission to or current full-time enrollment in study leading to a degree at the School of Nursing. Preference will be given to applicants who plan to work in Alabama upon graduation. The School of Nursing Office of Development and Alumni Affairs announces application deadlines and procedures.

**Mary Josephine Harwell Nursing Scholarship:** Established with funds received from the estate of Mary Josephine Harwell through the provisions of her will. Criteria: must be admitted to or currently enrolled full-time in study leading to the BSN degree at the UAB School of Nursing, and have a cumulative grade point average of 2.5 or higher. Preference will be given to residents of Elmore County, Alabama, and neighboring counties, and those who show financial need as defined by the UAB Financial Aid Office.

**Nancy Eastman Harp Oncology Endowed Nursing Scholarship:** Established Dr. J. Patrick Daugherty and her family and friend, as a memorial to Mrs. Harp (BSN 1972) - an oncology nurse and a graduate of the UAB School of Nursing who was killed in a tragic automobile accident. Criteria: current full-time enrollment in the oncology concentration of the MSN degree, a cumulative grade point average of at least 3.0, and evidence of marked achievement or potential for marked achievement in oncology nursing.

**Nancy P. Watts Endowed Nursing Scholarship:** Established by Ray L. Watts, MD and Nancy P. Watts. Criteria: enrolled in or admitted to the BSN program in the School of Nursing, a cumulative grade point average of at least 3.0 on a 4.0 scale, and must plan to transition seamlessly from the BSN degree to a doctoral degree program in the School of Nursing and are eligible to apply at the start of their third, fourth or fifth semesters of the BSN program. Preference given to applicants deserving of financial

assistance as determined by the UAB Office of Student Financial Aid with first preference given to those with the greatest need.

**Peggy Spain McDonald Endowed Nursing Scholarship:** Established by the late, Peggy Spain McDonald, a longtime community leader in Birmingham. Criteria: admission to or current full-time enrollment in study leading to a degree at the School of Nursing, a cumulative grade point average of at least a 3.0 on a 4.0 scale, and must demonstrate financial need as determined by the UAB Office of Student Financial Aid. Preference will be given to those who have demonstrated an interest in geriatric nursing.

**Rachel Z. Booth Endowed Nursing Scholarship:** Established by the UAB School of Nursing Board of Visitors with proceeds from the 2005 "MASH: Make Another Scholarship Happen" fundraising event. Dr. Booth served as the School of Nursing's third dean from 1987-2005. Criteria: students must be currently enrolled in, or admitted to, a doctoral program in the UAB School of Nursing, a cumulative grade point average of at least 3.2 on a 4.0 scale, and applicants must demonstrate financial need as determined by the UAB Office of Financial Aid.

**Reese Phifer, Jr. Endowed Nursing Scholarship:** Established by the Reese Phifer, Jr., Memorial Foundation to support Alabama students pursuing degrees in nursing and to honor the late Mr. Phifer. The scholarship assists Alabama residents who are currently enrolled in, or have been admitted to, the baccalaureate, masters or doctoral degree-seeking program within the UAB School of Nursing. Criteria: admission to or current full-time enrollment in study leading to a degree in the School of Nursing, a grade point average of at least a 3.0 on a 4.0 scale, and must be a resident of the state of Alabama.

**Retired Faculty and Friends Endowed Nursing Scholarship:** Established by former and current School of Nursing faculty members and friends. Criteria: enrolled in a degree granting program in the UAB School of Nursing; be in good academic standing (minimum GPA of 2.8 for BSN and 3.0 and higher in graduate programs.)

**Robert Luckie Family Endowed Nursing Scholarship:** Established by Robert E. Luckie, Jr., to enable deserving nursing students attending the UAB School of Nursing realize their dream of receiving a quality education. Criteria: admission to or current full-time enrollment in a degree-seeking program in the UAB School of Nursing, a cumulative grade point average of 2.8 on a 4.0 scale. Preference will be given to students who are citizens of Alabama or who express a desire to work in Alabama following graduation and demonstrate financial need as determined by the UAB Office of Financial Aid.

**Ruth Tonn Ahrgal Endowed Nursing Scholarship:** Established by alumna Ruth Tonn Ahrgal (DIPL 1954, BSN 1956). Criteria: first preference be given to full-time students in the undergraduate and graduate pre-licensure programs who demonstrate solid academic promise and who are deemed deserving of financial assistance, with further preference given to qualified candidates from Florence, Alabama.

**Rylee Casper Endowed Nursing Scholarship:** Established by a charitable gift from Mrs. Gladys Muriel Rylee Casper who was a 1947 diplomat of the School of Nursing and served for more than two decades as a nurse in the armed forces. Criteria: admission to or current full-time enrollment in a degree-seeking program at the UAB School of Nursing, demonstrate financial need as determined by the UAB Office of Student Financial Aid, and applicants must be residents of the State of Alabama. Preference will be given to applicants from Bibb, Chilton, or Perry Counties.

**Seth Houston McCain, Jr. and Elizabeth Morgan McCain Endowed Scholarship in Pediatric Nursing -** Established by the Junior Board of Visitors in memory of twin babies for whom the scholarship is named, to provide financial assistance to deserving nursing students specializing in pediatric care. Criteria: Must be admitted to or currently enrolled in the graduate program in the UAB School of Nursing. First preference will be given to applicants wishing to pursue a career in neonatal nursing. Applicants should have earned at least an overall 3.0 grade point average in coursework completed prior to the time of application.

**School of Nursing Dean's Merit Endowed Scholarship:** Four scholarships are available per year to undergraduate students. Three of these scholarships are two-year renewable scholarships and one is for one year only. The amount of the scholarship is \$1,000 per year. Criteria: a "B" (3.0) average on all collegiate pre-nursing work attempted. For renewal of a two-year scholarship, a student must maintain a 2.5 grade point average on nursing courses. All applicants for admission to study leading to the BSN degree at the School of Nursing are automatically considered for the Dean's Scholarship.

**School of Nursing Faculty and Staff Endowed Scholarship:** Established with funds from School of Nursing Faculty and Staff, this scholarship was established to benefit the training and education of deserving nursing students. Criteria: admission to or current full-time enrollment in a degree-seeking program in the University of Alabama School of Nursing at UAB and an overall 3.5 (on a 4.0 scale) grade point average in coursework completed prior to time of application.

**SOS Foundation Scholarship:** Established with funds received from the Sabin Oral Sunday (SOS) Foundation of Jefferson County. Preference will be given to a Jefferson County, Alabama, resident enrolled full-time in study leading to the BSN degree at the UAB School of Nursing.

**Stacey Blevins Stovall Memorial Endowed Nursing Scholarship:** Established by family, friends, colleagues and admirers of Stacey Blevins Stovall. Criteria: enrolled in or admitted to a degree-granting program in the School of Nursing at the University; preference given to applicants seeking to pursue neonatal nursing; should demonstrate solid academic promise and achievement and have earned at least an overall 3.0 (on a 4.0 scale) grade point average in coursework completed prior to the time of application.

**Student/Alumni Endowed Nursing Scholarship:** Established with funds raised from current and former students, this scholarship was developed by former students who wanted to make a difference in the lives of future students. Every year, former students contribute through the School of Nursing's Annual Fund. Criteria: admission to or current full-time enrollment in study leading to a degree at the School of Nursing, and a cumulative grade point average of at least a 3.0 on a 4.0 scale

**Sue Ellen and Mike Lucas Endowed Nursing Scholarship:** Established by Mr. and Mrs. Michael Lee Lucas. Criteria: currently enrolled in or admitted to a degree-granting program in the School of Nursing, a cumulative grade point average of at least 3.0 on a 4.0 scale, awarded on the basis of merit. Preference given to those who demonstrate strong academic leadership and community service as determined by the Scholarship Selection Committee and is enrolled in a graduate program or the Accelerated Masters in Nursing Pathway program, or its successor program, with first preference given to a Master's level student.

**Thelma Walker Mitchell Endowed Nursing Scholarship:** Established with funds from the estate of Thelma Walker Mitchell, who was a 1941 graduate of the Hillman Hospital School of Nursing at what is now UAB.

She made maternal and child health nursing her life's work, including many years as a nursing consultant to the Alabama State Department of Public Health Bureau of Maternal and Child Health in Montgomery.

**Terri J. Broach Nursing Scholarship Endowment:** Established by friends and family members as a memorial to the late Terri J. Broach, who was a student at the UAB School of Nursing. Criteria: must be a resident of the State of Alabama, be admitted to or enrolled in full-time study leading to the BSN degree in nursing at UAB, and have a cumulative grade point average of 2.5 or above. Preference will be given to those who have an active relationship with a church, synagogue, or other religious institution or order, and those who show financial need as defined by the UAB Financial Aid Office

**Thor-Louck Endowed Nursing Scholarship:** Established with funds from Isobel H. Thorp and Phyllis M. Loucks, beloved former faculty members of the School of Nursing. Criteria: admission to or current full-time enrollment in study leading to a degree at the School of Nursing, and a cumulative grade point average of at least a 3.0 on a 4.0 scale.

**UAB Hospital Auxiliary Endowed Nursing Scholarship -** Established by the UAB Hospital Auxiliary to assist nursing students currently working at UAB Hospital or in the UAB Health System and with an intention of practicing at UAB Hospital with the completion of their studies. Criteria: must be undergraduate students currently enrolled or admitted to the School of Nursing, with first preference given to applicants planning to work at UAB Hospital after graduation. Applicants should have earned at least an overall 3.0 grade point average. Applicants must work at UAB Hospital in a part-time or full-time capacity, have completed one full year of employment and be in good standing. A reference letter from the applicant's immediate supervisor is required as part of the scholarship application and will be used to determine good standing.

**Virginia Bonds Black Endowed Nursing Scholarship –** Established by Virginia Bonds Black to provide financial assistance to deserving nursing students. Ms. Black, a 1950 diploma graduate of Jefferson Hillman School of Nursing, spent her entire career as a dedicated servant to others. Criteria: must be currently enrolled in, or admitted to the School of Nursing at UAB and have earned at least an overall 2.8 (on a 4.0 scale) grade point average.

**William Groce Campbell Endowed Nursing Scholarship:** Established by Myrtle Campbell Bell in memory of her brother, William Groce Campbell, this scholarship was created to benefit students in the UAB School of Nursing. Criteria: admission to or current full-time enrollment in a degree-seeking program in the School of Nursing, and a minimum grade point average of a 2.8 on a 4.0 scale.

**William C. Howton Endowed Nursing Scholarship –** Established by the late, William C. Howton in honor of his two daughters who are registered nurses. Criteria: must be admitted to or enrolled in the undergraduate program at the UAB School of Nursing and have earned at least an overall 3.0 grade point average on a 4.0 scale. Preference will be given to applicants who are deserving of financial assistance as determined by the UAB Office of Student Financial Aid.

**Worthington-Cargo Family Endowed Nursing Scholarship:** Established by Nancy and Allan Worthington to support students in the Doctor of Nursing Practice Program who plan to pursue an Advanced Clinical Specialization in Adult Gerontology. Criteria: must show financial need as defined by the UAB Financial Aid Office and have a cumulative grade point average of 3.0 or above. Preference will be given

to residents of Alabama who plan to continue to work in Alabama as a doctorally-prepared clinical nurse.

**Comer Nursing Scholarship:** Established with funds received from the Comer Foundation. The Comer Foundation Scholarship program serves as a tribute to the tradition and future commitment in support of higher education. Criteria: must show financial need as defined by the UAB Financial Aid Office, be a resident of the State of Alabama, have a cumulative grade point average of 3.0 or above, intend to practice nursing in the State of Alabama, and be enrolled full-time in study leading to the BSN degree at the University of Alabama School of Nursing at UAB.

**Lettie Pate Whitehead Foundation Scholarship:** The Lettie Pate Whitehead Foundation was established in 1946 by Conkey Pate Whitehead. Mr. Whitehead established the Foundation as a memorial to his mother. Criteria: Exclusively for the purpose of providing need-based scholarships to deserving Christian women who are residents of one of the following states: Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia.

**Violet Terrell Clark Nursing Scholarship:** Established by Mr. and Mrs. Steve M. Bates in memory of Jean Clark Bates' mother, Violet Terrell Clark. Criteria: admission to or current full-time enrollment in study leading to a degree at the School of Nursing, and a cumulative grade point average of at least a 3.2 on a 4.0 scale. Preference will be given to applicants who plan to work with underprivileged patient populations upon graduation.

## Academic Common Market

The Academic Common Market is an interstate agreement among selected southern states for sharing academic programs at both the baccalaureate and graduate levels. Participating states are able to make arrangements for their residents who qualify for admission to enroll in specific programs in other states on an in-state tuition basis. Participating states are Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

Applicants who are non-Alabama residents and wish to enroll at UAB as an Academic Common Market student must be accepted for admission to a UAB program in which the applicant's home state has obtained access through the Academic Common Market.

- Certification of eligibility must be received prior to the first class day of the term; otherwise, in-state tuition status will be awarded beginning with the semester following receipt of this certification. Please note that if a student who enrolls at UAB as an Academic Common Market student changes majors, the student will revert to paying out-of-state tuition.
- Students placed into "Pre" major designations due to program requirements are ineligible for ACM benefits, but may qualify once fully admitted to the approved program. However, certification of eligibility must be received prior to the first day of class for the first semester of enrollment at UAB.
- If a student changes his or her major or residency classification after being approved for ACM, the student will be reclassified and charged the non-resident rate of tuition.

For more information, visit <https://www.uab.edu/cost-aid/resources/academic-common-market>.

## Freshman Year

### First Year Experience

Every UAB first year student will share a common foundation for learning, whatever their majors or professional goals. This common foundation is found in the First Year Experience (FYE) program.

### Convocation

Your journey to graduation and the fulfillment of your academic goals all begin with New Student Convocation, where the UAB community officially welcomes the incoming class of first-years and new transfer students. Convocation is the first of many memorable moments for you at UAB and the only time prior to graduation that your entire class is fathered. The President, Provost, Undergraduate Student Government President, along with UAB students, faculty and staff will all welcome the new class to UAB.

### First Year Class Photo

This is one of UAB's newest traditions! Each year, more than 2,000 incoming freshmen each year line the practice field and collectively form the shape of their graduation year. Since 2017, new students have smiled for the camera to show their UAB pride. The Class Photo cements the start of your UAB journey.

### First Year Experience Course Requirement

Student entering UAB with fewer than 24 hours of college credit must enroll in and pass (with a C or better) a first year experience (FYE) course in their first 24 credit hours at UAB. FYE courses can include CAS 112 BUS 101, EDU 100, EGR 110, EGR 111, HRP 101, NUR 100, PUH 101, UASC 101, and UASC 105. FYE courses are the gateway to undergraduate education at UAB. FYE courses improve your success by helping to bridge the gap between high school experiences and university achievement and holistic development.

## New Student Orientation

Blazer Beginnings, UAB's orientation program, is required for all new degree-seeking students (freshmen, transfer, or non-traditional), and it is offered several times prior to the beginning of each term. All new students must attend prior to their first term of enrollment. Sessions include information about resources and services available to students to help them be successful. Additionally, new students meet with faculty and academic advisors and register for classes. New students admitted to degree programs that are 100% online will complete the Online Major Orientation to meet this requirement. These students do not need to attend Blazer Beginnings on campus.

### Office of New Student Programs

936 Building • 936 19th Street South • Birmingham, Alabama 35294 • Telephone: (205) 975-7999 • E-Mail: [blazerbeginnings@uab.edu](mailto:blazerbeginnings@uab.edu) • Web: <https://www.uab.edu/orientation>

## Progress Toward a Degree

### Responsibilities

The student is responsible for selecting and registering for courses necessary for reasonable progress toward the degree sought. The minimum requirement for reasonable academic progress is that the student must pass a minimum of 24 semester hours of coursework in an academic year.

The Office of the Registrar is responsible for registration, recording and reporting grades; maintaining current and permanent records on all students; enforcing rules on academic warning, probation and suspension; certifying students for graduation; and issuing transcripts. The office is located in the Campbell Hall, 1300 University Blvd. CH 117A, Birmingham, AL 35294., (205) 934-8228.

Students must notify the Office of the Registrar of address changes so that notices and other materials are sent to the current address. Changes may be made online in BlazerNET or in person.

### Declaration of a Major

All students must declare a degree-awarding major by the time they earn 60 semester hours of coursework, including courses currently in progress, before registering for the next semester. Students who (1) have been dismissed from a degree-awarding major or professional program, (2) have over 60 semester hours of coursework, including courses currently in progress, and (3) are in a non-degree awarding major\* must declare a new degree-awarding major before enrolling for a second semester. Students who do not declare a major within the stated time-frame will not be allowed to register for the next term and must contact their academic adviser and change their major before enrolling.

Newly admitted students who have previously earned 60 or more hours without receiving a baccalaureate degree must declare a degree-awarding major during their first term of enrollment.

Conditions for acceptance of a student into a major vary by department, school, and college. Majors should be declared or changed online at BlazerNET. Some majors are subject to additional admission requirements and enrollment limitations.

### School, Major, or Address Changes

Changes or corrections to a student's address, telephone number, school, or major can be made online through BlazerNET or at or in person at One Stop Student Services, Room 103 of the Hill Student Center, 1400 University Blvd., Birmingham, Alabama 35294-1150.

### Course Enrollment

#### Terms and Course Offerings

There are three academic terms during a calendar year: fall semester, spring semester, and summer semester. The fall and spring semesters each consist of approximately 14 weeks of classes, followed by one week of final examinations. The summer term consists of five sessions, each with its own time and format. The five summer term sessions are as follows: a fourteen-week session that runs throughout the summer term; the intensive May session, consisting of the first three weeks of the summer semester; a ten week session, beginning after the May session ends and running until the end of the summer semester; and the summer A and summer B sessions, which are seven weeks long

and run back-to-back concurrently with the fourteen week session. The courses to be offered during a particular term are listed in the online Class Schedule. Summer/Fall class schedules are available to students in early March; spring semester schedules are available in late October. Early registration in April allows current students to enroll in fall semester classes on a priority basis. Class schedules are available in [BlazerNET](#) and also online <http://www.uab.edu/home/academics>.

## Course Numbering System

Course Numbers	Primarily for:
000 - 099	Developmental Courses
100 - 199	Freshman Level
200 - 299	Sophomore Level
300 - 399	Junior Level
400 - 499	Senior Level
500 and above	Graduate Level

## Academic Credit Levels

Courses at the lower division level (100-299) are introductory courses usually taken during the freshman and sophomore years. Upper division level undergraduate courses (300-499) are generally taken during the junior and senior years. Courses taught at the 500, 600, and 700 level are designed for graduate students.

## Freshman Year Experience

Students entering UAB with fewer than 24 hours of college credit must enroll in and pass a first year experience (FYE) course in their first 24 credit hours at UAB.

FYE courses are the gateway to undergraduate education at UAB. FYE courses improve student success by helping to bridge the gap between high school experiences and university expectations and enhance successful progress towards graduation by establishing the foundations for academic achievement and holistic development. FYE courses include: [CAS 112](#), [BUS 101](#), [EDU 100](#), [EGR 110 & EGR 111](#), [HRP 101](#), [NUR 100](#), [PUH 101](#), [UASC 101](#), [UASC 105](#).

## Capstone Course

UAB's undergraduate programs culminate in a capstone requirement. The capstone provides a summative opportunity for students to draw upon, synthesize, and apply what they have learned to an original project and/or real life application. Depending on the discipline, the capstone may involve such components as collaborative projects, internships, service learning, fieldwork, independent research, community outreach, and/or thesis writing. In every case capstones include a set of well-defined learning outcomes, significant writing, and integration of discipline-specific competencies in quantitative literacy and in ethics and civic responsibility. Most importantly the capstone provides an enriching bridge experience for students between their undergraduate education and post-graduation lives.

All UAB students must successfully complete the capstone course or experience required by their major program or school in order to graduate.

## Undergraduate Students in Graduate Courses

With the approval of the academic advisor, the undergraduate program director or department chair, and the instructor, UAB undergraduate students may be allowed to register for a graduate course at the 500 or

600 level. Credits earned by undergraduate students may be applied to either an undergraduate degree or a graduate degree, but not both, with the exception being if a student is pursuing a graduate degree as part of the Accelerated Bachelors/Masters program. If the student is subsequently admitted to the Graduate School, use of this credit toward a graduate degree requires the approval of the graduate program director and the Graduate School dean. (The Graduate School does not give credit for any grade below a "C".) Credits that have been used toward the baccalaureate degree cannot be used a second time toward a graduate degree. Courses offered at the 600 level are intended primarily for students at the master's level, and courses numbered 700-799 are designed for students at the doctoral level.

## Registration

A student wishing to attend any of the three academic terms must register for that specific term. A student is eligible to register if he/she has been admitted to UAB, the student's financial records in the Student Accounting Office are clear, and the student is in good academic standing. An early registration period for fall semester will occur every spring for degree-seeking students.

A degree-seeking student who has not registered for course work over a period of one academic year must reapply for admission to resume study as a degree-seeking student. If accepted, the student is subject to the policies of the catalog current at the time of re-enrollment.

Registration can be accomplished online through [BlazerNET](#).

## Credit Hours and Loads

The unit of credit at UAB is the semester hour. Course descriptions indicate the number of semester hours that may be earned for a particular course. A standard course load for a full-time student is 15 semester hours of course work in a semester. At least 12 semester hours of course work are required for full-time status. Registration for more than 18 semester hours in a term or more than three semester hours in the May Session requires approval by the dean or the dean's representative of the school in which the student is majoring.

## Prerequisites for a Course

Prerequisites are enforced for UAB students. Prerequisites are waived for transient students taking courses at UAB. It is the student's responsibility to ensure that prerequisites for a course are met before registering for the course. Advisors are available to help with this determination. After term grade processing, students preregistered for a course in which they do not meet the prerequisites, will be dropped from the course.

## Course Placement in Mathematics and English

### Mathematics

All students who wish to register for a math course must take a math placement assessment.

#### Exceptions

- Minimum ACT math sub-score of 29 or minimum SAT mat score of 680.
- Earned transfer credit for a 100-level math course or higher (excludes remedial college math and MA 110 – Finite Mathematics) with a grade of "C" or higher or

- Earned college credit for math based on having received qualifying AP, IB, AICE, or CLEP scores (excludes MA 180 - Statistics).

## English

Students who have not earned credit for English Composition (101) with a grade of C or better must take an English placement assessment.

### Exceptions

- Minimum score of 20 on both the English and Reading sub-scores of the ACT or minimum SAT Reading test score of 26.
- Earned transfer credit for EH 101 with a C or better.
- Earned college credit for EH 101 based on qualifying AP, IB, AICE, or CLEP scores.

### Placement in English Composition for Second Language Writers

**(EH 108)** Have not completed English Composition (101) with a grade of C or better at your transfer institution AND have a TOEFL Writing sub-score of 16-22 or an IELTS Writing sub-score of 5.5-6.0.

*\*If your TOEFL Writing sub-score is below 16 or your IELTS Writing sub-score is below 5.5, you will be placed in the requisite course in UAB's INTO Program.*

## First Class Attendance

An instructor has the prerogative to drop a student from a course if the student is absent without prior notification from the first class of a term. Such action is at the discretion of the instructor, and absence from the first class does not automatically drop the student from the course. If a student wishes to drop or withdraw from the course, the student must follow official drop or withdrawal procedures. A student who misses the first class of a term is responsible for determining his/her status in the class.

## Attendance and Excused Absence Policy

UAB recognizes that the academic success of individual students is related to their class attendance and participation. Each course instructor is responsible for establishing policies concerning class attendance and make-up opportunities. Any such policies, including points for attendance and/or participation, penalties for absences, limits on excused absences, total allowable absences, etc., must be specified in the course syllabus provided to students at the beginning of the course term. Such policies are subject to departmental oversight and may not, by their specific prescriptions, negate or circumvent the accommodations provided below for excused absences.

The University regards certain absences as excused and in those instances requires that instructors provide a reasonable accommodation for the student who misses assignments, presentations, examinations, or other academic work of a substantive nature by virtue of these excused absences. Examples include the following:

- Absences due to jury or military duty, provided that official documentation has been provided to the instructor in a timely manner in advance.
- Absences of students registered with Disabilities Services for disabilities eligible for "a reasonable number of disability-related absences" provided students give their instructors notice of a disability-related absence in advance or as soon as possible.
- Absences due to participation in university-sponsored activities when the student is representing the university in an official capacity and as

a critical participant, provided that the procedures below have been followed:

- Before the end of the add/drop period, students must provide their instructor a schedule of anticipated excused absences in or with a letter explaining the nature of the expected absences from the director of the unit or department sponsoring the activity.
- If a change in the schedule occurs, students are responsible for providing their instructors with advance written notification from the sponsoring unit or department.
- Absences due to other extenuating circumstances that instructors deem excused. Such classification is at the discretion of the instructor and is predicated upon consistent treatment of all students.
- Absences due to religious observances provided that students give faculty written notice prior to the drop/add deadline of the term.

In these instances, instructors must give students the opportunity to complete assignments in a way that corresponds as much as possible to the nature, scope and format of the original. Options may include making up exams or other assignments, rescheduling student classroom presentations, or arranging for early or late submission of written assignments. The course make-up policy should be included in the syllabus.

## Add/Drop Procedures

Drop/Add deadlines are published in the [Academic Calendar](#) available online. In the case of fall and spring semesters, the last day to drop a class without paying full tuition is the eighth calendar day of the term; the last day to add a class is also the eighth calendar day of the term. It is the student's responsibility to initiate add/drop procedures. Students may drop and add courses online after they have registered and until the drop/add deadline online using [BlazerNET](#) or in person in One Stop Student Services. Students may register online if space is available and waiting lists may be offered for courses that are filled to capacity.

## Voluntary Medical Withdrawal Policy

The Voluntary Medical Withdrawal policy at The University of Alabama at Birmingham (UAB) establishes procedures to follow when a student suffers from a physical, emotional, or psychological condition that significantly impairs the student's ability to function successfully or safely as a student. The policy is primarily administered by the UAB's Student Health Services (SHS) according to the procedures described below.

### Academic Impact

Medical withdrawal, when approved, withdraws a student from all courses for a given semester/term. Students are not allowed to medically withdraw from individual courses, with the following exceptions:

1. When a student is enrolled in clinical, physical education, and/or other courses in which the student cannot meet the essential requirements of the course. For example, a student may be assigned to a clinical site that requires standing for an extended period of time and becomes unable to do so due to an injury. The student could medically withdraw from the clinical coursework and remain enrolled in other courses.
2. When parts of a term within a semester have unique start and end dates. For example, the summer semester at UAB includes five separate parts (May Session, Summer

A, Summer B, Summer 10-week, and full Summer Term). It would be possible, if approved, for a student to complete coursework in Summer A and to medically withdraw from Summer B. In this example, the student would not be medically withdrawn from the entire summer semester, but rather only from all courses for the Summer B.

*NOTE: a medical withdrawal may have an impact on financial aid. Students should discuss the consequences of a medical withdrawal with a Financial Aid Advisor.*

## Procedures

Medical withdrawal requests are to be used when a documented medical condition affected a student's ability to attend or successfully complete a course enrolled in during a previous semester/term. Students who need to withdraw during the current semester should request a Regular Term Withdrawal.

A timely medical withdrawal for a previous semester must be made within sixty (60) calendar days of the last day of class for the semester/term for which the withdrawal is requested, with any supporting documentation submitted within thirty (30) calendar days of initiating the medical withdrawal request. The student must submit the *Student Request for Voluntary Medical Withdrawal* form and the *Licensed Provider Recommendation for Medical Withdrawal* form (forms available at TBD website). For all approved retroactive medical withdrawals, the effective date shall be the last day of class for the semester/term in question.

***Voluntary Medical Withdrawal Requests submitted outside of the semester in question, and beyond the required sixty (60) day deadline must have clearly documented extraordinary circumstances in order for the request to be considered.*** Extensive documentation (such as extended hospitalization and/or extensive, required rehabilitation, etc.) must be submitted to the SHS and must be related to the reasons for the medical withdrawal and to the circumstances that prevented a timely request.

After appropriate SHS personnel have deemed a medical withdrawal request eligible for consideration, a designated SHS physician handles all medical withdrawal decisions on behalf of the University. The designated SHS physician, on behalf of the University and, where appropriate, in consultation with relevant University personnel, will conduct an individualized assessment of the student's situation before deciding to approve or deny the request and determining the effective date of the withdrawal. Once a decision is rendered, SHS will notify the Office of the University Registrar (for undergraduate students) or the Graduate School (for graduate students). Upon notification by SHS, the University Registrar/ Graduate School shall process the withdrawal (if approved) and notify the student of the outcome within ten (10) business days.

## Medical Withdrawal Documentation

A student **must** fully and accurately complete the *Student Request for Voluntary Medical Withdrawal* request via BlazerNET.

1. A student **must** have a licensed medical provider (physician, nurse practitioner or physicians assistant, or

mental health professional) submit a completed *Licensed Provider Recommendation for Medical Withdrawal* form (available at TBD website) via the Patient Portal, or if there is time by mail to UAB Student Health & Wellness Center, Medical Withdrawal, 1714 9<sup>th</sup> Avenue South, Birmingham, AL 35294. The licensed medical provider shall be a provider who is currently treating the student for the condition(s) prompting the withdrawal request and is responsible for obtaining permission from the student to provide the documentation and to discuss the medical conditions, if needed, with the appropriate University personnel. If the University, in its sole discretion, determines that an extraordinary or emergency situation exists, alternative documentation may be requested and considered.

2. A student **may** also attach to the student request form any further supportive documentation from the instructor of record for the courses within the semester/term for which a medical withdrawal is requested.
3. In the event that the student's medical condition so incapacitates the student that the student cannot act on his or her own behalf, the student's parent, legal guardian, or spouse should contact the UAB Student Health & Wellness Center at 205-934-3581 for further guidance.

## Handling of a Medical Withdrawal

Once a Medical Withdrawal has been approved, the Office of the University Registrar/Graduate School will assign a grade of "W" on the official transcript. The student is still responsible for any tuition and fees associated with the term/semester in which the medical withdrawal applies.

## Return to the University Following Medical Withdrawal

It is the responsibility of the student to ensure they are medically prepared to re-enroll. While eligible to return in a future term after requesting a medical withdrawal, subsequent medical withdrawal requests for the same condition will not be approved within 24 months of the initial request. Exceptions may be considered in situations where documented extraordinary circumstances are available. Students who do not return within one academic year will be made inactive and must reapply for admission. In cases where students need more than one year to return following a medical withdrawal, a Leave of Absence may be requested.

If a student voluntarily withdraws from the University while academic honor code, non-academic, or Title IX charges against him or her are pending, permission for readmission will be granted only after the charges have been resolved.

## Title IX Exception

The University of Alabama at Birmingham Division of Student Affairs oversees the University's compliance with Title IX of the Education Amendments of 1972. The Title IX Office is responsible for the Title IX Sexual Violence and Sexual Misconduct Policy and related procedures to foster a campus community free from sexual misconduct which includes gender-based assault, harassment, exploitation, dating and domestic violence, stalking, as well as discrimination

based on sex, sexual orientation, gender identity, and gender expression, and related retaliation.

The Title IX Office provides reasonable protective measures and interim support, which may include a Medical Withdrawal. In Medical Withdrawal submissions involving the Title IX Sexual Violence and Sexual Misconduct Policy, the withdrawal will be handled outside of this policy and in conjunction with the Title IX Office. For more information, please visit <https://www.uab.edu/titleix/>.

## Questions

For clarification or more information, undergraduate students should contact the Office of the Registrar. Graduate Students should contact the Graduate School.

## Withdrawal Refund Policy

*Effective Fall 2019*

The University is required to contract for a substantial amount of goods and services in advance. Most of these expenses are fixed and are not subject to change on short notice. Under certain circumstances, refunds are available to students who officially withdraw from the University. A student desiring to withdraw from the University must complete the withdrawal process in BlazerNET.

This policy applies to all terms including Fall and Spring semesters, Fall and Spring 7-week sessions, and Summer terms.

If a student withdraws from all courses in a term, a portion of or all financial aid may be returned by the University to the original provider(s) of the funding. In such cases where the return of funds creates a balance due to UAB, the student will be required to reimburse the University for those returned funds and any associated fees.

The following schedules will dictate the amount of tuition refunded to the student when the student withdraws from all courses in a term. Fees will not be refunded after the last day of the add/drop period. <https://www.uab.edu/students/one-stop/classes/add-drop-and-withdrawal-policy>.

## Withdrawing from a Course

To avoid academic penalty, a student must withdraw from a course by the withdrawal deadline shown in the academic calendar and receive a grade of W (withdrawn). The withdrawal period ends at approximately 75% of the academic term. Failure to attend class does not constitute a formal drop or withdrawal.

Withdrawal from courses can only be accomplished using official procedures. The official withdrawal must be completed online in BlazerNET. In extraordinary circumstances, if it is impossible for the student to withdraw online the student may mail a withdrawal letter to the Office of the Registrar. The official date of withdrawal will be the date the letter is received in this office. If the official date of withdrawal is after the last day to drop without paying, no tuition or fees will be refunded.

For financial aid purposes, the date of last class attendance will be the official date of withdrawal unless otherwise documented. Note that individual schools may have withdrawal rules in addition to the above.

Withdrawal from a course while a possible violation of the Academic Honor Code is under review will not preclude the assignment of a course

grade that appropriately reflects the student's performance prior to withdrawal if the violation is substantiated.

## Exceptions

All students are responsible for adhering to UAB's academic policies, as published in the UAB Undergraduate Catalog. The Provost may make exceptions to policies. Exceptions will only be made in extraordinary circumstances. Only in cases of a call to active military service, can a student qualify under this policy for either administrative or academic withdrawal from courses from that semester. In such instances, students requesting an exception to policy must provide the cause specific documentation in order for the request to be considered.

Requests are evaluated only from written documentation and not through appointments or telephone calls. Information and forms are available [online](#). (Please note that grievances of an academic nature are addressed through the Academic Grievance Policy). Requests for exceptions must be submitted at the earliest possible time. Consideration will not be given to any request submitted later than the term immediately following the term for which the exception is being requested. A full reduction in tuition and associated fees will be made for appropriately documented serious illnesses or military service activation, which preclude a student from continuing his/her studies at UAB. For students receiving refunds, such refunds will first be applied to any outstanding obligations and to any scholarship, grant, or loan the student has received for that term. A student who is receiving any form of Federal Title IV Financial Aid will be liable for any unearned funds received as determined by the Federal Return of Funds Policy (check with [Student Accounting Office](#) for details.)

Failure to adhere to the published drop and withdrawal deadlines (as outlined in the UAB Catalog and the UAB Class Schedule) does not qualify under this policy as an Academic Exception.

## Contact

Exceptions to Academic Policy • Office of the Registrar • Campbell Hall • 1300 University Blvd. CH 117A • Birmingham, AL 35294 • (205) 934-8228

## Unofficial Withdrawal Policy

Students that choose not to attend one or more courses are not automatically withdrawn or dropped from these courses and are required to follow the proper withdrawal procedures of the University. If the student stops attending one or more courses and does not formalize the withdrawal through the Office of the University Registrar, this act will be considered an unofficial withdrawal. This includes students who earn failing grades in all classes if it is determined the student ceased attending classes prior to the end of the payment period or term. A student who discontinues attending one or more classes without dropping or requesting an official withdrawal will receive a failing grade for that course for that enrollment term. The withdrawal date for students who unofficially withdraw is the last date of attendance reported by the student's instructor(s). The withdrawal date for students registered for multiple courses will be the latest date reported by the student's instructor(s).

Prior to the Last Day to Drop/Add, as noted on the Academic Calendar, students receiving Federal Title IV aid are required to officially notify the Financial Aid Office of their intent to withdraw from the enrollment term. For information regarding potential consequences of withdrawing while in

receipt of Title IV funding, please see UAB's policy regarding the Return of Title IV Funds.

Financial Aid recipients who completely withdraw from all courses or cease to attend all courses prior to completing over 60% of the term, may be subject to repay a prorated amount of the federal financial aid received for the term. For information regarding potential consequences of withdrawing while in receipt of Title IV funding, please see UAB's policy regarding the Return of Title IV Funds.

## Course Completion

### Final Examinations

The final examination for each course is scheduled for a designated period during finals week. The final examination time cannot be changed without the approval of the appropriate dean. A student with three or more exams scheduled in one day or two exams scheduled during the same final exam period may request to have one exam rescheduled by mutual agreement between student and instructor. The student's request to the instructor should include appropriate written documentation of his/her schedule and should be provided to the instructor at least 14 calendar days prior to the last day of classes. Faculty are encouraged to work collaboratively with students and other faculty when such situations arise.

Faculty reserve the right to administer an alternate examination at the rescheduled time.

## Grading Policies and Practices

### Grade Report

Final grades of all students are recorded and posted to their transcripts. In determining these final grades, the faculty may consider such things as grades received in daily recitations, written work, laboratory work, tests, and final examinations. Grade reports are available online.

### Grades Assigned by the Faculty

**A (superior achievement)**

**B (above average)**

**C (average)**

**D (minimally adequate)**

**F (failing)**

**P (passing)** Applicable only to a course taken on a pass/fail basis.

**I (incomplete)** is a temporary notation which is assigned at the discretion of the instructor, and only if the following three conditions are met.

- The student, for nonacademic reasons beyond his or her control, is unable to complete course requirements.
- The student is, according to the instructor's assessment, currently passing or has demonstrated the potential for passing the course.
- The student has made arrangements with the instructor, prior to the grade submission deadline, for completing the course requirements.

It is the responsibility of the student receiving an Incomplete to arrange with the instructor whatever action is needed to remove the Incomplete at the earliest possible date. If make-up work requires classroom attendance in a subsequent term, the student must register for the course

as an auditor (with the instructor's permission) and must pay tuition and associated fees.

An Incomplete will not be calculated in the student's grade point average for the term in which the notation appears. However, an Incomplete that is not changed by the Instructor by the grade submission deadline of the next semester automatically converts to an F. A notation of Incomplete may not be used to meet a prerequisite requirement. A student cannot graduate with an Incomplete notation on his or her academic record.

**MT (Multi-term)** is a temporary notation which may be assigned in departmentally approved courses, including theses, practica, and internships, if work cannot be completed within one semester. A notation of MT will not be calculated in the student's grade point average for the term in which the notation appears. However, an MT notation that is not changed by the instructor by the grade submission deadline of the next semester automatically converts to an F. A student cannot graduate with an MT notation on his or her academic record.

### Notations Assigned by the Office of the Registrar

**W (withdrawn)** A notation assigned by the Office of the Registrar reflecting an administrative action initiated by the student in accordance with regulations governing withdrawal from courses. "W" (withdrawn) may not be assigned by the instructor.

**N (no grade submitted)** A temporary notation made by the Office of the Registrar if no grade (A, B, C, D, F, I, or P) is assigned the student by the course instructor. This notation is used only when the Office of Registrar is unable to obtain a grade from the instructor prior to the issuing of grades for the semester or when the course is designed to extend beyond a single term. It remains the instructor's responsibility to assign a permanent grade. If the instructor has not submitted a grade by the end of the following term, the "N" (no grade submitted) is changed automatically to an "F" (failing) by the Office of the Registrar. The notation "N" cannot be extended. A notation of no grade submitted may not be used to meet a prerequisite requirement. A student cannot graduate with an no grade submitted notation on his or her academic record.

## Study Abroad Grading Policy

### Auditing

Auditing of any study abroad courses will not be permitted. This policy has been put into effect to ensure full participation by all students on such programs. This policy includes UAB student exchanges, UAB faculty-led programs, Non-UAB Programs (third party programs), and any other study abroad programs.

### Grade Assignment and Posting of Study Abroad Grades to the UAB Transcript

In cases where a student is receiving a transcript from a foreign institution, UAB will honor the U.S. equivalent of the final grade that is assigned by that host institution and posted to the official transcript of said host institution. If a foreign institution assigns a pass/fail grade on the official host institution transcript, then the UAB transcript will reflect such a pass/fail grade.

For those programs in which a UAB faculty member is teaching a class, the instructor will assign the final grade as is normally done for any regular UAB class taught on campus. See the Grading Policies and Practices section of the [UAB Undergraduate Catalog](#) (p. ). In most cases letter grades shall be assigned.

Assignment of a pass/fail grade will be left to the discretion of the faculty leader/instructor of the course and will be determined on a case-by-case basis.

In all cases, students must participate fully in all course activities and meet all stated course requirements.

### **Grade Assignment and Posting of the Washington Center Grades to the UAB Transcript**

UAB students wishing to participate in the Washington Center internship program must receive written permission from their academic department at UAB to enroll in the UAB internship course offered by their department prior to applying to the Washington Center. After permission is granted by the student's academic department at UAB, but before the start of the internship, the student will enroll in the UAB internship course offered by the permission-granting department at UAB and will be assigned a UAB faculty member who will act as the instructor of record. The instructor will assign a final grade as is normally done for the internship course in that UAB department.

The Washington Center also offers courses and seminars, which will not count toward a UAB degree.

## **Grade Change Policy**

Final grades for an I (Incomplete) or an MT (Multi-term) should be submitted no later than the grade submission deadline of the semester after the notation was originally awarded; Incomplete and Multi-term notations not changed by that time will convert to Fs. In general, end-of-course grades submitted to the Office of the Registrar are final and are not subject to change by reason of revision of the teacher's judgment; nor are submitted grades to be revised on the basis of a second trial (e.g., a new examination or additional work undertaken or completed). Grade changes submitted in order to correct an error in computation or transcription must be made within two semesters after the grades were originally submitted. These grade changes must be submitted via [BlazerNET](#) and require the teacher's statement as to the reason for the change, the approval of the department head, and the approval of the dean of the school in which the course is taught.

## **Auditing Courses**

As an alternative to full participation in a course, students may audit the course. Auditors do not receive grades and do not usually participate in the examinations; however, instructors have the option of establishing requirements for a satisfactory audit.

Audit is similar to regular enrollment. Students choosing this option must be admitted to UAB; enroll in the course by completing a UAB registration form, indicating "AU" in the column labeled "Sem. Hrs."; obtain the signature of the instructor; and pay the same tuition and fees as regular enrollees. Provided the instructor's requirements are met, the course will appear on the transcript with the notation "AU" and zero semester hours credit.

If the requirements are not met, a "W" will be entered on the transcript.

Course registration, withdrawal, and drop policies apply to audited courses. In instances of over-enrollment, preference is given to students taking courses for credit, and auditing students may be dropped.

A student is not permitted to change from audit to credit or credit to audit at any time.

## **Courses Taken on a Pass/Fail Basis**

A degree-seeking student who is in good standing may request permission from an instructor to register for a course on a pass/fail basis. The course must be one for which the student is eligible to register and cannot be among those used to satisfy core requirements. The department housing the student's major must approve all courses taken on a pass/fail basis if used to satisfy major and minor requirements. A student must declare the intention to take a course on pass/fail basis by notifying the instructor prior to the first class meeting. It is recommended that students consult their academic advisors prior to taking any course as pass/fail.

Grades awarded for a pass/fail course are "P" (pass) or "F" (fail). A grade of "P" carries full credit for the course, but the course is not counted in calculating the grade point average. At most, twelve semester hours taken on a pass/fail basis may be used to satisfy degree requirements (not including courses for which "P" or "F" is the only grade awarded).

## **Course Repeat**

A student may repeat any course in an effort to improve grades and/or to improve understanding of the course content. Students are encouraged to seek advice of an academic advisor before repeating courses.

A student may repeat an individual course no more than one time (for a total of two attempts). Under exceptional circumstances, and upon approval of a formal electronic appeal submitted to the Associate Dean of the College or School in which the course is taught, a student may be allowed to repeat a course for a second time (for a total of 3 attempts). A student may not appeal to repeat a course more than a second time. In order for an appeal to be considered, it must be submitted prior to the first day of the applicable term.

Both the original grade and the repeated grade(s) will show on the student's transcript. Both grades will also be calculated in the student's grade point average (GPA) unless the forgiveness policy is applied. It is the student's responsibility to notify the Office of the Registrar of his/her applying the forgiveness policy to a repeated course. The process is not automatic. (See Forgiveness Policy below). Academic departments and schools may have additional provisions regarding how repeat courses affect the calculation of GPA.

A course repeat takes place any time a student retakes a course for which that student has already received an A, B, C, D, F, P, W, AU, NP, MT, or N. Students should not re-enroll in a course for which they have been assigned a grade of I (incomplete) and will not be affected by this policy unless the I converts to a grade of F. Courses which are designed to be repeated (e.g. Independent Study, Special Topics, Music Recital, etc.) are exempt from this policy.

## **University Forgiveness Policy**

UAB offers the undergraduate student a forgiveness option by which courses taken at UAB may be repeated at UAB, and the grade for the first course will be excluded from the calculation of his/her grade point average (GPA). If a student has repeated a course more than once, the student may choose which grade should be removed from the calculation. Only courses for which the student has received a grade of C, D, or F may be repeated under this option. The forgiveness policy may be used a maximum of four (4) times, only once for any course,

which allows a student to use the forgiveness for four different courses. The transcript will show both the original grade and the course repeat grade, but only the grade points and credit hours earned in the repeated courses will be counted toward degree completion and averaged into the student's GPA. Once a course grade is declared forgiven, the decision is irrevocable. (The forgiveness policy can be invoked at any time for a repeated course; however, all forgiveness requests must be made prior to application for degree). It is the student's responsibility to notify the Office of the Registrar of his/her applying the forgiveness policy to a repeated course. The process is not automatic.

The Forgiveness Policy can only be applied to grades earned at UAB and may not be applied after the student has graduated. Forgiveness forms are available [online](#) and also in One Stop Student Services.

Note that individual schools may have course repeat and forgiveness policy rules in addition to the above.

In accordance with the UAB Academic Honor Code, any course grade of F for academic misconduct supersedes any other grade or notation for that class and therefore is not eligible for replacement under the Forgiveness Policy.

## The New Start Option

The New Start Option serves the student who previously accumulated a poor academic record, but who has recently demonstrated the ability to succeed in college-level work at UAB. The option enables the student to eliminate from the grade point calculation all grades and credit hours earned prior to the date of the New Start and begin anew with work from that point forward. To be eligible, a student must not have been enrolled in an academic institution for at least five (5) consecutive calendar years.

The policy does not apply to college graduates or to admission policies in the Schools of Nursing and Health Professions, nor to college graduates, admission policies and progress toward degree in the School of Education's Teacher Education Programs leading to certification. Students seeking degrees in a Non-Certification Program are eligible for the New Start Option.

To apply for the [New Start Option](#), the student must obtain the written approval of an academic advisor. The application must be filed with the Office of the Registrar prior to graduation and must specify a date, called the New Start date, prior to which all grades and notations are voided. This application is available online: [New Start Option](#).

## The application will not be considered until the following are met:

1. The student's transcript contains at least 24 semester hours of course work applicable to a degree (i.e. hours earned, but not necessarily to a particular major) at UAB, posted after the requested New Start date.
2. The Higher Education GPA on all work taken after the requested New Start date, as well as the UAB GPA, must be at least 2.0.

## Policies governing the New Start Option are as follows:

1. Upon approval of the application, all grades (including passing grades) and notations listed on the transcript prior to the New Start date are placed in a separate listing on the transcript and are voided for purposes of satisfying UAB degree requirements and computing GPA. The transcript carries the notation: "Approved for New Start

(date); work prior to this date is not calculated in GPA or applied toward a degree."

2. All work completed after the New Start date is counted toward completion of a degree, in accordance with policies of the catalog in effect at the New Start date. The transcript will be re-evaluated from the New Start date. The forgiveness policy applies only to courses taken after the New Start date.
3. A course completed before the New Start date, and which is a prerequisite for a course to be taken later, must be taken again even if successfully completed before the New Start date, unless explicit exception is made by the chair of the department in which the course is taught.
4. The student may employ alternative credit to replace some voided courses taken prior to the New Start date.
5. A student may not use the New Start Option to graduate with honors.
6. The New Start Option may be granted only once during the student's academic career at UAB and is irrevocable.

## Academic Warning, Probation, and Suspension

### Academic Warning

A first-term freshman (a student with no previous college credit, except through dual enrollment) will be placed on academic warning if a grade point average of at least 2.0 is not earned during the first term of enrollment. The freshman must meet with his/her academic advisor before the next registration period. If the second term's UAB grade point average is not 2.00 or higher, the freshman will be placed on academic probation.

### Academic Probation

A student (other than a first-term freshman) will be placed on academic probation if his/her UAB grade point average falls below 2.00 and will be required to meet with his/her academic advisor before the next registration period. At this meeting, the student and advisor will agree on a plan of action that will best help the student with his/her academic progress (e.g., courses to take or repeat, supplemental instruction, reduced credit hour load, basic skills seminars, etc.). The Academic Plan will be monitored by the student's academic advisor throughout the probationary period. While on academic probation, the student must earn a minimum 2.0 term GPA each term of enrollment, or they will be suspended (first suspension is one term; any subsequent suspension is one year). In order to clear academic probation, the student must earn a UAB GPA of at least 2.0.

### Academic Suspension

If while on academic probation a student fails to achieve a minimum term GPA of 2.0, the student will be suspended for one term. When returning from the one-term suspension, the student must meet with his/her academic advisor to be reinstated prior to registering for classes. The student will be reinstated on academic probation and must achieve a 2.00 or higher term grade point average each term until the UAB grade point average is at least 2.00. The student must achieve a UAB grade point average of at least 2.00 to have the academic probation removed.

Students wishing to return to UAB after a one-year suspension must submit an application for readmission and a letter of appeal for readmission to the Office of Undergraduate Admission. The deadline for a student to submit an application and letter of appeal for readmission will be eight weeks prior to the date of intended enrollment. By this

deadline, an applicant must have submitted any attending documentation to support the appeal.

If readmitted to UAB after a one-year suspension, the student will be admitted under probation and must achieve a 2.00 grade point average each term until the UAB grade point average is at least a 2.00. If both the term grade point average and the UAB grade point average fall below 2.00, the student will be placed on suspension for one year.

Credits earned while on academic suspension from UAB or another institution may be eligible for transfer. However, the UAB Forgiveness Policy can only be applied to grades earned at UAB.

Note that individual schools may have probation and/or suspension rules in addition to the above.

All notations of academic warning, probation or suspension are a permanent part of a student's transcript.

## Appeal of a One-Term Academic Suspension

Students academically suspended from UAB for one term are not allowed to register for classes at UAB until the end of the suspension period. If a student appeals successfully, he or she will be immediately eligible for readmission.

### The procedure for a student to appeal an academic suspension decision is as follows:

1. The suspended student must present a petition describing the extraordinary personal circumstances that contributed to his or her academic deficiencies. Such events must be highly unusual such as the death of an immediate relative, a serious illness, severe financial distress, or personal crisis. Each individual wishing to appeal an academic suspension is required to submit a petition outlining the reasons for the applicant's previous academic problems and how the applicant plans to correct the problems. Each petition must be accompanied by appropriate documentation relative to the need for additional consideration and/or substantiating the extenuating circumstances related to the appeal. The student petition should be received in the Office of the Registrar no later than five working days prior to the beginning of the desired semester of entry. The suspension appeal documentation will be forwarded to the Suspension Appeals Committee.
2. The Suspension Appeals Committee is composed of five members (two faculty members appointed by the Provost's designee, one student designated by the Student Government Association, one representative from Registration and Academic Records, and the University Registrar) who will review all petitions.
3. Should the Suspension Appeals Committee determine that an extraordinary personal event contributed significantly to the student's academic deficiencies, and there is evidence of an adequate plan to address these extraordinary circumstances, they will recommend that the student be reinstated on academic probation. The student must maintain a minimum 2.0 grade point average or reach the retention standards each semester he or she remains in this status.
4. The decision of the suspension appeals committee is final.

The Office of the Registrar is the administrative unit responsible for the academic suspension appeals process. This unit is responsible for coordinating the appeals process, maintaining the official records and producing annual reports.

## Transcripts

Transcripts may be requested [online](#) or in person at One Stop Student Services.

Upon request by the student, the Office of the Registrar will send an official transcript directly to the recipient designated by the student. Official transcripts will not be issued to the student; however, an unofficial transcript may be issued to the student. There is a charge for each transcript. Transcript requests will be honored only for students whose financial accounts with UAB are clear, including payment of charges for the current term.

## Classification of Students

Students are classified as sophomores when they have earned 30 semester hours of credit, juniors when they have earned 60 semester hours of credit, and seniors when they have earned 90 semester hours of credit.

## Overall Credits and Grade Point Average

The official determination of "credit hours earned," "credit hours attempted," and "grade point average" is made only by the Office of the Registrar. The following sections indicate how these figures are calculated. Transfer work and courses taken at UAB are treated on the same basis. Developmental courses are not included in calculations of credit hours earned, credit hours attempted, or grade point average.

### Credit Hours Earned

The student's "credit hours earned" are increased by:

1. Earning a passing grade (D or better) in a course for which the student was registered for credit.
2. Obtaining the "Pass" grade in a course taken on a pass/fail basis.
3. Obtaining the "Pass" grade for alternative credit.

### Credit Hours Attempted

The student's "credit hours attempted" are increased by:

1. Receiving an A, B, C, D, or F in a course for which the student was registered for credit.
2. Receiving the "Fail" grade in a course taken on a pass/fail basis.

### Grade Points

Four quality grade points are awarded for each semester hour for which the student received an A grade; three quality grade points are awarded for each semester hour in which a B is obtained; two quality grade points are awarded for each semester hour in which a C is obtained; and one quality grade point is awarded for each semester hour in which a D is obtained. No quality grade points are awarded for an F.

### Grade Point Average

The grade point average is determined by taking the grade points obtained and dividing by the credit hours attempted (not credit hours earned). The UAB grade point average is determined using

only work attempted at UAB. The cumulative (overall) grade point average is determined by calculating all college work attempted.

## Academic Honors

UAB compiles and publishes an honor roll at the close of each regular term. Only UAB work is considered. To be eligible for the Presidential Honors List, students must be registered for and complete at least 12 semester hours of standard letter graded credit and have a 4.0 grade point average for the term. Students who register for and complete at least 12 semester hours of standard letter graded credit and who attain a grade point average of at least 3.6 are included in the Dean's List for the term. Superior scholastic achievement may be further recognized by election to membership in appropriate national honorary societies.

## Eligibility of College Credits for Transfer

The eligibility of credit for transfer to UAB depends both on the subject matter of the credit and on the accreditation status of the institution that awarded the credit.

The evaluation and awarding of transfer course credit is based on review of official transcripts. Students are required to submit official transcripts, sent directly to UAB, from all postsecondary institutions attended. Students do not retain the right to choose, or eliminate certain courses for transfer. All academic transfer work will be posted to the UAB transcript, including courses with final grades of D's, F's, and WF's. This includes instances when a student has repeated a course. All occurrences of the course, including grade, will be posted to the UAB transcript. Courses for which a student has been granted academic clemency, bankruptcy, or forgiveness, by the institution at which the course was completed will not be posted to the UAB transcript. However, those courses and grades are included in review for admissions purposes.

Technical/vocational credits or remedial credits, whether earned at UAB or at any other institution of higher education, are not eligible for transfer and may not be used to satisfy degree requirements. The exception to this rule is when the transfer of certain courses applicable to specific professional degree programs are approved in advance by the appropriate department. The accepted courses will be posted only while the student is in the degree program approving the credit. If the student changes programs, the courses will be removed. Credits earned while on academic suspension from UAB or another institution may be eligible for transfer. However, the UAB forgiveness policy can only be applied to grades earned at UAB.

Transfer credit in academic subjects will be considered for transfer to UAB from post-secondary institutions that are fully accredited by one of the six regional accrediting associations (see below) that offer the baccalaureate degree or associate's degree leading to the baccalaureate degree. If an institution is not yet accredited, but has acquired candidate status from a regional accrediting agency, then academic credits from the institution will be considered for transfer to UAB.

- Middle States Commission on Higher Education (MSCHE)
- Higher Learning Commission (HLC)
- New England Commission on Higher Education (NECHE)
- Northwest Commission on Colleges and Universities (NWCCU)
- Southern Association of Colleges and Schools Commission on Colleges (SACSCOC)
- Western Association of Schools and Colleges Accrediting Commission for Schools (WASC ACS)

- Western Association of Schools and Colleges Accrediting Commission for Community and Junior Colleges (WASC ACCJC)

Academic credit earned at Alabama Community Colleges during the initial organization of the Alabama College System (1965-1967) will be acceptable for transfer to UAB.

College courses completed at unaccredited non-candidate institutions are not usually considered for transfer to UAB. However, applicants with credits in this category may contact the Office of the Registrar for information on the Credit by Portfolio option. The official determination of acceptability of courses from other institutions is the responsibility of the Office of the Provost.

Students with credits from institutions outside the United States should review [transfer of international credits](#).

Credits awarded by other institutions for Advanced Placement (AP), International Baccalaureate (IB), College Level Examination Program (CLEP) and Advanced International Certificate of Education (AICE) must be reevaluated to determine if credit will be awarded at UAB. Students wishing to submit such credits should send an official score report to the Office of the Registrar.

## Courses Taken as a Transient Student

To take a course at another institution while enrolled as a degree-seeking student at UAB, a student must submit a Transient Student Request via [BlazerNET](#) prior to enrolling in the course. The student must check with his/her academic advisor to determine whether the course is transferrable and will be applicable toward a degree at UAB. Further, the student must be in good academic standing (i.e., has a minimum 2.0 GPA at UAB).

## Alternative Credit Opportunities

In some instances academic credit may be awarded for work done in a format other than a college course. Credits earned in this way are recorded on the transcript with a grade of P. Such credits may not be used in repeating a course and may not be awarded for work equivalent to a course that is a prerequisite to a course already taken for credit. No more than 45 semester hours of alternative credit may be applied toward a degree.

Opportunities for earning credit outside the normal course format include:

### Advanced Placement (AP)

The amount of credit awarded and the examination score required are stated in the current policy. To determine which tests are eligible for UAB credit please see the [Advanced Placement Credit Table](#).

### Cambridge Advanced International Certificate of Education (AICE)

The program allows students to customize their studies around their individual interest and abilities within an international curriculum framework. Official certifying statement of results are required for exams taken. To determine which are eligible for UAB credit please see the [Cambridge AICE credit table](#).

### College Level Examination Program (CLEP)

The CLEP General Examination must be taken before 15 semester hours of college work have been completed. The subject-area examinations are assigned credit as listed in the UAB CLEP Policy

statement. For more information on CLEP testing schedules, fees and study guide information, please contact the UAB Testing Office <http://www.uab.edu/testing> or call (205) 934-5503. To determine which tests are eligible for UAB credit please see the [College Level Examination Program Credit Table](#).

### International Baccalaureate Credit (IB)

Academic credit may be awarded for scores of five or higher on IB standard-level and higher-level examinations. To determine which tests are eligible for UAB credit please see the [International Baccalaureate Credit Table](#).

### Credit by Examination (CBE)

A degree-seeking student may petition to obtain credit for a course by taking an examination; however, not all programs will accept CBE. It is the student's responsibility to verify the applicability of CBE courses for major/minor requirements with your academic advisor. The relevant department must agree to create and grade the examination. If a student takes CBE in a course that he/she has already taken for credit, the grade for CBE will not replace the grade for the previous course. The fee for CBE is based on the current rate of tuition according to level (undergraduate/graduate) and residency status. The Credit by Examination application is available online: [CBE Form](#).

### Credit by Portfolio (CBP)

A degree-seeking student may petition to receive credit for a course on the basis of a portfolio of information documenting knowledge of the course material. It is the student's responsibility to verify the applicability of CBP courses for major/minor requirements with your academic advisor. The chair of the appropriate department and dean of the school make the final decision on acceptability of the materials for credit. The fee for CBP is based on the current rate of tuition according to level (undergraduate/graduate) and residency status. The Credit by Portfolio application is available online: [CBP Form](#).

### Non-collegiate Courses

Credit may be awarded for non-collegiate courses in accordance with American Council on Education recommendations and approval of the appropriate department chair and dean.

### Credit for Military Experiences

UAB evaluates military service and educational experiences completed by active-duty military service and Coast Guard personnel. UAB is an institutional member of Service Members' Opportunity Colleges. Information regarding the credit equivalencies may be found here: <https://www.uab.edu/students/admissions/credit-equivalencies/military-experience>

### Dante's Subject Standardized Tests (DSST)

The DSST, prepared by the Chauncey Group, is a nationally recognized credit by examination program that awards college credit for courses taken by examination. DSST Examinations are scheduled individually, by appointment. To determine which tests are eligible for UAB credit please see the [DANTES Subject Standardized Test Credit Table](#).

## Cooperative Exchange Programs

### Birmingham Area Consortium for Higher Education (BACHE)

UAB, Birmingham-Southern College, Miles College, the University of Montevallo, and Samford University have established the Birmingham Area Consortium for Higher Education (BACHE) to expand educational opportunities for their students. Please visit the web site <http://www.uab.edu/bache/> for more information on BACHE. Any full-time, degree-seeking UAB student who is in good academic standing may, with written permission from his/her academic advisor and dean, and at no additional charge, take a course at another cooperative exchange institution if it is not offered at UAB and it is deemed to be beneficial to the student's overall educational program. All courses eligible to be taken through the cooperative exchange programs must be articulated by UAB prior to the student's registration. Credit for work completed under the cooperative programs will be posted on the student's record as UAB credit.

### The University of Alabama System

UAB students may also enroll in courses at the University of Alabama and the University of Alabama in Huntsville through the University of Alabama System Cooperative Exchange Program. Any full-time, degree-seeking UAB student who is in good academic standing may, with written permission from his/her academic advisor and dean, and at no additional charge, take a course at another cooperative exchange institution if it is not offered at UAB and it is deemed to be beneficial to the student's overall educational program. All courses eligible to be taken through the cooperative exchange programs must be articulated by UAB prior to the student's registration. Credit for work completed under the cooperative programs will be posted on the student's record as UAB credit.

## Conduct and Complaints

### Student Conduct Code

The Student Conduct Code promotes honesty, integrity, accountability, rights and responsibilities expected of students consisted with the core missions of the University of Alabama at Birmingham. This Code describes the standards or behavior for all students, and outlines student's rights, responsibilities, and the campus processes for adjudicating alleged violations. Behavior that violates UAB standards of conduct listed within the Student Conduct Code and elsewhere will be subject to disciplinary action through the appropriate conduct process. Whether it is determined that an individual or group is responsible for the violation(s), either by direct involvement or by condoning, encouraging, or covering up the violation, appropriate response will occur with respect to the individual(s) and/or group involved.

### Academic Integrity Code

The University of Alabama at Birmingham expects all members of its academic community to function according to the highest ethical and professional standards. Students, faculty, and the administration of the institution must be involved to ensure this quality of academic conduct. The purpose of the Academic Integrity Code is to support our academic mission and to maintain and promote academic integrity. All students in attendance at UAB are expected to pursue all academic endeavors with

integrity, honor, and professionalism and to observe standards of conduct appropriate to a community of scholars.

To view the full Academic Integrity Code policy [here](#).

## Student Complaints

### Academic Matters

Judgments on academic matters are most appropriately made by individuals with expertise in the particular academic discipline involved. For this reason, complaints by students on academic matters are the responsibility of the department and school involved. Normally, such complaints can be resolved quickly through discussion with the faculty directly involved. In rare situations where such resolution does not occur, the student should contact the chair of the appropriate academic department to file a formal grievance. For programs where no department chair is available, the grievance should contact the school's Associate Dean.

The student's grievance should be submitted in writing and accompanied by any appropriate documentation. Grievances should be submitted at the earliest possible time. Consideration will not be given to any grievance submitted later than the end of the term immediately following the term in which the matter in question arose. The department should acknowledge the date the grievance is received and provide notice to the student of when an answer may be expected. It is the responsibility of the department chair to provide an answer to the student within 10 working days. If the matter cannot be settled within the department, the student has 10 working days from the day the department's response is received to appeal to the dean of the school in which the department is located. The dean should acknowledge receipt of the student's appeal and inform the student of the course of action within 10 working days of the date the appeal is received in the dean's office.

At the dean's discretion, an advisory panel may be appointed to study the disagreement and make a recommendation to the dean. However, it is the responsibility and prerogative of the dean alone to make, in a timely manner, a decision on any academic disputes which have not been resolved at lower levels, and the decision of the dean is final.

### Non-Academic Matters

When complaints on non-academic matters cannot be settled by the persons directly involved, a written complaint should be forwarded to the appropriate office. If the administrative officer is unsuccessful in resolving the complaint, it may then be forwarded in writing to the Provost or a designee for further consideration. For specific information concerning the procedures and processes for non-academic complaints and grievances, contact the Office of Student Accountability or visit the following web site <https://www.uab.edu/students/accountability/homepage>.

## ROTC

Both the United States Army and Air Force offer Reserve Officer Training Corps (ROTC) at UAB. Air Force ROTC courses are taught on the Samford University campus.

### Army ROTC

**Faculty:** LTC Skells, CPT Araujo, MSG Scott, SFC Marlow, Mr. Parker, Mr. Garcia, Mr. Abbott, Ms. Edwards, Ms. Scott

The Army Reserve Officers Training Corps (ROTC) program offered at UAB operates under federal laws and Acts of Congress. Students may

compete for two, three, or four year full tuition ROTC scholarships just by attending an ROTC class.

ROTC develops leadership and problem-solving skills training, through hands-on training and classroom instruction by experienced active-duty Army officers and non-commissioned officers. Students learn the necessary skills to become successful civilian or military professionals. Students apply leadership, organizational and personnel management skills in a variety of challenging environments.

Qualified students may obtain a commission as a Second Lieutenant, with the opportunity to serve as either full-time in the active Army, or full- or part-time in the National Guard or U.S. Army Reserve.

### Enrollment

All students are eligible to apply to the program. The Army ROTC program offers several courses that may be counted as electives. The Lower Division is designed to benefit students with a broad range of professional goals. The Upper Division leads to a presidential commission as a Second Lieutenant in the U.S. Army. Enrolled students who actively pursue a commission may earn a Minor in Military Science.

### Lower Division

Lower Division courses are normally taken in the freshman and sophomore years. Veterans may take a compressed version of the Lower Division sequence in the summer as a six-week, all-expense-paid leadership seminar. Successful completion of the Lower Division gives students the credentials necessary for enrollment in the Upper Division.

### Upper Division

Upper Division courses are taken during the final two years of college and include an advanced summer seminar between the junior and senior years. Students in the Upper Division are paid \$450 to \$500 per month while enrolled, and earn a salary for all summer internships.

### Scholarship Program

Army ROTC offers opportunities for scholarships covering full tuition. Students may apply for three-year or two-year scholarships. Each scholarship covers tuition, provides an annual allotment of \$1,200 for books and fees, and gives students a tax-free allowance each month classes are in session. The allowance increases each year: \$300 per month during the student's freshman year, \$350 per month during the sophomore year, \$450 per month during the junior year, and \$500 per month during the senior year. Army ROTC scholarships are awarded on the basis of merit. Family income has no bearing on eligibility for an award. For more details, see the Financial Aid section of this catalog or contact the scholarship advisor at the ROTC Department, Telephone (205) 934-8749.

### Partnership in Nursing Education

Army ROTC also offers a unique scholarship opportunity for UAB School of Nursing students under the Partnership in Nursing Education (PNE) program. These scholarships not only cover tuition, books and fees, and the monthly allowance, but also guarantee progression into the upper division clinical nursing classes. Two-year, three-year, or four-year scholarships are available for all qualified nursing majors. See the Financial Aid section of this catalog or contact the scholarship advisor at the ROTC Department, Telephone (205) 934-8749.

## Veterans

Students with prior military experience can fulfill credit requirements for the ROTC Lower Division sequence. If credit is granted, and provided the student is not on a three-year Army ROTC Scholarship, veterans may bypass the freshman and sophomore years of ROTC and enroll directly in the Upper Division sequence. Students with prior service may be eligible for special veteran scholarships. In addition to any financial assistance from ROTC, veterans are still qualified to receive any and all GI Bill, Army College Fund, or VEAP benefits to which they are entitled.

## Simultaneous Membership Program

Students may take advantage of the Simultaneous Membership Program (SMP), which allows participation in ROTC and enlistment in the Army National Guard or Reserve at the same time. SMP Students serve as officer trainees in a Guard or Reserve unit and perform duties commensurate with the grade of Second Lieutenant. SMPs are paid at the rate of at least a Sergeant E-5 for Guard or Reserve service.

## Minor in Military Science

Students who are actively pursuing a commission as a Lieutenant (active duty or reserve duty) may pursue a minor in Military Science. Contact the Department of Military Science, (205) 934-8763, for more information.

## Honors Program

As part of the Military Honors Program, military science students with outstanding qualities of leadership, academics, and high moral character may be designated by the Professor of Military Science as "Distinguished Military Students." Upon earning a commission as a Second Lieutenant and a baccalaureate degree, select students may be designated "Distinguished Military Graduates."

## Further Information

For further information on the UAB Army ROTC program, contact the Professor of Military Science at (205) 934-8763 or 934-8749, or visit the web site at <http://www.uab.edu/armyrotc>.

## Air Force ROTC

The Air Force Reserve Officer Training Corps (ROTC) program provides college men and women with the opportunity to compete for a commission as an officer in the United States Air Force or Space Force upon graduation. The program is divided into the General Military Course and the Professional Officer Course. The General Military Course includes courses offered during the first two years of the program and is open to all students without military obligation. The Professional Officer Course includes junior and senior level courses and is restricted to those who meet entry requirements or have special permission from the Professor of Aerospace Studies. Air Force ROTC students can gain confidence, leadership training, communication skills, and an appreciation for the role of the military in contemporary society. Call (205) 726-2859 or email [afrotc@samford.edu](mailto:afrotc@samford.edu) for complete information. Visit [AFROTC.com](http://AFROTC.com) for scholarship and general information, or visit [AFROTC Det 012's website](http://AFROTC Det 012's website) to learn more about UAB and Samford's joint Air Force ROTC program.

## General Military Course

The General Military Course consists of:

Requirements		Hours
AFS 101	Heritage and Values	1
AFS 102	Heritage and Values II	1
AFS 201	Team and Leadership Fundamentals I	1
AFS 202	Team and Leadership Fundamentals II	1

These courses are open to all students regardless of qualifications for military service or intent to compete for commission. As part of the General Military Course, students examine the basic organization and structure of the Air Force, appreciate the historical significance of air power, apply basic communication skills, and receive an introduction to total quality management. Each course is one semester hour credit.

## Scholarship Programs

Four-year college scholarships are available to highly qualified high school seniors. Interested students should visit [www.afrotc.com](http://www.afrotc.com) or contact the nearest Air Force ROTC program for more information. Applications are due by December 1 of the senior year in high school.

Three-year and two-year scholarships are also available to college students. Air Force ROTC scholarships pay college tuition, and books. Scholarship students also receive a monthly tax-free stipend ranging from \$300 to \$500 depending on academic year in school. Family income has no bearing on eligibility for an award. For additional information, contact the Aerospace Studies Department at (205) 726-2859. Uniforms and textbooks for all aerospace studies courses are provided at no charge.

## Leadership Laboratory

Leadership Laboratory is an integral part of the Air Force ROTC program. It provides an opportunity for students to apply classroom teachings to actual environments. Each course has an associated leadership laboratory. The laboratory meets for two hours each week during the term. Instruction is conducted within the framework of an organized cadet corps with a progression of experiences designed to develop leadership potential. Leadership Laboratory involves a study of the life and work of Air Force junior officers. Students develop their leadership potential in a practical, supervised laboratory, which typically includes field trips to Air Force and Space Force installations throughout the United States.

The first two years of Leadership Laboratory involve activities classified as initial leadership experiences. This includes studying Air and Space Force Customs & Courtesies, Drill & Ceremonies; giving military commands; instructing, correcting, and evaluating the preceding skills; studying the environment of an Air and Space Force base; and learning about career opportunities available to commissioned officers. The last two years of Leadership Laboratory consist of activities classified as advanced leadership experiences. They involve planning, organizing, coordinating, directing, and controlling the military activities of the cadet corps; preparing and presenting briefings and other oral and written communications; and providing interviews, guidance, and information to increase the understanding, motivation, and performance of other cadets.

## Field Training

Air Force ROTC field training is offered during the summer months at selected military bases throughout the United States. Students in the four-year program participate in multi-week field training, usually between their sophomore and junior years. The major areas of study in the field training program include officership training, career orientation, base functions and the active duty environment, and physical training.

## Minor Requirements for Aerospace Studies

To earn a Minor in Aerospace Studies, the student must have a cumulative GPA 2.0 or better and a minimum of 2.0 in all Aerospace Studies courses. No grade below a "C" will count towards the Minor in Aerospace Studies. This must include at least two courses of the Aerospace Studies 300 Sequence (6 semester hours), and two courses of the Aerospace Studies 400 Sequence (6 semester hours). Air Force ROTC Field training is required and not waiverable. Failure to successfully complete Field Training will prevent a student from earning a Minor in Aerospace Studies.

Requirements	Hours
<b>All courses must take accompanying Leadership Lab</b>	
AFS 101 & 101L Heritage and Values and Leadership Laboratory I	1
AFS 102 & 102L Heritage and Values II and Leadership Lab	1
AFS 201 & 201L Team and Leadership Fundamentals I and Leadership Laboratory II	1
AFS 202 & 202L Team and Leadership Fundamentals II and Leadership Lab	1
AFS 301 & 301L Leading People and Effective Communication I and Leadership Laboratory III	3
AFS 302 & 302L Leading People and Effective Communication II and Leadership Lab	3
AFS 401 & 401L National Security, Leadership Responsibilities and Commissioning Preparation I and Leadership Laboratory IV	3
AFS 402 & 402L National Security, Leadership Responsibilities and Commissioning Preparation II and Leadership Lab	3
<b>Total Hours</b>	<b>16</b>

## Minor Requirements for Military Science

Requirements	Hours
MS 101 Military Leadership	2
MS 101L Leadership Lab	0
MS 102 Military Leadership	2
MS 102L Leadership Lab	0
MS 201 Military Leadership	2
MS 201L Leadership Lab	0
MS 202 Military Leadership	2
MS 202L Leadership Lab	0
MS 301 Military Leadership	3
MS 301L Leadership Lab	0
MS 302 Military Leadership	3
MS 302L Leadership Lab	0
MS 401 Military Leadership	3
MS 401L Leadership Lab	0
MS 402 Military Leadership	3
MS 402L Leadership Lab	0
<b>Required History Course</b>	
MS 327 American Military History	3
<b>ROTC Cadet Leadership Course (CLC) - Not Waiverable</b>	

Failure to successfully complete CLC will prevent a student from earning a minor in Military Science. This is a required summer training program for 33 days of training and evaluation in skills and leadership ability, conducted at Ft. Knox, Kentucky.

Total Hours

23

## AFS-Aerospace Studies Courses

### AFS 101. Heritage and Values. 1 Hour.

A survey course serving as an introduction to the Air and Space Forces. The course focuses on information needed to be better informed about the role of the USAF and USSF. The course allows students to examine general aspects of the Department of the Air Force, leadership fundamentals, service benefits, and opportunities for officers. Students should also take AFS 101 Lab. Offered: Fall only. Class conducted at Samford University. Call Detachment for course schedule (205)726-2859.

### AFS 101L. Leadership Laboratory I. 0 Hours.

Laboratory to accompany AFS 101.

### AFS 102. Heritage and Values II. 1 Hour.

A survey course providing a historical perspective including lessons on war and US military, AF operations, principles of war, and airpower. This course provides students with a knowledge-level understanding for the employment of air and space power, from an institutional, doctrinal, and historical perspective. The students will be introduced to the military way of life and gain knowledge on what it means to be an Air or Space professional. Students should also take AFS 102 Lab. Offered: Spring only. Class conducted at Samford University. Call Detachment for course schedule (205)726-2859.

### AFS 102L. Leadership Lab. 0 Hours.

Laboratory to accompany AFS 102.

### AFS 1LAB. Air Force Learning Lab. 0 Hours.

### AFS 201. Team and Leadership Fundamentals I. 1 Hour.

A survey course analyzing leadership and followership traits in the context of a modern military force. The course provides details on leadership fundamentals and different leadership styles. Both verbal and written communication skills are taught along with problem solving techniques. Students should also take AFS 201 Lab. Offered: Fall only. Class conducted at Samford University. Call Detachment for course schedule (205)726-2859.

### AFS 201L. Leadership Laboratory II. 0 Hours.

Laboratory to accompany AFS 201.

### AFS 202. Team and Leadership Fundamentals II. 1 Hour.

A survey course designed to introduce the student to fundamental team dynamics and team building. Application of leadership perspectives in practical activities fostering skills like conflict management and ethical decision making. Group leadership problems designed to enhance interpersonal communications and decision making skills. Students should also take AFS 202 Lab. Offered: Spring only. Class conducted at Samford University. Call Detachment for course schedule (205)726-2859.

### AFS 202L. Leadership Lab. 0 Hours.

Laboratory to accompany AFS 202.

### AFS 300. Field Training. 2 Hours.

Four-week training and evaluation course to select potential candidates for Professional Officer Course. Rigorous physical training.

**AFS 301. Leading People and Effective Communication I. 3 Hours.**

Selected concepts, principles, and theories of Air Force leadership and management. Individual leadership skills and personal strengths and weaknesses as applied to an Air Force environment. Students should also take AFS 301 Lab. Departmental approval required to enroll in course. Offered: Fall only. Class conducted at Samford University. Call Detachment for course schedule (205)726-2859.

**AFS 301L. Leadership Laboratory III. 0 Hours.**

Laboratory to accompany AFS 301.

**AFS 302. Leading People and Effective Communication II. 3 Hours.**

Selected Air Force officer's duties and responsibilities as a subordinate leader. Responsibility and authority of an Air Force Officer. Application of listening, speaking, and writing skills in Air and Space Force-peculiar formats and situations with accuracy, clarity, and appropriate style. Air Force officer's responsibilities in personnel counseling and feedback process. Students should also take AFS 302 Lab. Departmental approval required to enroll in course. Offered: Spring only. Class conducted at Samford University. Call Detachment for course schedule (205)726-2859.

**AFS 302L. Leadership Lab. 0 Hours.**

Laboratory to accompany AFS 302.

**AFS 401. National Security, Leadership Responsibilities and Commissioning Preparation I. 3 Hours.**

Basic elements of national security policy and process. Roles and missions of air power in implementing national security policy. Preparation for service in the United States Air and Space Forces. Students should also take AFS 401 Lab. Departmental approval required to enroll in course. Offered: Fall only. Class conducted at Samford University. Call Detachment for course schedule (205)726-2859.

**AFS 401L. Leadership Laboratory IV. 0 Hours.**

Laboratory to accompany AFS 401.

**AFS 402. National Security, Leadership Responsibilities and Commissioning Preparation II. 3 Hours.**

Contemporary roles for the military in society and current issues affecting the military profession. Comparative analysis of civil and military justice systems. Preparation for service in the United States Air and Space Forces. Students should also take AFS 402 Lab. Departmental approval required to enroll in course. Offered: Spring only. Class conducted at Samford University. Call Detachment for course schedule (205)726-2859.

**AFS 402L. Leadership Lab. 0 Hours.**

Laboratory to accompany AFS 402.

**MS-Military Science Courses****MS 101. Military Leadership. 2 Hours.**

Foundations of officership, examines the unique duties and responsibilities of officers. Discusses organization and role of the Army; reviews basic life skills pertaining to fitness and communication; analyzes Army values and expected ethical behavior.

**MS 101L. Leadership Lab. 0 Hours.**

Labs are the primary training opportunity for and by the cadet chain of command. To be efficient, labs should be multi-echelon exercises. The MS IV cadets act on guidance from the Professor of Military Science to plan, prepare, execute and evaluate the lab and also assist in assessing subordinate cadet leaders.

**MS 102. Military Leadership. 2 Hours.**

Basic leadership presents fundamental leadership concepts and doctrine. Practices basic skills that underlie effective problem solving; applies active listening and feedback skills; examines factors that influence leader and group effectiveness and examines the officer experience.

**MS 102L. Leadership Lab. 0 Hours.**

Labs are the primary training opportunity for and by the cadet chain of command. To be efficient, labs should be multi-echelon exercises. The MS IV cadets act on guidance from the Professor of Military Science to plan, prepare, execute and evaluate the lab and also assist in assessing subordinate cadet leaders.

**MS 153. Basic Military Studies. 3 Hours.**

Mini-term class stressing physical training, leadership, and communication skills. Designed for students who are not able to take scheduled MS 101, 102, and 103 classes. Taken only with permission of Professor of Military Science.

**MS 201. Military Leadership. 2 Hours.**

Quality Leadership and Management. Emphasizes individual skills necessary to be a successful leader and manager. Instruction on written and interpersonal communications, briefing/presentation skills, hands-on office equipment and computer software training. First aid and map reading.

**MS 201L. Leadership Lab. 0 Hours.**

Labs are the primary training opportunity for and by the cadet chain of command. To be efficient, labs should be multi-echelon exercises. The MS IV cadets act on guidance from the Professor of Military Science to plan, prepare, execute and evaluate the lab and also assist in assessing subordinate cadet leaders.

**MS 202. Military Leadership. 2 Hours.**

Continuation of Quality Leadership and Management. Through lecture, activities, films, short readings, and discussion, students examine leadership dynamics, individual and group behavioral processes and team building. Analysis of professional values and ethics. Decision making and problem solving skills.

**MS 202L. Leadership Lab. 0 Hours.**

Labs are the primary training opportunity for and by the cadet chain of command. To be efficient, labs should be multi-echelon exercises. The MS IV cadets act on guidance from the Professor of Military Science to plan, prepare, execute and evaluate the lab and also assist in assessing subordinate cadet leaders.

**MS 204. Rangers. 1 Hour.**

Develop leadership qualities of ROTC cadets through small unit tactics, self discipline, self confidence, and resourcefulness. Cadets participate in physical training. Enrolled cadets may participate in the two-day, 27-school South East Conference invitational varsity Ranger Challenge competition.

**MS 205. Rangers. 1 Hour.**

Develop leadership qualities of ROTC cadets through small unit tactics, self discipline, self confidence, and resourcefulness. Cadets participate in physical training. Enrolled cadets may participate in the two-day, 27-school South East Conference invitational varsity Ranger Challenge competition.

**MS 206. Rangers. 1 Hour.**

Develop leadership qualities of ROTC cadets through small unit tactics, self discipline, self confidence, and resourcefulness. Cadets participate in physical training. Enrolled cadets may participate in the two-day, 27-school South East Conference invitational varsity Ranger Challenge competition.

**MS 253. Basic Military Studies. 3 Hours.**

Physical training, leadership, communication skills. Designed for students who are not able to take scheduled MS 201, 202, and 203 classes. Taken only with permission of Professor of Military Science.

**MS 301. Military Leadership. 3 Hours.**

Leadership and Problem solving examines basic skills that underlie effective problem solving; analyzes the role officers played in the transition of the Army from Vietnam to the 21ST century; reviews the features and execution of the Leadership Development Program; analyzes military missions, plan military operations and executes squad battle drills.

**Prerequisites:** MS 101 [Min Grade: C] and MS 102 [Min Grade: C](Can be taken Concurrently) and MS 201 [Min Grade: C] and MS 202 [Min Grade: C]

**MS 301L. Leadership Lab. 0 Hours.**

Labs are the primary training opportunity for and by the cadet chain of command. to be efficient, labs should be multi-echelon exercises. The MS IV cadets act on guidance from the Professor of Military Science to plan, prepare, execute and evaluate the lab and also, assist in assessing subordinate cadet leaders.

**MS 302. Military Leadership. 3 Hours.**

Leadership and Ethics probes leader responsibilities that foster an ethical command climate; develops cadet leadership competencies; prepares for success at National Advanced Leadership Camp; recognizes leader responsibility to accommodate subordinate spiritual needs; apply principles and techniques of effective written and oral communication.

**Prerequisites:** MS 301 [Min Grade: C]

**MS 302L. Leadership Lab. 0 Hours.**

Labs are the primary training opportunity for and by the cadet chain of command. to be efficient, labs should be multi-echelon exercises. The MS IV cadets act on guidance from the Professor of Military Science to plan, prepare, execute and evaluate the lab and also assist in assessing subordinate cadet leaders.

**MS 303. Pre-Cadet Leadership Course (CLC). 3 Hours.**

Platoon defensive and offensive measures; platoon movement techniques and command and staff functions. Incorporates all cadet skills for the Leadership Development and Assessment Course at Fort Lewis, Washington.

**Prerequisites:** MS 301 [Min Grade: C] and MS 302 [Min Grade: C]

**MS 327. American Military History. 3 Hours.**

Survey of American Military History from 1775 to present.

**MS 401. Military Leadership. 3 Hours.**

Oral and written presentation skills, including writing and reviewing selections of military correspondence and forms; presentation of performance-oriented training; conduct of briefings and meetings; analysis of organizational morals and ethics.

**Prerequisites:** MS 302 [Min Grade: C] and MS 301 [Min Grade: C]

**MS 401L. Leadership Lab. 0 Hours.**

Labs are the primary training opportunity for and by the cadet chain of command. to be efficient, labs should be multi-echelon exercises. The MS IV cadets act on guidance from the Professor of Military Science to plan, prepare, execute and evaluate the lab and also assist in assessing subordinate cadet leaders.

**MS 402. Military Leadership. 3 Hours.**

Military justice system and junior officer's use of it; Army personnel management, logistics system, and personal support agencies.

**Prerequisites:** MS 301 [Min Grade: C] and MS 302 [Min Grade: C] and MS 401 [Min Grade: C]

**MS 402L. Leadership Lab. 0 Hours.**

Labs are the primary training opportunity for and by the cadet chain of command. to be efficient, labs should be multi-echelon exercises. The MS IV cadets act on guidance from the Professor of Military Science to plan, prepare, execute and evaluate the lab and also assist in assessing subordinate cadet leaders.

**MS 405. Applied Army Leadership. 1 Hour.**

MSL 405, Applied Army Leadership is the capstone class for Army cadets who have completed their Military Science and Leadership level four requirements, yet still need to complete their bachelor or masters level graduation requirements before commissioning as a Second Lieutenant. MSL 405 is an advanced level course that draws upon all previous learning and experience in the ROTC program for application in leading and mentoring of the Blazers Cadet Battalion. The course places significant emphasis on independent leadership in the form of direct mentorship of Cadet MS IVs, exploration and growth in personal leadership styles and approaches and effective communication with the Assistant Professor of Military Science (APMS). This semester, you will: Advise Cadet Battalion leadership in tactical, procedural and ethical decision making. Guide Cadets in the art and science of Mission Command through engaged leadership. Explore, apply and evaluate personal leadership approaches. Communicate weekly with the PMS concerning independent mentorship and personal leadership evolution. Prepare for the transition to a career as an Army Officer.

## Student Life

Student Involvement & Leadership would like to invite you to complete your UAB experience by becoming involved in the many activities and organizations available to you as a student. Events range from enjoying new release films at our film series, engaging in critical conversations through our Lecture Series, enjoying a night out with friends at HSC LIVE! events, involvement in student organizations, cheering on the Blazers, writing for the Kaleidoscope student newspaper, rappelling down a cliff, hiking the Grand Canyon and so much more. Each semester brings new events, new organizations, opportunities to make friends, get physically fit, learn, socialize, relax, and have a good time becoming a part of the Blazer community! We want you to get involved!!

This section of the catalog contains an alphabetical list of many of the activities and organizations and activities available to students.

**Contact Us:****Student Experience**

205-934-4175

Physical Address:

Hill Student Center, Suite 401  
1400 University Boulevard

**Student Experience Offices:****UAB Career Center**

205-934-4324

**careerservices@uab.edu**

Physical Address:

Hill Student Center, Suite 307  
1400 University Boulevard

**Student Conduct and Outreach**

205-975-9509

**sarc@uab.edu**

Physical Address:

Hill Student Center, Suite 303

1400 University Boulevard

**Student Involvement & Leadership**

205-934-8020

**getinvolved@uab.edu**

Physical Address:

Hill Student Center, Suite 230

1400 University Boulevard

**Student Multicultural & Diversity Programs**

205-996-6778

**diversity@uab.edu**

Hill Student Center, Suite 311

1400 University Boulevard

**Off-Campus Student & Family Engagement**

205-975-0684

**families@uab.edu** (**diversity@uab.edu**)

Hill Student Center, Suite 140

1400 University Boulevard

## Student Involvement & Leadership

The Office of Student Involvement and Leadership is responsible for developing the leadership capacity of students and supporting student organizations as integral members of the university community by serving as a leadership and organizational development clearinghouse. The mission of the Office of Student Involvement and Leadership is to serve as full partners in the collegiate experience by empowering students through intentional programs that foster personal and professional development, while enhancing campus pride and commitment to the greater Birmingham community.

Students who engage in programs, activities, and services provided by the Office of Student Involvement and Leadership will be able to choose opportunities that foster collaboration with others by finding value in the contribution of viewpoints that differ from their own, develop a spirit of public-mindedness that influences civic engagement with local and global communities while creating spaces that generate a more porous and interactive flow of knowledge between campus and community, and develop their leadership and professional skills (such as critical thinking, event planning, conflict resolution), allowing them to succeed in all roles of a team and use these skills to build a foundation for future career success.

### Civic Engagement

The Office of Student Involvement and Leadership promotes and supports service and community involvement through engaging our students in a variety of meaningful service activities. The office serves as a resource center for community service programming in order to help students expand their understanding of social/community issues, develop leadership skills, and work on solutions to real life problems. The Blazers on Break alternative spring break program and Summer Service Weekends promotes community

service, develops leadership skills, and creates strong bonds among participants who travel to another community to participate in volunteer work addressing issues such as environmental protection, children, affordable housing, hunger, education, HIV/AIDS awareness, and disabilities. Through local partner fairs and large scale programs like Into the Streets Day of Service, Awareness Weeks, and Martin Luther King, Jr. Day of Service, students can get involved in many ways to make a positive difference on the lives of others in our community.

## Fraternities and Sororities

Looking to excel in you academics? Have incredible leadership opportunities? Give back to the community and a cause bigger than yourself? Most importantly, looking for a home away from home? The fraternities and sororities here have set the bar high for UAB students in terms of scholarship, leadership, philanthropy and service, and brotherhood and sisterhood. We currently have over twenty fraternities and sororities across four councils: the Panhellenic Council, Interfraternity Council, National Pan-Hellenic Council, and Multicultural Greek Council. Our diverse groups welcome students from all backgrounds, and will help you lay a foundation for success that lasts long after your college years have ended.

## Leadership Programs

The Office of Student Involvement and Leadership values and encourages all forms of leadership to cultivate an inclusive, socially responsible and vibrant campus community. All students are capable of leading and should develop and understanding and application of leadership, with or without a title. Students at UAB have the opportunity to do this through student leader positions, the Winter Leadership Retreat, the Fall Leadership Conference, and our Learn to Lead presentation series.

Educating is an integral part of what our office does, whether it is offering weekly seminar-style learning through the LEAD (Leadership Education And Development) on Demand program, a chance to sharpen networking skills through an annual etiquette dinner, or how to be an effective leader as a member of UAB LEAD. We also offer a scholarship annually to an emerging leader.

## Student Activities

Student events and activities enhance the co-curricular experience through opportunities that foster leadership development, collaboration, and connection to campus. Through signature events and spirit weeks like Homecoming, Creed Week, Grad Week, and UAB's Got Talent students can connect with others and show their campus pride through participating in campus traditions. Students have the opportunity to attend events, but can also hold leadership roles that allow them to plan, develop, and implement opportunities for engagement and involvement with their peers.

## Student Organizations

UAB recognizes over 300 student-led organizations concerned with the academic, social, and personal development of students. Organizations include groups with interests in religion, music, athletics, and cultural diversity. Additionally, nearly every academic major is represented by a student organization. Check out our organizations at [uab.edu/uabengage](http://uab.edu/uabengage)

For more information, contact the Office of Student Involvement and Leadership, [getinvolved@uab.edu](mailto:getinvolved@uab.edu), (205) 934-8020, Hill Student Center 230, [www.uab.edu/studentinvolvement](http://www.uab.edu/studentinvolvement).

## Student Multicultural and Diversity Programs

Student Multicultural and Diversity Programs (SMDP) empowers, engages and challenges students to increase resiliency; support retention and graduation; and develop global leaders. In order to contribute to student success, SMDP provides learning environments that value and respect underrepresented student populations through community building, education, and resources.

### Vision

Fostering a campus culture that embraces and celebrates UAB's diverse Community

### What We Do

- Mentorship
- Student Leadership Development
- Dialogue
- Social Justice, Identity, and Cultural Programming
- Diversity Education and Training
- Student Advocacy
- Community Outreach and Engagement

## Student-Led Programs

### Black Student Awareness Committee

Through educational events and programs, the Black Student Awareness Committee (BSAC) strives to increase the awareness of issues surrounding the Black community on our campus, within the city of Birmingham, and across the nation. BSAC encourages celebration of Black heritage, celebrates the accomplishments of Black people on and around the campus, and offers insight into the future of Black America.

### Blazer Male Excellence Network

The BMEN Peer Mentoring Program is designed to provide academic and social support to Black male students entering UAB. BMEN's overall goal is to improve the quality of life for the new student by partnering a returning student with a new student, and by staff providing information on navigating the collegiate experience inside and outside the classroom. The mentors are selected each spring and go through extensive training to offer the best services possible. At UAB, improving the retention and graduation rates of its students is a primary objective of the University. Nationally, black males have the lowest retention rate of any group on most college campuses. The BMEN Peer Mentoring Program is one way to connect black males to the University and help them successfully transition to UAB.

### Free Food For Thought

Free Food for Thought (FFFT) aims to create a space for students, and sometimes community members, to share their thoughts and opinions about 'hot topic' or 'hot button' current events and issues. Each semester a topic is chosen for discussion and each session is framed around that topic. FFFT encourages building

a community that values inclusion and social justice. Interested participants exchange viewpoints on topics like these, resulting in a greater awareness about issues and experiences across social and personal identities. Learning from one another through facilitated, respectful discussion can help us value the contributions of peers. Just as the title espouses, food is served at all of our sessions.

### Queer Peers

Queer Peers is a small programming board looking to create a space for LGBTQ students to feel supported and build community. Every year Queer Peers host a number of social programs and activities aimed at engaging and developing community amongst UAB's LGBTQ+ identified students.

### International Mentors

UAB International Mentors is a program that provides incoming international students with valuable information about UAB, Birmingham, and the United States. International Mentors serve the UAB international community by offering programming, support, and assistance to better meet the needs of incoming new students. The mentors are chosen through a highly selective process each spring and go through extensive training to offer the best services possible.

### Safe Zone Peer Educators

SafeZone Peer Educators are a group of volunteer undergraduate students who provided education and training around issues of gender, sexuality, power and oppression. SafeZone Peer Educators provide a visible network where all UAB undergraduate, graduate and professional students can receive knowledge and ask questions in a welcoming space in order to help make campus a safer, more accepting place for LGBTQ students, staff, faculty and visitors. Each semester, three open sessions are offered to all UAB students: **SafeZone 101**, **SafeZone 201**, and **Trans 101**. Lunch-n-learns and special topics are also offered throughout the year.

### Social Justice Advocacy Council

The Social Justice Advocacy Council (SJAC) is a programming, leadership and advocacy board comprised of a diverse group of students that promote multicultural awareness and inclusive excellence. Our objective is to celebrate diversity of identity, broaden cultural understanding, encourage unity, empower marginalized and underrepresented groups, educate about identity related issues, and promote intercultural interactions between all communities of people at The University of Alabama at Birmingham.

## Theatre Activities

### UAB Department of Theatre

The UAB Department of Theatre presents several productions each year in the Alys Stephens Center's Sirote Theatre and the Odessa Theatre. Students of all majors can audition, build productions and participate on running crews for credit. Special ticket pricing is available for UAB students. For more information, contact the Department of Theatre at (205) 934-3236.

## Ambassadors

The UAB Ambassador Program is the oldest and most prestigious student program on campus. This select group of 22 dedicated students

are committed to the University by serving as the official hosts and hostesses at recognized activities and events of UAB. At all times, these student leaders represent UAB through their actions, demeanor, and speech. Ambassadors are selected each spring semester via application and interview.

For more information, contact the Office of Student Involvement and Leadership, [getinvolved@uab.edu](mailto:getinvolved@uab.edu), (205) 934-8020, Hill Student Center 230, [www.uab.edu/studentinvolvement](http://www.uab.edu/studentinvolvement).

## Athletic Team Support Groups

Blazer support groups include the UAB Golden Girls, Cheerleaders, mascot (Blaze), Blazer Band and the UAB Marching Blazers. These groups perform at UAB basketball, volleyball and at a variety of events in Birmingham. Each spring tryouts are held and are based on performance and recruitment process. For more information on cheerleaders, mascot and Golden Girls please visit [uabsports.com/sports/uab-spirit](http://uabsports.com/sports/uab-spirit) or email Cody Sellers at [cseller5@uab.edu](mailto:cseller5@uab.edu). For information on the Blazer Band and the UAB Marching Blazers, call the band office at (205) 975-BAND (975-2263). You can also visit the website [www.uab.edu/spirit](http://www.uab.edu/spirit).

## BlazeRadio

Hear music from your favorite artist, get the 411 on celebrity news and find out what's happening on campus 24 hours a day with BlazeRadio, UAB's student Web radio station. Tune in online, or download our Live365 smartphone app, and listen to the latest alternative, rock, hip hop, jazz, dance, and country music and more. You can also check out our popular news, sports, and talk shows that are all produced by and for UAB students.

If a job in radio is what you hope to achieve, BlazeRadio offers volunteer spots on the air and behind the scenes. Check the BlazeRadio site for details on programming, promotion, technology, and management positions. On-air slots require an audition. Get started by completing an application in the Office of Student Media.

To tune in, go to [www.uab.edu/studentmedia](http://www.uab.edu/studentmedia) and click on our live stream link. Our studio is located in Suite 130 in the Hill Student Center located at 1400 University Blvd. You can call us at (205) 934-3354 (WBLZ), or send us an email at [info@InsideUAB.com](mailto:info@InsideUAB.com) ([info@insideuab.com](mailto:info@insideuab.com)).

## Good Games UAB

Good Games UAB (gg.UAB) is a student-led programming board who actively engage in numerous eSports initiatives and activities throughout the school year. This student organization provides programming, hands-on experience and mentoring to promote eSports culture within the community while increasing career awareness for students looking to jump-start their journey into the industry by connecting them with companies in the Greater Birmingham area. All currently enrolled undergraduate and graduate students are eligible to participate in gg.UAB's programming. Students who wish to serve on the leadership board for gg.UAB must be a full time student with a minimum GPA of a 2.5 in the semester they apply as well as the semesters they remain on the board.

For more information, contact the Office of Student Involvement and Leadership, [getinvolved@uab.edu](mailto:getinvolved@uab.edu), (205) 934-8020, Hill Student Center 230, [www.uab.edu/studentinvolvement](http://www.uab.edu/studentinvolvement).

## Honor Societies

UAB recognizes many nationally affiliated honor societies that acknowledge scholastic achievement, citizenship, and outstanding leadership among students. To learn more about UAB's honor societies and other student organizations visit UAB's online involvement platform engage at [uab.campuslabs.com/engage](http://uab.campuslabs.com/engage).

For more information, contact the Office of Student Involvement and Leadership, [getinvolved@uab.edu](mailto:getinvolved@uab.edu), (205) 934-8020, Hill Student Center 230, [www.uab.edu/studentinvolvement](http://www.uab.edu/studentinvolvement).

## Leadership and Service Council (LSC)

The Leadership and Service Council is a student led organization designed to promote volunteerism, conscientious citizenship, and leadership development through the planning and execution of signature university programs. LSC exists to provide service based opportunities for students that combine elements of social change and civic engagement to develop socially responsible leaders that support UAB and the surrounding communities. The Leadership and Service Council works collaboratively with campus and community partners to plan, market, and execute signature service events which include Into the Streets, Rise Against Hunger, and MLK's Beloved Community. Selection for the Leadership and Service Council takes place during the spring semester.

### *As a result of membership within LSC, students will:*

- Successfully plan, market, and execute large signature service programs
- Work collaboratively with council members to achieve programming goals and outcomes through execution of service events
- Develop transferable leadership skills that will enhance overall engagement inside and outside of the classroom
- Use appropriate technology to support marketing and promotion of events to UAB students, staff, and faculty

For more information, contact the Office of Student Involvement and Leadership, [getinvolved@uab.edu](mailto:getinvolved@uab.edu), (205) 934-8020, Hill Student Center 230, or [www.uab.edu/studentaffairs/](http://www.uab.edu/studentaffairs/).

## Miss UAB

The spotlight shines on students both on stage and behind the scenes in the Miss UAB Scholarship Competition, an official preliminary to the Miss Alabama and Miss America competition. Held each fall, the competition showcases each contestant's talent and achievement and provides scholarships to help them pursue educational goals. Students involved in the Miss UAB Scholarship Program gain valuable experience and opportunities to enhance leadership and interviewing skills, talent, poise, and confidence. More than \$4,600 in scholarships are awarded to the winner and alternates.

For more information, contact the Office of Student Involvement and Leadership, [getinvolved@uab.edu](mailto:getinvolved@uab.edu), (205) 934-8020, Hill Student Center 230, [www.uab.edu/studentinvolvement](http://www.uab.edu/studentinvolvement).

## Music Ensembles

Students of all majors are invited to participate in instrumental or vocal music ensembles offered through the Department of Music. Each group performs on campus several times each year; some also perform for selected off-campus events. Some prior experience and brief auditions are required. Several scholarships are available each year for students

who perform with these groups. For more information, contact the Department of Music, (205) 934-7376.

## Vocal Groups

### Chamber Singers

This choral ensemble performs a variety of music representing different periods and styles. The group is open to students of all majors. A short audition is required. For more information, please contact Dr. Brian Kittredge at (205) 975-2599 or [briank@uab.edu](mailto:briank@uab.edu).

### Concert Choir

This auditioned choral ensemble performs music representing a variety of periods and styles. Some music-reading ability is needed. The group is open to students of all majors. A short audition is required. For more information, please contact Dr. Brian Kittredge at (205) 975-2599 or [briank@uab.edu](mailto:briank@uab.edu).

### Gospel Choir

This ensemble primarily performs choral literature from the major eras of American Gospel Music. It is open to students of all majors. Students with significant skill in playing gospel, jazz and/or pop keyboard, rhythm guitar, bass guitar, saxophone, and drums are also encouraged to participate in the Gospel Choir. For more information, please contact Mr. Kevin Turner at (205) 934-6155 or [kturmer@uab.edu](mailto:kturmer@uab.edu).

### Opera Workshop

This ensemble performs opera scenes and musical theater excerpts, as well as fully staged, complete operas. It is open to students of all majors. A short audition is required. For more information, please contact Dr. Kristine Hurst-Wajszczuk at (205) 934-8906 or [khw@uab.edu](mailto:khw@uab.edu).

## Bands

### Blazer Band

As part of the university band program, the Blazer Band provides support for UAB Blazer basketball. It performs at all home and selected away games and for post-season events such as the annual Conference USA tournament. For further information, please contact the band office at (205) 975-BAND (975-2263).

### Jazz Ensemble and Jazz Combos

Instrumentalists can further their musical knowledge and creative skills by performing classic and contemporary jazz, swing, and rhythm and blues. For further information, please contact Dr. Steve Roberts at (205) 934-6154 or [jazztpt@uab.edu](mailto:jazztpt@uab.edu).

### UAB Marching Blazers

The UAB Marching Blazers is part of the university band program, and produces high-quality experiences for students and fantastic entertainment for diverse audiences. The Marching Blazers go beyond the traditional role of collegiate marching bands by performing for professional sporting events; local, regional, and national marching band competitions and parades; and international travel and competitions. Scholarships are available. For further information, contact the band office at (205) 975-BAND (975-2263).

## Wind Symphony and Symphony Band

As part of the university band program, the Wind Symphony and Symphony Band perform the finest concert band literature in campus concerts, selected special performances, and an annual spring tour. Band placement is contingent upon a brief audition. Scholarships are available for students who participate in the Wind Symphony or Symphony Band and the Marching Blazers. For further information, please contact the band office at (205) 975-BAND (975-2263).

## Student Media

*Kaleidoscope*, UAB's student newspaper, was here before there was a UAB. Students have been gathering, editing, and distributing the news about the UAB community since 1967.

Throughout the years, "*Kscope*," as it is known on campus, has played a vital role in helping keep students informed as well as providing a public forum for the discussion of timely issues of interest to our community.

As times have changed, so has UAB's Student Media -- trading in typewriters for computers, adding more color to its print edition, and aggressively converging what had once been a print-only medium into a contemporary operation that delivers content not only in print but daily on the web and through mobile devices.

And, UAB's Student Media has expanded along the way with these innovative media:

- Interactive Student Media, the web services group that powers *Kscope* online.
- Streaming internet radio ([BlazeRadio](#))
- Literary and visual arts magazine (*Aura* Literary Arts Review)
- Television web channel ([UABTV](#))

Regardless of the medium, however, at the heart of these operations are students who gain real-world experience and training that has equipped them for entry into the professional world. Over the years, teams of students have won numerous regional and national awards for journalistic excellence.

Student Media alums have gone on to work for a variety of media, ranging from community journalism to major metropolitan operations across the U.S. with most crediting their experiences with student media at UAB as essential to their careers.

Today, students produce content for all facets of these operations, including wrangling multimedia and mobile technologies to adapt the medium for display on smartphones and tablets. These innovations are produced by students themselves and are among some of the most cutting-edge concepts in collegiate journalism in the nation.

Student Media is always looking for those who want to join a team dedicated to finding the next great idea in serving our community. Perhaps that's you. Contact us today.

For more information, contact:

### Student Media Office

Hill Student Center, 1400 University Blvd., Suite 130 • Telephone (205) 934-3354 • Find us on B-Sync or Email: [info@insideuab.com](mailto:info@insideuab.com)

## Student Organizations

UAB recognizes over 300 student-led organizations concerned with the academic, social, and personal development of students. Organizations include groups with interests in Academic & Professional, Arts & Entertainment, Community Service & Philanthropy, Cultural and Social Awareness, Fitness, Fraternity & Sorority Life, Gaming, Health & Wellness, Honor Societies, Ideology & Politics, Leadership Development, Off-Campus & Commuter, Religion & Spirituality, School Spirit, Sports & Recreation, Sustainability and Special Interests. For the full student organization directory login to UAB's online involvement platform Engage at [uab.edu/uabengage](http://uab.edu/uabengage).

For more information, contact the Office of Student Involvement and Leadership, [getinvolved@uab.edu](mailto:getinvolved@uab.edu), (205) 934-8020, Hill Student Center 230, [www.uab.edu/studentinvolvement](http://www.uab.edu/studentinvolvement).

## UAB TrailBlazers

The [UAB TrailBlazers](#) are UAB's official student recruitment team. TrailBlazers assist the Office of Undergraduate Admissions by providing in-depth information about UAB to prospective students and their families. Chosen annually, TrailBlazers strive to ensure that students know about the diverse academic, cultural, and extracurricular interests found within the UAB community. These highly motivated, energetic, and dedicated students are chosen to represent the Division of Enrollment Management at special on- and off-campus recruitment events and campus tours. For more information, contact the Campus Visit Center, Hill Student Center, Suite 201, (205) 934-9098 or [TrailBlazers@uab.edu](mailto:TrailBlazers@uab.edu).

## Undergraduate Student Government Association (USGA)

The Undergraduate Student Government Association (USGA) is the voice for the undergraduate student body and represents student issues, concerns, and views to the administration. USGA provides programs and services for undergraduate students in the Schools of Business, Education, Engineering, Health Professions, Nursing, Public Health, and the College of Arts and Sciences. Elections for these executive council and senate positions are held each Spring semester. Students can also serve on USGA committees or be appointed to the cabinet or student court. Freshman may get involved through Freshman Forum.

For more information about USGA, contact the Office of Student Involvement and Leadership, [usga@uab.edu](mailto:usga@uab.edu) ([getinvolved@uab.edu](mailto:getinvolved@uab.edu)), (205) 934-8020, Hill Student Center 230, or [www.uab.edu/usga](http://www.uab.edu/usga).

## Blazer Spirit Council

The Blazer Spirit Council (BSC) is a student programming board that works to implement spirit and tradition activities for the student body.

Programs include activities for Homecoming, Creed Week, and Grad Week as well as activities to support athletic engagement.

### Goals:

- Increase Blazer pride through intentional, student-led programming and initiatives
- Engage UAB students, faculty, staff, and community members in creating new and celebrating existing UAB traditions
- Place students at the center of the institutional conversation regarding campus pride and in a position to create and sustain UAB traditions

- Develop a sustainable framework for planning and promoting spirit and tradition events and initiatives

For more information, contact the Office of Student Involvement and Leadership, [getinvolved@uab.edu](mailto:getinvolved@uab.edu), (205) 934-8020, Hill Student Center 230, [www.uab.edu/studentaffairs](http://www.uab.edu/studentaffairs).

## Student Outreach

### Student Outreach

Student Outreach, a function of the Office of Student Conduct & Outreach, assist students who may be struggling or distressed in some way by linking them to appropriate resources on or off campus. Staff meet with students to identify sources of stress and discuss individualized options to address those factors. The ultimate goal of the office is to help students reduce their stress and increase their support in order to be as successful as possible at UAB. Student Outreach serves as part of the UAB CARE Team (Communicate, Assess, Refer, Educate) to help develop strategies to support students experiencing academic, social, and crisis situations, including mental health concerns.

Student Outreach also coordinates Blazer Kitchen at Hill Student Center, one of the University's two on campus food pantry locations. Open to any active UAB student, the location provides access to perishable and non-perishable food, school supplies, and personal hygiene items.

Additional information is available by stopping by 303 Hill Student Center, visiting [uab.edu/studentoutreach](http://uab.edu/studentoutreach), or calling 205-975-9509.

## Title IX

The University of Alabama at Birmingham Division of Student Affairs oversees the University's compliance with Title IX of the Education Amendments of 1972. The Title IX Office works with students, University administration, departments, faculty, staff, campus police, and other support services to ensure that University policies and programs foster a campus community free of sex discrimination including gender-based assault, harassment, exploitation, dating and domestic violence, stalking as well as discrimination based on sex, sexual orientation, gender identity and gender expression, and related retaliation.

For more information about Title IX, policy, procedures, reporting, protections, resources, and support, please email [titleixoffice@uab.edu](mailto:titleixoffice@uab.edu) or visit [uab.edu/titleix](http://uab.edu/titleix). Kasey M. Robinson serves as the University's Title IX Coordinator and can be reached at 405 Hill Student Center, 205-996-1340, or [kaseyr@uab.edu](mailto:kaseyr@uab.edu).

## Student Services & Facilities

This page contains a list of facilities and services available to UAB students. For further information on these and other facilities and activities, contact the [Information Desk](#), located at the Hill Student Center or refer to the UAB student handbook, *Direction*, at <https://www.uab.edu/students/> and on [BlazerNET](#) on the Student Resources tab.

## Academic Advising

Academic advising is designed to assist students in identifying and achieving their educational and career goals. Specific guidance is given in selecting majors and choosing courses to satisfy degree requirements. Each student is assigned an academic advisor based on their choice of school and major.

## Meet Your Advisor

### Collat School of Business

### College of Arts & Sciences

### Honors College

School/Area/Advisor	Telephone
Personalized Pathway/Global & Community Leadership Honors - Amy Atkisson	(205) 934-3871
Personalized Pathway Honors - Kamina Perdue	(205) 934-3082
Personalized Pathway Honors - Chris Perry	(205) 934-1967
Personalized Pathway Honors - Morgan Sieck	(205) 975-3916
Science & Technology Honors - TBD	(205) 996-5701
University Honors - Rebecca Freeman	(205) 934-3228

### School of Education

### School of Engineering

### School of Health Professions

#### **SHP Office of Student Services and Advising**

The Office of Student Services, located in Suite 230 in the School of Health Professions Building, provides academic advising to undergraduate School of Health Professions majors. Our mission is to provide information to students preparing for careers in the health professions and to assist them in planning their program of study to achieve their degree goals. We offer curriculum and academic guidance including course selection and scheduling as well as admissions counseling. For additional information on our department and to connect with an undergraduate advisor visit: <https://www.uab.edu/shp/home/office-of-student-recruitment-engagement-and-success/team-members>

Physical Address: 1716 9th Avenue South, SHPB Room 230

Mailing Address: 1720 Second Avenue South Birmingham, AL 35294

Voice: 205-934-4194

Email: [shp@uab.edu](mailto:shp@uab.edu)

### School of Public Health

School/Area/Advisor	Telephone
Nicole Gravitt, MAEd	205-934-4993
Michelle Henry, MA, NCC	205-934-4993

### Vulcan Materials Academic Success Center/ Undeclared and Exploratory Advising

## Birmingham Area Consortium for Higher Education (BACHE) Library Cooperation

The Birmingham Area Consortium for Higher Education (BACHE) consists of UAB, Birmingham-Southern College, Miles College, the University of Montevallo, and Samford University. Students, faculty, and

staff at BACHE institutions may access the resources of all member libraries in person by simply presenting their valid ID cards. It is best for students to discuss research projects first with the reference staff at UAB's library before using other member libraries. The rules and regulations of the lending library are in effect.

<http://www.uab.edu/bache/>

## University Recreation

UAB University Recreation (URec) provides fitness, wellness, and recreational opportunities for the UAB community and beyond. URec makes this possible by offering a variety of premier programs, facilities, and services, all in the heart of UAB's campus!

## COVID-19 Re-entry Disclaimer

Please note that UAB URec is currently operating under modified operations and to view the most up to date information on what is currently offered, visit the [UAB URec Website](#).

## Campus Recreation Center

The 152,000 square foot facility covers three floors housing: four basketball/volleyball courts; four racquetball courts (one of which can be converted to squash and three for wallball); four aerobics studios (one dedicated to F45 - Functional Training); Studio V - functional fitness area; 18,000 square feet of weight and cardio-fitness areas and iron cave; a game room; an aquatics center with both lap and leisure components; a multi-purpose court used for indoor soccer, floor hockey, and badminton; an indoor track; and a climbing and bouldering wall.

Patrons can take advantage of the fitness and wellness services here at the Campus Recreation Center, which offer personal fitness assessments, massage therapy, and personal training. In addition, we have a Pro Shop in house. So if you forget something we've got you covered, along with the PowerZone to keep you fueled before and after your workout.

URec also offers a number of lockers available for rent in 12 month or 3 month options. Lockers are limited, so if you are interested, please contact us at 205-996-5038 or stop by our Member Services desk today! If you prefer not to purchase a locker, we have several areas in the facility, including the locker rooms, with day-use lockers available; just bring a lock, store your belongings while you work out with your own lock, and take it with you when you leave - free of charge! The Campus Recreation Center is located at 1501 University Boulevard, next to the Campus Green.

## Campus Green & Intramural and Club Sports Complex

University Recreation is also responsible for the scheduling of the Campus Green and the full operation of the Intramural and Club Sports Complex on the north side of campus.

For more details on reserving any University Recreation space visit our [Facilities website](#).

## Aquatics

The Aquatics Center housed within the Campus Recreation Center provides a place for members to swim laps as well as meet their leisure aquatic needs by swimming laps, floating through the river or taking a dip in the hot tub. In addition, the aquatics program offers group swim classes, private lessons, lifeguarding certifications WSI (Water Safety

Instructor) classes, and pool parties for special events. For details about pool party requests and/or other pool activities, please visit our [website](#).

## Fitness & Wellness Services

The Fitness and Wellness programs offered at the UAB Campus Recreation Center range from traditional Ufit (Group Exercise) classes and F45 classes to personal training packages to campus rec kitchen and wellness massage services. For more information on all of our fitness and wellness services or to schedule an appointment today, check out our [FitWell page](#).

### **Ufit (In-person & Virtual) and F45 Classes**

[Ufit classes](#) are FREE to anyone with an active [URec membership](#). Feel free to drop in any time or day of the week to participate in the wide variety of classes available! If you are interested in participating in any of the F45 classes please register on our [Mobile App](#).

We offer a wide variety of fitness classes, designed to fit your scheduling needs. From seasoned cyclers to those wanting to try yoga for the first time, Ufit has a class that will get you moving! Please visit our [website](#) to view our current schedule.

### **F45 - Functional Training**

If high intensity interval training is something you are looking for, you will love F45 – Functional Training. The F45 program is uniquely developed to offer systemized training program that changes daily and is structured to build as the most effective workout method for burning fat and building lean muscle.

For more information about F45 and to view the current F45 schedule, visit the [F45 website](#).

### **Rec On The Go**

Rec on the Go is a program designed to cater to any recreation, health, and/or wellness topic to the UAB community. All programs are presented by a recreation professional and can be modified for your group's exact needs. Topics covered vary from fitness classes to chair massages and nutrition demonstrations. Departments have the opportunity to pick a topic to be presented at a staff meeting, lunch group, or any time of your choice! To find out more, please contact our Fitness team at [fitness@uab.edu](mailto:fitness@uab.edu).

### **Complete Fitness Assessments**

Fitness Assessments provide individuals with their baseline measurements of flexibility, endurance, blood pressure, muscular strength, body composition, and cardiovascular fitness. The results of these tests are reviewed by a certified Personal Trainer and are used to help personalize a tailored workout plan specifically for you. To schedule your Fitness Assessment please email our FitWell team at [fitness@uab.edu](mailto:fitness@uab.edu) and complete the [Health History Questionnaire](#) as well as the [Fitness Assessment Form](#) prior to the appointment.

### **Personal Training**

Do you want to get back into shape or are you simply looking to kick start a new workout routine? Personal training is the right choice for you!

URec offers a variety of Personal training packages for everyone. Check out our [website](#) now for complete pricing, packing, and details.

### **Massage Therapy Services**

Celebrate a little YOU time by scheduling yourself a massage today!

Appointments are available for 30 or 60 minutes and are performed by certified massage therapists. Choose from a variety of massage packages in order to customize the perfect relaxation for you. Massage therapy appointments are based upon the therapists' schedules and availability. Please allow at least 48 hours of advanced notice of your preferred appointment time in order for us to best schedule your appointment.

For more information or to schedule your next appointment, please email a completed [Health History Form](#) and [Massage Therapy Request Form](#) for your appointment to [fitness@uab.edu](mailto:fitness@uab.edu) today!

## Competitive Sports

The Competitive Sports program offers activities such as intramurals and club sports that involve individual and team competition, as well as other fun events.

### **Intramurals**

All UAB students, staff, and faculty are eligible to participate in intramural sports. Faculty and Staff must adhere to the specific entrance policies if they are not campus recreation facility members. Individuals in any team league must have their campus card in possession to be eligible to participate.

Every team league is offered in men's, women's and co-rec format. Each league will have a 4-week regular season followed by a single-elimination playoff. For more information please visit our [website](#) or contact [intramurals@uab.edu](mailto:intramurals@uab.edu).

### **Club Sports**

A club sport is student organization established to promote interest in a sport and develop skills of its members in that sport. A club sport may be organized for recreational, instructional, performance, or competitive purposes. For more information please visit our [website](#) or contact [clubsports@uab.edu](mailto:clubsports@uab.edu).

## Outdoor Pursuits

Outdoor Pursuits offers outdoor trips and clinics throughout the year including kayaking, backpacking, camping, climbing, canoeing, and whitewater rafting. Also offered are belay certification and lead climbing programs. Trips and clinics, such as the Wilderness First Responder training, are open to university students, faculty/staff, alumni, and the community. Contact [outdoors@uab.edu](mailto:outdoors@uab.edu) or visit our [Outdoor Pursuit page](#) for more information on trips, clinics, and equipment rentals.

### **Climbing Wall & Bouldering Wall**

Located on the mezzanine level of the Campus Recreation Center, the 36' tall by 42' wide climbing wall offers 1,512 square feet of climbing. The wall's climbing surface is constructed of reinforced polymer concrete panels and imprinted to match the look and feel of natural rock. We also have a 12-foot bouldering wall for everyone to enjoy. Both are open to all URec members. The community may use the wall by private group rental.

### **Team Building**

University Recreation offers many opportunities for team building initiatives, catering toward campus groups, corporate outings, school groups and more! Our enthusiastic and skilled facilitators will guide your group through fun activities focused on enhancing or developing vital workplace and life skills such as teamwork, cooperation, communication,

and trust. Our program can accommodate groups of any size in both virtual and in-person settings. Initiatives work on developing or enhancing: communication, teamwork, trust, cooperation, team building, planning, and other common workplace functions. For more information, or to request team building, visit our [website](#).

### **Outdoor Equipment Rentals**

Planning a trip for the weekend but missing the gear? The Outdoor Pursuits Rental Center is here to save your adventure! We offer outdoor equipment for various events and the rental service is open to university students, faculty/staff, alumni, and the community. Whether backpacking, camping, or canoeing, the rental center has multiple rental time spans on the equipment you might need like sleeping bags, tents, backpacks, and cooking sets. To view the full list, pricing and to complete the rental request form, visit the [Outdoor Pursuits Rental Center website](#).

## **Campus Dining**

Dining on-campus gives you the advantage of never having to worry about keeping cash on hand and never losing your parking space. At UAB we have more than fifteen (15) restaurants on-campus. Just swipe your ONE Card and dine! For more information about Campus Dining, please stop by the UAB Campus Dining office located on the top floor of the Commons on the Green next to the Den, or call (205) 996-6567. You can also visit us online at <https://www.uab.edu/students/dining/>.

For a map of dining locations and updated hours of operation visit: [www.uab.edu/students/dining/locations-hours](http://www.uab.edu/students/dining/locations-hours).

### **Meal Plans**

Your meal plan gives you the advantage of never having to worry about keeping cash on hand to eat on-campus. Just swipe your ONE Card and dine. For meal plan options and requirements visit [www.uab.edu/students/dining/meal-plans](http://www.uab.edu/students/dining/meal-plans).

### **Dining Dollars**

Dining Dollars are funds that you receive from your campus dining fee. All full-time undergraduate students (those students taking twelve (12) or more credit hours on campus) will be assessed a **\$225 Campus Dining Fee** during fall and spring semesters. This Dining Dollars fee is loaded onto a student's OneCard and is used as a declining balance account accepted at all on campus dining locations. Dining Dollars are not part of a student's meal plan.

## **Hill Student Center**

The Hill Student Center is the living room of UAB, in the heart of campus. Comprised of over 167,000 square feet, the Hill Student Center is home to over 18 unique departments, restaurants, retail spaces and other services. In addition, the Hill Student Center offers over 25 reservable spaces which include tabling/marketing locations, multiple meeting rooms, a state-of-the-art theater, ballrooms and multiple outdoor areas. As a student-centered facility, student organizations receive priority scheduling of all spaces, free of charge. University departments and external organizations may reserve space within Hill Student Center for an hourly fee. Over 7,200 meetings, programs, concerts and other special events take place at Hill Student Center each year.

As a department within the Division of Student Affairs, the Hill Student Center is committed to student growth and development. One of the largest student employers on campus, Hill Student Center employees over 60 student annually with many of those students serving in

leadership roles as Area Supervisors and Building Managers. Throughout their employment these students receive extensive training and real-world experience to develop their skills outside the classroom and prepare them to enter the workforce after graduation.

The impact of Hill Student Center reaches far beyond that of just the UAB campus. As home of the Campus Tour office, the Hill Student Center welcomes thousands of perspective new Blazers and their families each year. Additionally, over one-million visitors pass through the Hill Student Center annually.

For additional information about Hill Student Center, including building maps and hours of operation, please visit [uab.edu/studentcenter](http://uab.edu/studentcenter).

## **Libraries**

**UAB Libraries** hold more than two million volumes and provide access to thousands of relevant digital resources for information, instruction, and research in support of UAB's vast academic and medical enterprise. The UAB Libraries system comprises [Mervyn H. Sterne Library](#) as well as [Lister Hill Library of the Health Sciences](#), which includes [Lister Hill Library at University Hospital](#) and UAB Historical Collections' [Reynolds-Finley Historical Library](#), [UAB Archives](#), and the [Alabama Museum of the Health Sciences](#). The faculty and staff of UAB Libraries provide the resources and essential expertise to support excellence in education, research, patient care, and community outreach. Priorities for UAB Libraries include increased access to resources, seamless cloud-based single search capability, campus-wide digital asset management, and increased support for distance and international students and researchers.

### **Mervyn H. Sterne Library**

The **Mervyn H. Sterne Library** houses a collection of more than one million items and numerous electronic resources that support teaching and research in the arts and humanities, business, education, engineering, natural sciences and mathematics, and social and behavioral sciences. The library is located at 917 13th Street South and online at <https://library.uab.edu/locations/sterne>. The website is the gateway to all library services and collections including the Undergraduate Research Toolkit, subject- and course-specific Library Guides, and a list of FAQs. Services include research assistance, citation consultations, workshops and faculty-requested classes, assistance with locating materials, and interlibrary loan.

Named in memory of the late Birmingham philanthropist and civic leader Mervyn H. Sterne shortly after it opened in 1973, the library has seminar rooms, study rooms, lockable study carrels, computers, printers, scanners, copiers, and seating for 1,350 users. The first floor of the library was renovated in 2010 to make it even more user-friendly and houses the University Writing Center and a Starbucks. Due to student requests, Sterne Library has extended hours, opening 24 hours a day for five days a week except during holidays and summer terms. For more information on resources and services, visit the Sterne Library website at <https://library.uab.edu/locations/sterne>, call General Inquiries at (205) 934-6364 or request help by email, text, or chat at [here](#).

### **Lister Hill Library of the Health Sciences**

The **Lister Hill Library of the Health Sciences**, the largest biomedical library in the state, provides services and resources for UAB students, research and teaching faculty, and clinicians in medicine, nursing, optometry, dentistry, public health, health professions, and joint health sciences. The library was established in 1945, and then dedicated in

1971 in honor of Senator Joseph Lister Hill, a champion for health care and library legislation.

Lister Hill Library, located at 1700 University Boulevard, provides collaborative and group study space on the first floor and quiet study space on the second floor. Lister Hill Library's website at [www.uab.edu/lister](http://www.uab.edu/lister) provides 24/7 access to databases, electronic journals, ebooks, LHL Guides, FAQs, and recorded classes and tutorials. Services include consultations for conducting searches, guidance for citing resources, assistance with locating materials, and interlibrary loan services. For more information on resources and services, visit the Lister Hill Library website at [www.uab.edu/lister](http://www.uab.edu/lister), call (205) 934-2230, or request help by email, text, or chat at [www.uab.edu/lister/ask](http://www.uab.edu/lister/ask).

The **Lister Hill Library at University Hospital**, located in the West Pavilion, provides onsite support for education, research, and patient care. Access the resources and services for clinicians through the LHL@UH website at [www.uab.edu/lhluh](http://www.uab.edu/lhluh) or call (205) 934-2275 for more information.

The **UAB Historical Collections**, located on the third floor of Lister Hill Library, includes the [Reynolds-Finley Historical Library](#), [UAB Archives](#), and the [Alabama Museum of the Health Sciences](#). The Reynolds-Finley Historical Library contains rare books, pamphlets, and manuscripts in the history of medicine, science, and health-related fields. This collection dates from the mid-14th century to the early 20th century and includes a core of world-renowned medical classics with important concentrations on medicine in the Civil War, the South, and early Americana. UAB Archives is the official repository for the permanent records of the University and for archival collections held by UAB. One collecting area for manuscripts is the history of the health sciences, but the repository preserves collections with a wide variety of topics. The Alabama Museum of the Health Sciences preserves over seven hundred years of medical history with instruments, specimens, equipment, and pharmacology used by health care professionals throughout the world, with a special emphasis on material used on and around the University of Alabama at Birmingham campuses. Please call (205) 934-4475 for more information on the [Reynolds-Finley Historical Library](#) or the [Alabama Museum of the Health Sciences](#). Call (205) 934-1896 for more information on [UAB Archives](#).

## Math Learning Lab

Located on the second floor of Heritage Hall, the Math Learning Lab offers free tutoring in basic and intermediate algebra, pre-calculus algebra and trigonometry, business calculus, finite mathematics, elementary statistics, and calculus I, II, and III. One-on-one tutoring and homework help are available with no appointment necessary.

## Student Housing and Residence Life

Student Housing facilities include a suite-style residence hall, two semi-suite style residence halls, and four apartment-style residence halls. Student Housing is centrally located on campus and is within walking distance of all classroom buildings, libraries, campus dining facilities, the Medical Center, and the Campus Recreation Center and other student recreation facilities.

Student Housing is limited to full-time undergraduate students who are admitted to UAB and who are in good standing. "Good Standing" means not on academic or disciplinary suspension. A full-time undergraduate student must be registered for at least 12 credit hours throughout the entire academic year. The summer term is treated under a separate contract. Students will be required to satisfy these eligibility standards

throughout the term of their Student Housing Contract and to inform Student Housing and Residence Life of any changes in status, which may affect eligibility. All first-time freshmen who graduated from high school the same year as, or the year prior to their first semester at UAB are required to live on campus for the entire academic year. If a student feels they have extenuating circumstances that might warrant an exemption, they may request exemption by completing the form [online](#).

Residence Life Coordinators and Resident Assistants (RAs) serve as live-in professional staff and student leaders within the residence halls. The Residence Life Program consists of educational, cultural, recreational, and social events based on the needs and interests of the residents. In addition to planning these programs, trained staff members are available to answer questions, make appropriate referrals, and assist residents with personal or academic problems.

Since housing at UAB is limited, students should apply as early as possible, particularly if on campus housing is desired for the fall semester. Submitting a Housing Application does not guarantee a space for fall. Every effort will be made to inform applicants of availability.

Applications should be completed on-line. For first time applicants a \$25 non-refundable application fee is due along with a \$250 prepayment of the room fees for the fall term. Returning residents are also required to submit a \$250 prepayment at the time of application. All Student Housing rooms are assigned on a first come, first served basis.

Any questions or concerns may be directed to [studenthousing@uab.edu](mailto:studenthousing@uab.edu) or by telephone at (205) 996-0400. You can also visit the Student Housing & Residence Life website for additional information and resources at [uab.edu/housing](http://uab.edu/housing).

## The UAB Bookstore

The UAB Bookstore is located at 1400 University Boulevard inside the new Hill Student Center. The bookstore posts official lists of UAB courses and stocks the textbooks and all other items necessary for successful UAB coursework. Most textbooks can be purchased new or used. The option to rent textbooks is also available for most courses. The bookstore carries study aids, reference materials, school and office supplies; medical instruments, lab coats, and scrubs; and the largest assortment of UAB logo apparel and gifts available. Contact the UAB Bookstore at (205) 996-2665 or visit the store online at [www.shopuab.com](http://www.shopuab.com)

## University Writing Center

Located on the first floor of Mervyn Sterne Library, the [University Writing Center](#) (UWC) is UAB students' go-to place for writing assistance, whether the task at hand is a Freshman Composition paper, a lab report, or a graduate school application essay. In a friendly and professional one-on-one setting, UWC tutors teach students to use writing to discover, apply, and communicate knowledge in all disciplines. Students commonly visit to get help with understanding a writing assignment; brainstorming ideas; developing outlines and claims; understanding and applying instructor feedback; and revising and editing complete drafts. While UWC tutors do not edit for students, they can help students identify their common errors and develop stronger editing processes.

In addition to one-on-one sessions in the Sterne Library location, the UWC offers online consultations for students enrolled in online courses; Ask-a-Tutor, an email service for short writing questions; and regular workshops on topics of common interest. To make an appointment, visit the [UWC's website](#) and log onto the online scheduling system with your Blazer ID and password. Like the UWC's [Facebook](#) page and follow

the UWC's [Twitter](#) page to stay in touch and find out about upcoming workshops.

## One Stop

**What if you could get answers to your questions about your student account, financial aid and registration all in one place?**

Stop running from office to office and make the [One Stop](#) your first and possibly your only stop! If we can't help you on the spot, we'll do the leg-work for you or connect you to the appropriate resource.

Contact us by email, phone, or in person.

[One Stop Student Services](#), Room 103 of the Hill Student Center, 1400 University Blvd

[onestop@uab.edu](mailto:onestop@uab.edu)

(205) 934-4300

855-UAB-1STP (822-1787)

8:00 am - 5:00 pm, Monday - Thursday

9:00 am - 5:00 pm, Friday

## Information Center

Information regarding programs, services, and activities at UAB is available at the UAB Information Center. Referrals to the appropriate department, office, or person may be made for more specific information. The Information Center is located just inside the 14th Street entrance of the Hill Student Center, 1400 University Blvd.

For additional information, call (205) 934-8000, or see the Web page at <https://www.uab.edu/studentaffairs/studentcenter/>

## UAB Career Center

The [UAB Career Center](#), in the Division of Student Services, assists undergraduate and graduate students in selecting appropriate fields of study, furthering their education, learning effective job searching strategies, and making connections with employers.

[Career Consultants](#) and [Peer Career Advisors](#) are available to meet one-on-one with students to explore career or educational options, revise résumés and cover letters, hone interviewing techniques, conduct searches for internships and full-time jobs, and ready themselves for interviews with employers.

The UAB Career Center is now providing UAB students with the opportunity to enhance career readiness through [Canvas modules](#) focused on key career components and resources. These modules can be completed as a series or individually. The modules are designed to walk you through various aspects and tasks to ensure you are ready for your career journey.

In addition, students may utilize [Handshake](#), UAB Career Center's career management platform to do the following:

- [Search and apply for internships](#)
- [Search and apply for full-time jobs](#)
- [RSVP for events](#)
- [Sign-up for Interviews](#)
- [Upload resumes cover letters and more](#)
- [Connect with Students](#)
- [Make Appointments with Career Consultants](#)
- [Explore Resources](#)

The mission of the UAB Career Center to engage and empower members of the UAB community through meaningful career and experiential learning opportunities, to revolutionize the future of work. Over 25,000 employers use the UAB Career Center to connect with students. The UAB Career Center hosts a number of events throughout the year to further connect students and employers, including career fairs, employer meet-ups, and on-campus interviews.

### Location

Hill Student Center, Suite 307

1400 University Boulevard

### Contact

Website: <https://www.uab.edu/students/cpd/>

Office Number: 205.934.4324

Office Email: [careercenter@uab.edu](mailto:careercenter@uab.edu)

Facebook: <https://www.facebook.com/uabcareercenter>

Instagram: <https://www.instagram.com/uabcareercenter/?hl=en>

Youtube: [UAB Career Center Playlist](#)

## Disability Support Services

Disability Support Services (DSS), located in the Hill Student Center, serves as the central campus resource for students with disabilities. The goal of DSS is to provide a physically and educationally accessible university environment that ensures an individual is viewed on the basis of ability, not disability. DSS staff members work individually with students to determine appropriate accommodations. To be eligible for services, students need to complete an application, submit documentation of their disability and meet with our counseling staff.

For more information, contact Disability Support Services at (205) 934-4205 (voice) or 934-4248 (TTY) or <http://www.uab.edu/students/disability/> E-mail contacts are welcome at [dss@uab.edu](mailto:dss@uab.edu).

### Physical Address

Hill Student Center

1400 University Boulevard

### Mailing Address

UAB One Stop

1400 University Blvd., Hill 103

Birmingham, AL 35294

## International Student and Scholar Services

ISSS provides immigration compliance expertise and cultural events for international students on F-1 and J-1 visas. Specifically, we issue and extend federal immigration documents (Forms I-20 and DS-2019), help students apply for CPT and OPT work authorization, issue letters necessary to obtain Social Security cards and driver licenses, offer assistance filing taxes, and hold annual events such as Coffee Hour, International Barbecue, International Thanksgiving, and global holiday celebrations. Our vision is to provide cutting-edge immigration advising and programming to UAB and its international community, preserving the integrity of our programs while advocating for the unique needs of international students and scholars, leading to enriched educational and research opportunities, broadened cultural perspectives, and ease of adjustment to life in the US. ISSS shares space with INTO UAB on the second floor of [Mervyn H. Sterne Library](#), located on the corner of 9th Avenue and 13th Street South. Drop by the Welcome Desk any time between 8:00 AM and 5:00 PM, or book an appointment online

at <https://www.uab.edu/global/students/international-students/book-an-appointment>.

For additional information, visit <https://www.uab.edu/global/students/international-students/current-students>.

## Multicultural Scholars Program (MSP)

The Multicultural Scholars Program (MSP) provides special resources and services to better prepare students for options after graduation from UAB, including admission to graduate and first-professional schools or initial entrance into a competitive job market. This multi-faceted program focuses on academic excellence and social development. The program takes students from the freshman year of college to graduation and beyond, which exemplifies the program's motto "each one, reach one." All programs and services are designed to help students ease their transition to college, maximize their college experience, achieve their goals, and prepare for the next phase of their lives. For more information, contact the Office of the Vice President for Diversity, Equity and Inclusion in the Administration Building, suite 336, telephone (205) 996-4686, electronic mail [hj@uab.edu](mailto:hj@uab.edu) or read about our programs and services on the Office of Diversity, Equity and Inclusion website, <https://www.uab.edu/dei/cace/campus-engagement/multicultural-scholars-program>

## ONE Card

The UAB ONE Card serves as the official student ID and offers access to a variety of services and resources on and around campus. Students use their ONE Card to enter residence halls and the Campus Recreation Center, attend UAB athletic and cultural events and check out materials from UAB libraries. With their ONE Card, students can enjoy discounts on tickets to a wide variety of on and off-campus events through the UAB Ticket Office. The ONE Card also functions as a debit card, allowing students a convenient and secure way to pay for goods and services at a variety of on campus and local area merchant locations.

General information about the UAB ONE Card, including a list of carding locations, is available at [www.uab.edu/onecard](http://www.uab.edu/onecard).

Questions about ONE Card services can be directed to [onestop@uab.edu](mailto:onestop@uab.edu) or (205) 934-4300.

*Note: A photo ID is required to have your initial ONE Card made.*

The University of Alabama at Birmingham is located in the central business district of Birmingham offering multiple [transportation options](#). On-campus and nearby housing make walking, bicycling, and on-campus transit convenient. Public transit, private transportation providers, and personal automobiles make longer trips accessible. Regional and national transportation options help expand connections to much of the world and planned innovative transportation projects are increasingly making it easier to get to, from, and around UAB regardless of your travel preferences.

## On-Campus Transportation

### Walking and Bicycling

With a relatively flat, compact campus, many popular destinations are convenient to UAB and most trips to and from classes will be made on foot. In the United States, the average pedestrian commute is one-mile with the average bicycle commute approximately three miles. The UAB campus footprint is about 1.5 miles wide. UAB Housing and Residence Life and Off-Campus Student Services are able to assist students in identifying nearby on- and off-campus housing options. Apps such

as [Rave Guardian](#) and other services below help make walking and bicycling easier and safer. Students and employees wishing to [register their bicycle](#) for free will also receive a bicycle helmet and u-lock.

### Blazer Express

Blazer Express provides transit service throughout the University campus. With a valid UAB One Card, students, employees, and authorized visitors can enjoy fare-free bus transportation along designated routes. Buses are ADA-accessible and can seat up to 35 riders. Bus service is provided Monday-Friday from 5:30 a.m.-12:00 a.m. [Routes, stops, and real-time location of buses](#) may be found online at through the [DoubleMap](#) smartphone app.

### Blaze Ride and Safety Escort

For trips within the UAB footprint, Blaze Ride offers daytime transportation for students and employees with limited mobility, while Safety Escort provides late-night service to all students and employees. [Safety Escort](#) service is available seven days a week from 9:00 p.m.-5:30 a.m. by calling (205) 934-8772. Access to [Blaze Ride](#) is limited to students gaining eligibility through Disability Support Services and employees registering with the AWARE Program. Blaze Ride is available from 7:30 a.m.-7:30 p.m. by calling (205) 975-7433. Rides for both services may also be requested through the [TapRide](#) smartphone app.

## Public Transit and Other Providers

Public transit is provided by MAX Transit, Birmingham On-Demand, and CommuteSmart. Other transportation providers include micromobility, ride-hailing and carpool ride-matching apps, while future transportation innovations such as bus-rapid transit are planned to launch.

### MAX Transit

Local public bus service is provided by [MAX Transit](#). Discounted passes are available from the UAB One Stop with over thirty bus routes serving the metro Birmingham area. Real-time bus tracking is available from myStop Mobile app with trip planning available from most major mapping apps.

### Birmingham On-Demand

The City of Birmingham has partnered with Via to provide the shuttle van service, [Birmingham On-Demand](#). These trips are similar to other ride-hailing apps except using branded vans, paid drivers and with lower-priced trip costs and a more limited service area.

### CommuteSmart

CommuteSmart, a program of the Regional Planning Commission, provides a subsidy for vanpooling and incentives to anyone choosing to walk, bicycle, take the bus, carpool, or work from home. Carpool participants can receive online ride-matching and all participants must log their commutes to receive incentives. Visit [CommuteSmart](#) for more information about vanpooling, ride-matching, and incentives.

### Micromobility (Bicycle & Scooter Sharing)

Shared electric bicycles and scooters, known as [micromobility](#), are provided by multiple vendors for on- and off-campus trips. These vehicles are best for short trips and may be rented through smartphone apps. Users should familiarize themselves on where they are permitted and how to safely operate them around UAB. Information on using the shared micromobility vehicles is available through the UAB Transportation [website](#), which includes a tool to report their unsafe usage or improper parking.

## Regional/National Transportation

The City of Birmingham is served by the [Birmingham-Shuttlesworth International Airport](#) (BHM) with direct and indirect flights connecting to most domestic and international destinations. Ride-hailing and taxi apps are available for transportation to and from BHM. Groome Transportation offers airport shuttle service picking up at Blazer Hall and dropping off at Hartsfield-Jackson Atlanta International Airport (ATL). Other regional transportation providers include Amtrak train service and bus service from Greyhound and Megabus, all accessible from the Birmingham Intermodal Facility.

## Other Providers and Upcoming Innovative Options

Innovative transportation options are consistently launching in the city. Ride-hailing and similar taxi services operate in and around the Birmingham area. Bus Rapid Transit (BRT) is due to launch in 2022 under the name, [Birmingham Xpress](#). BRT offers the comfort of light rail train service at a lower cost. Partially running on dedicated lanes with signal priority, BRT is expected to make traveling across the city faster and more efficient.

## Parking

For those choosing to bring a vehicle, a permit is required to access student parking. Permits are purchased through the [UAB Transportation website](#) with a limited number available each semester. Incoming students may purchase permits as soon as they have been accepted by UAB and created a Blazer ID. Students unable to purchase a permit will need to develop their own transportation arrangements from the options above or other parking providers around town. Once purchased, permits are mailed to the address provided by the student. As such, it is important to regularly update your contact information in the parking system. Parking spaces are available on a first-come, first-served basis to vehicles with the proper permit displayed. Designated spaces are offered for motorcycles, carpooling, and ADA-accessible parking. Students requiring temporary or permanent ADA accessible parking must provide state-issued documentation in the student's name. A full list of [parking policies](#) and regulations are available on our website. Please note that [metered street spaces](#) are operated and enforced by the City of Birmingham.

## Motorist Assistance (MARS)

[Motorist Assistance Roadside Service](#) (MARS) is a free service available to all visitors, students, and employees parking on campus who need help with a dead battery, air in a flat tire, keys locked in a car, or empty gas tank. The service is available weekdays 7:30 a.m. - 4:30 p.m., except holidays. For help, call 205-975-6277.

## UAB Transportation Contact

608 8th Street South • Telephone (205) 934-3513 • E-mail: [transportation@uab.edu](mailto:transportation@uab.edu) • Website: <http://www.uab.edu/transportation/>

## Student Health & Wellness Center

The Student Health & Wellness Center (SHWC) provides a comprehensive and integrated program of services to meet the medical, counseling and wellness needs of UAB's undergraduate, graduate and professional students. Creating a healthy campus and promoting student wellness are essential to supporting student learning and success. The SHWC is staffed by a group of committed medical providers, counselors, nurses, clinicians, wellness promotion professionals, and support staff who embrace the opportunity to meet your wellness, medical

and counseling needs. Those services and resources are available in the state-of-the-art Student Health & Wellness Center located at 1714 9<sup>th</sup> Ave. South (LRC building), Birmingham, AL 35294-1270. Blazer Express has convenient drop-off and pick-up locations near the Student Health & Wellness Center. Patient and client parking is available at the South entrance to the building.

## Health Services

Student Health Services offers comprehensive primary care services including acute and chronic care, women's health, a Registered Dietitian, mental health evaluation and treatment with an on-site psychiatrist and mental health Nurse Practitioner, immunizations, allergy immunotherapy, and treatment of minor emergencies. SHS provides COVID-19 vaccines, both Moderna and Pfizer and COVID-19 testing, symptomatic and asymptomatic, at no cost to the student. A dedicated Sports Medicine and Sexual Health Clinic and Eye Care Clinic are also available, as well as Certified Athletic Trainers located in the UAB Recreational Center. Medical Clearance/Immunizations and Insurance Department are also available to assist students. On-site lab and x-ray services are available. After-hour's consultation is provided through provider on call coverage, 24 hours a day/7 days a week/365 days a year. To ensure convenience and access, Student Health Services operates under an open-access appointment scheduling system. Go to [www.uab.edu/students/health](http://www.uab.edu/students/health) for more information or to schedule an appointment through our [patient portal](#). You may also call (205) 934-3580 to schedule an appointment or for general information. All currently enrolled UAB undergraduate and graduate students are eligible for services at a low to no out-of-pocket cost under the student benefit. Many carriers have agreed to waive copays for these services. A more complete listing of low to no out-of-pocket cost services and those services available, but at additional cost, can be accessed at <http://www.uab.edu/students/health/health-services>.

## Counseling Services

Counseling Services assists in developing students' potential in physical, academic, spiritual, psychosocial, emotional, and vocational areas. Common presenting concerns include depression, anxiety, grief, relationship concerns, stress management, eating disorders, alcohol or substance abuse concerns, identity, conflict, gender transition and trauma. In addition to individual and couples counseling, services include wellness programs, group opportunities, and educational resources. Confidential counseling services are available to all currently enrolled UAB students at no cost. For more information or to schedule an appointment call (205) 934-5816 or visit <http://www.uab.edu/students/counseling/>.

## Wellness Promotion

Wellness Promotion provides students with programs, education, and resources to promote personal wellness in the areas of interpersonal violence prevention; alcohol, tobacco, and other drug misuse prevention; and self-care. Wellness Promotion offers honest conversations, provides accurate information, and develops skill-building activities to help students navigate decisions outside the classroom that can impact their personal and academic success.

Wellness Promotion also supports the Promoters of Wellness peer health education program. Promoters of Wellness (POW) are undergraduate and graduate students who are nationally Certified Peer Educators and work as student health educators. POW peer health educators seek to positively influence the campus by providing workshops, outreach and events. They also serve as a catalyst for healthy norms within the student

campus culture. Additional information about the POW program can be found at [www.uab.edu/students/wellness](http://www.uab.edu/students/wellness)

You can get involved with Wellness Promotion and become eligible to apply for a POW position by taking CHHS 426: Wellness Promotion Peer Education. This 3-credit hour course provides the national Certified Peer Educator credential, focuses on participant self-care, and teaches in depth information on topics that are relevant to college students.

### Student Insurance Coverage (Mandatory and Optional)

All full time students enrolled in a degree seeking program have a mandatory requirement to have major medical health insurance to ensure coverage for hospital, emergency room, specialty physician care and diagnostic testing. For more information on the mandatory insurance coverage requirement go to the SHWC website <https://www.uab.edu/students/health/insurance-waivers>.

Information regarding the Student Health Insurance Plan for full-time registered undergraduate students taking a minimum of **9 credit** hours and full-time graduate students taking a minimum of **6 credit** hours can be found at <https://www.uab.edu/students/health/insurance-waivers/insurance-requirement-overview>. All students enrolled in a **clinical program** that has a mandatory health insurance requirement will continue to have the same requirement regardless of the number of credit hour of enrollment.

To learn more about services available through the Student Health and Wellness Center, please visit any of the following website.

Student Health Services <http://www.uab.edu/students/health/>

Student Counseling Services <http://www.uab.edu/students/counseling/>

Wellness Promotion <http://www.uab.edu/students/wellness/>

You can also contact us at one of the following phone numbers for assistance.

Call **Health Services** at (205) 934-3580 or schedule/cancel an appointment through the [patient portal](#).

Call **Counseling Services** at (205) 934-5816 for questions or to schedule an appointment. Appointments can be canceled through the [patient portal](#). Appointments cannot be scheduled through the patient portal.

Call **Wellness Promotion** at (205) 996-0834 for appointments. *Office hours vary for this department.*

## Office Hours

Day	Hours
Monday - Friday	8:00 a.m.- 5:00 p.m.

## TRIO Academic Services

Fully funded by the U.S. Department of Education, TRIO Academic Services (Student Support Services) offers assistance to UAB's degree-seeking undergraduate students who are either first generation college students (neither parent has a bachelor's degree), are limited-income, or have a documented disability. The programs seek to increase eligible students' chances of being retained and graduating from UAB in four to six years. Students can participate in the program from their entrance

to UAB as freshmen or sophomores until graduation. The two programs Student Support Services programs described here are Classic SSS and STEM-H (Science, Technology, Engineering, Math and Healthcare majors).

In both programs, priority acceptance is given to first and second year students who have been accepted for enrollment or who are attending UAB. Students are accepted into the program in the fall and spring (if needed) semesters. New Participant Applications are available from April 1<sup>st</sup> to the first week of courses in the fall semester of each year. An application can be downloaded by clicking on the link below or can be picked up from our office during our recruitment period. Our office is located at Hill Student Center, Suite 315. Applications are also emailed to TRIO eligible students accepted to UAB between April 1<sup>st</sup> and July 1<sup>st</sup>. **The application deadline for each year is always reflected on the application. Students will need to complete the appropriate application, based on major.**

### Classic SSS and STEM-H participants are the only students on UAB's campus who receive a UAB funded incentive stipend.

This stipend increases yearly. Student who enter the TRIO program as freshmen, remain in good standing, and graduate in four years, will be eligible for the largest amount of money. Students are required to be full time and complete a minimum of 27 semester hours with at least a 2.0 grade point average each academic year. Required developmental courses are counted in these 27 semester hours. Students must maintain eligibility for financial aid if needed and participate fully in needed program services. Intensive services are provided during the freshman and sophomore years; fewer services are provided during the junior and senior years.

### What are the benefits of being in the Classic SSS or TRIO STEM-H Program?

- Individualized Guidance: One-on-one assistance to help students make a smooth transition to college, develop goals and create a graduation plan.
- Academic Support: Weekly FREE tutoring sessions and workshops.
- Workshops: Sessions on time management, learning styles, résumé writing etc.
- Financial Advising: Assistance in applying for financial aid (FAFSA), scholarship searches, and financial counseling including help in creating a budget, managing credit, debt and personal finances.
- Career and Academic Guidance: Success Coaching and assistance with academics, including career and educational planning, mentoring, graduate school tours, and career development.
- Resources: Access to textbooks, calculators, reference materials, computers, FREE printing, graduate school prep tests and quiet study space.
- Money: Grant-Aid and UAB Stipend.
- Cultural Events: Free cultural events and trips that will broaden horizons and enrich life experiences. Also, Classic SSS and STEM-H provides opportunities to study abroad.
- Campus Connections: A place to feel connected with others and UAB.

### DOWNLOAD THE APPROPRIATE TRIO APPLICATION TODAY

### Who can participate in a TRIO program?

Students who are citizens or nationals of the United States

Students who have been accepted or who are enrolled at UAB

Students who have academic need

Students who:

- are first-generation college students (*neither parent completed a 4 year college degree*),
- have a documented physical, psychological or learning disability (*that may affect their role as a college student*), and/or
- have a limited family income (*determined by taxable income level and family size*)

**How do I find out more information?** Contact us at [trioacademicserv@uab.edu](mailto:trioacademicserv@uab.edu) or 205-934-2729 or visit us in the Hill Student Center, Suite 315.

## Office of Education Abroad

[Contact Education Abroad](#)

### Mission

The mission of the UAB Office of Education Abroad (UABEA) is to administer, establish, and send UAB students on high-quality education abroad opportunities to prepare them for success in the globalized world.

### Education Abroad

The Office of Education Abroad is a member of the Forum for Education Abroad (Forum), Institute of International Education, and Association of International Educators (NAFSA). The Office of Education Abroad strives to meet the Forum's Standards of Good Practice for Education Abroad, 6th Edition and Code of Ethics.

UAB Education Abroad administers, establishes, and sends UAB students on high-quality education abroad opportunities to prepare them for success in the globalized world.

Pursuant to our mission, UABEA engages in the activities described below.

- **Study Abroad:** Take courses for which academic credit is received and transferred to UAB on our supported study abroad programs. This includes academic credit for student exchanges, UAB affiliate programs, and faculty-led programs that feature traditional classes, research, service learning, internships, volunteerism, shadowing, clinical rotation, and observations.
- **International Internships, Research & Service-Learning:** Take courses for which academic credit is received and transferred to UAB on our supported study abroad programs. These opportunities are designed to enhance your resume with hands-on experiential learning abroad and offer credit-bearing outcomes.
- **Virtual Experiences:** UAB students may participate in a variety of virtual/remote learning experiences, which vary from group internships, part/full time internships, and remote academic courses. Explore these opportunities to immerse yourself in a virtual remote experience while earning academic credit at UAB.
- **Student Organizations Abroad:** Travel abroad as part of a UAB student organization; including Outreach Abroad, Outdoor Pursuits,

artistic performances, athletic activities, or other student organization travel. Our office can help students register travel with the university, obtain the necessary education abroad insurance, and prepare for travel.

- **Student Conference Travel Abroad:** Present at or attend a conference that takes place abroad as a UAB representative. Our office can help students register travel with the university, obtain the necessary education abroad insurance, and prepare for travel.
- **Passport Office:** Apply for a passport conveniently on campus. As an official U.S. Department of State Passport Acceptance Facility, we are happy to accept passport applications for students, employees, and members of the community. Our passport service is open to the public.

### Eligibility

To be eligible to apply for our programs, one must:

1. be an enrolled UAB student;
2. be 19 years of age or older (or have parental permission); and
3. be in good academic, disciplinary, and financial standing with UAB.

Some programs have additional eligibility requirements, such as GPA minima, listed on the individual program webpages.

Students may petition to the Director of Education Abroad for a possible exception to the eligibility criteria.

### Grade Posting

All grades earned while abroad will be posted to the student's UAB transcript and included in GPA calculations. Letter grades are used rather than pass/fail marks. In all cases, students must participate fully in all course activities and meet all stated course requirements. Auditing of any course abroad is not permitted. The process of grade posting varies depending on the program type:

### UAB Exchanges

Students earn direct UAB course credit. Courses taken on student exchanges will begin with IN ("International" indicating that the course took place at an international UAB exchange location) and a two-letter subject code such as ME (Mechanical Engineering), GN (German), SP (Spanish), etc. to indicate the subject that was studied. Additionally, each of the courses are numbered. All courses are variable in the number of credit hours students can receive based upon their enrollment at the host university. INxx courses are repeatable. INxx courses include:

Subject	Description
INAB	Study Abroad Arabic
INAH	Study Abroad Art History
INAN	Study Abroad Anthropology
INAR	Study Abroad Art Studio
INAT	Study Abroad Astronomy
INBE	Study Abroad Biomedical Engineering
INBU	Study Abroad Business
INBY	Study Abroad Biology
INCH	Study Abroad Chinese
INCM	Study Abroad Communication Studies

INCS	Study Abroad Computer & Information Science
INCY	Study Abroad Chemistry
INDC	Study Abroad Digital Community
INEC	Study Abroad Economics
INED	Study Abroad Education
INEE	Study Abroad Electrical Engineering
INEH	Study Abroad English
INES	Study Abroad Earth Science
INEV	Study Abroad Environmental Science
INFN	Study Abroad Finance
INFR	Study Abroad French
INGN	Study Abroad German
INHYP	Study Abroad History
INIS	Study Abroad International Studies
INIT	Study Abroad Italian
INJP	Study Abroad Japanese
INJS	Study Abroad Justice Sciences
INMA	Study Abroad Mathematics
INME	Study Abroad Mechanical Engineering
INMG	Study Abroad Management
INMK	Study Abroad Marketing
INMU	Study Abroad Music
INPC	Study Abroad Physics
INPE	Study Abroad Physical Education
INPH	Study Abroad Philosophy
INPS	Study Abroad Political Science
INPY	Study Abroad Psychology
INSC	Study Abroad Sociology
INSP	Study Abroad Spanish
INTH	Study Abroad Theatre
INTL	Study Abroad Special Topics

For all other programs, visit [UAB Education Abroad's website](#) for details.

## Residency

Courses taken on UAB Exchanges, USAC programs, ISA programs, CISAbroad programs, U.S. - UK Fulbright Commission Summer Institutes, U.S. Department of State Critical Language Scholarship Program, Clinton Scholarship at the American University in Dubai, UAB Faculty-Led Programs, and UAB Internship/Practicum Courses Abroad will satisfy the UAB residency requirement. Students must contact UABEA to ensure their Graduation Planning System records are noted accordingly.

## Changes of Grades

Requests for grade changes to UABEA must be accompanied by official documentation sent directly from the host university.

## UAB Testing Services

UAB Testing Services provides testing services for UAB students, prospective students, and the community at large. Assessments include,

but are not limited to, MAT, LSAT, PRAXIS, DSST, and CLEP. For more information, visit [www.uab.edu/testing](http://www.uab.edu/testing).

## UAB Ticket Office

The UAB Ticket Office is an excellent source for discounted tickets to local and regional attractions along with on-campus events. Discounted tickets are available for AMC and Regal Cinemas, and to most major theme parks across the southeast, including Six Flags over Georgia, Birmingham Zoo and McWane Science Center. First-class postage stamps are also available for purchase (UAB internal requisitions are accepted).

For additional information, contact the UAB Ticket Office, located inside One Stop Student Services in Room 103 of the Hill Student Center, 1400 University Blvd., Birmingham, AL 35294-1150 Telephone: (205) 934-8001.

Visit our website <https://www.uab.edu/students/one-stop/ticket-office>

## Veterans Services

UAB Veterans Services (UAB-VS) assists veterans, reservists, guardsmen, and dependents of disabled or deceased veterans to access their educational benefits. UAB-VS serves as a liaison between the student and the local and federal agencies, including the State Department of Education, Department of Defense, and the Department of Veterans Affairs. The office staff assist students in applying for educational benefits, securing tutorial assistance and obtaining veterans work-study positions. For further information, contact UAB Veterans Services, Hill Student Center, Room 313, 1400 University Blvd., Telephone (205) 996-0404 or read about our programs and services at [www.uab.edu/students/veterans](http://www.uab.edu/students/veterans)

## VA Complaint Policy

Any VA Complaint against the school should be routed through the VA GI Bill Feedback System by going to the following link: <http://www.benefits.va.gov/GIBILL/Feedback.asp>. The VA will then follow up through the appropriate channels to investigate the complaint and resolve it satisfactorily.

## Choice Act

The University of Alabama at Birmingham in the State of Alabama complies with section 702 - Tuition under Veteran's Access Choice and Accountability Act of 2015, providing for resident (in-state) tuition and fees for the following:

- A Veteran using educational assistance under either chapter 30 (Montgomery G.I. Bill – Active Duty Program) or chapter 33 (Post 9/11 G.I. Bill), of title 38, United States Code, who lives in the State of Alabama while attending a school located in the State of Alabama (regardless of his/her formal State of residence) and enrolls in the school within three years of discharge from a period of active duty service;
- Anyone using transferred Post – 9/11 G.I. Bill benefits (38 U.S.C. § 3319) who lives in the State of Alabama while attending a school located in the State of Alabama (regardless of his/her formal State of residence) and enrolls in the school within three years of the transferor's discharge from a period of active duty service;
- A spouse or child using benefits under the Marine Gunnery Sergeant John David Fry Scholarship (38 U.S.C. § 3311 (b) (9)) who lives in the State of Alabama while attending a school located in the State of

Alabama (regardless of his/her formal State of residence) and enrolls in the school within three years of the Service member's death in the line of duty following a period of active duty service.

- Anyone described above while he or she remains continuously enrolled (other than during regularly scheduled breaks between courses, semesters, or terms) at the same school. The person so described must have enrolled in the school prior to the expiration of the three-year period following discharge or death described above and must be using educational benefits under either chapter 30 or chapter 33, of title 38, United States code.

## Veteran Student Resident Tuition Rates

The University of Alabama at Birmingham complies with veteran student regulations regarding tuition rates. The following individuals shall be charged a rate of tuition not to exceed the in-state rate for tuition and fees purposes:

- A Veteran using educational assistance under either chapter 30 (Montgomery G.I. Bill – Active Duty Program) or chapter 33 (Post-9/11 G.I. Bill), of title 38, United States Code, who lives in Alabama while attending a school located in Alabama (regardless of his/her formal State of residence) and enrolls in the school within three years of discharge or release from a period of active duty service of 90 days or more.
- Anyone using transferred Post-9/11 GI Bill benefits (38 U.S.C. § 3319) who lives in Alabama while attending a school located in Alabama (regardless of his/her formal State of residence) and enrolls in the school within three years of the transferor's discharge or release from a period of active duty service of 90 days or more.
- Anyone described above while he or she remains continuously enrolled (other than during regularly scheduled breaks between courses, semesters, or terms) at the same school. The person so described must have enrolled in the school prior to the expiration of the three year period following discharge or release as described above and must be using educational benefits under either chapter 30 or chapter 33, of title 38, United States Code.
- Anyone using benefits under the Marine Gunnery Sergeant John David Fry Scholarship (38 U.S.C. § 3311(b)(9)) who lives in Alabama while attending a school located in Alabama (regardless of his/her formal State of residence).
- Anyone using transferred Post-9/11 G.I. Bill benefits (38 U.S.C. § 3319) who lives in Alabama while attending a school located in Alabama (regardless of his/her formal state of residence) and the transferor is a member of the uniformed service who is serving on active duty.
- Anyone using educational assistance under chapter 31, Vocational Rehabilitation/Employment (VR&E), also be charged the resident rate. Effective for courses and terms beginning **after March 1, 2019**, a public institution of higher learning must charge the resident rate to chapter 31 participants, as well as the other categories of individuals described above. When an institution charges these individuals more than the rate for resident students, VA is required to disapprove programs of education sponsored by VA.
- The policy shall be read to be amended as necessary to be compliant with the requirements of 38 U.S.C. 3679(c) as amended.

## V.A. Education Benefits

*Effective 8/1/2019 - (PL 115-407 Sec. 103)*

Students utilizing VA education benefits shall not be charged a penalty, including assessment of late fees, denial of access to classes, libraries or other institutional facilities, or be required to borrow additional funds because of the individual's inability to meet their financial obligations due to the delayed disbursement of a payment to be provided by the Department of Veterans Affairs.

## UAB Core Curriculum

The UAB Core Curriculum provides students with the foundation for later academic and personal success. It is designed to deliver six competencies that make up the Shared Vision for a UAB Graduate. These competencies both equip students for more advanced study in their chosen majors and help them develop a broader and more complex understanding of the world.

As part of its new strategic plan, [Forging the Future](#), UAB is currently reexamining and redesigning its Core Curriculum. For more details, visit the [Signature Core Curriculum](#) page.

## Core Curriculum Competencies

Sometimes called general education courses, the core curriculum is a selection of required and elective courses that together promote six competencies which build the foundation for attainment of the Shared Vision for a UAB Graduate.

A graduating student should be able to demonstrate the following core competencies:

- Reading and writing skills sufficient to ensure access to information and ideas in the institution's curriculum as well as in society at large.
- An ability to make aesthetic judgments in the arts, literature, and humanities based on relevant historical, social, or philosophical contexts.
- The ability to collect and evaluate information within the context of the scientific method and to use this ability to further one's understanding of the natural world.
- The ability to apply mathematical skills and quantitative reasoning to solve problems and interpret information.
- The ability to reason and evaluate information within the context of the social and behavioral sciences and to use this ability to further one's understanding of the social, economic, and political environment.
- Knowledge of contemporary and/or historical issues.

## Who is required to fulfill the Core Curriculum Requirements?

- First time college freshmen who have no credit for college work (excepting credit earned while still enrolled in high school).
- Those returning UAB students or transfer students who are enrolling as a degree student after an absence from college of more than 12 months.
- Students who enrolled for the first time in any institution of higher education in Fall 1998 or later and who subsequently transferred to the University of Alabama at Birmingham.

Any student with a valid articulation contract from an Alabama two-year school will be able to enroll under the terms of the contract. Contracts prior to Fall 1998 must have been submitted to UAB's Office of Admission according to the procedures in place at the time. Since Fall Term 2000,

all undergraduate students entering UAB have been subject to the 1998 Core Curriculum requirements.

## Can One Satisfy Core Curriculum Requirements with Alternative Credit?

Students may satisfy certain Core Curriculum requirements by presenting credit earned through the following: Advanced Placement (AP), International Baccalaureate (IB), College Level Examination Program (CLEP), and Credit by Examination (CBE). Students with AP, IB, or CLEP credit must have official documents sent to the Office of Enrollment Management, ATTN: Alternative Credit, 1605 Building, 1605 11th Avenue South, (205) 934-8228 for evaluation and acceptance before credit can be posted on the UAB transcript.

## What Courses Satisfy Core Curriculum Requirements?

Core curriculum requirements are divided into four areas, and all students must fulfill requirements in each area. See Collat School of Business and School of Engineering sections of this catalog for their specific variations. Majors may also have specific requirements in each area, as indicated in this catalog.

[Refer to Core Curriculum](#)

## The UAB Core Curriculum Matrix

The matrix below identifies how specific core curriculum courses introduce or reinforce the desired core competencies which build the foundation for attainment of the Shared Vision for a UAB Graduate. Faculty who teach courses in the disciplines have identified these core competencies as essential for success in upper-division major courses.

### Core Competency

*Demonstrate reading and writing skills sufficient to ensure access to information and ideas in the institution's curriculum, as well as in society at large.*

Requirements	Hours
<b>Core curriculum courses in which introduced:</b>	
CMST 101 Public Speaking	3
BY 123 Introductory Biology I	4
BY 124 Introductory Biology II	4
EH 101 English Composition I	3
EH 102 English Composition II	3
EH 216 Introduction to Literature	3
FR 101 Introductory French I	3
GN 101 Introductory German I	3
MA 126 Calculus II	4
MA 252 Introduction to Differential Equations	3
PHS 101 Physical Science	4
SPA 101 Introductory Spanish I	3
<b>Core curriculum courses in which practiced and reinforced:</b>	
AAS 200 Introduction to African-American Studies	3
ARH 204 Early Modern-Contemporary Art	3
EH 102 English Composition II	3
EH 217 World Literature I: Before 1660	3
EH 218 World Literature II: 1660-Present	3
EH 221 British and Irish Literature I: Before 1800	3

EH 222	British and Irish Literature II: 1800-Present	3
FR 102	Introductory French II	3
FR 201	Intermediate French I	3
FR 202	Intermediate French II	3
GN 102	Introductory German II	3
GN 201	Intermediate German I	3
GN 202	Intermediate German II	3
GN 204	Readings in German Literature	3
PHL 100	Introduction to Philosophy	3
PHL 115	Contemporary Moral Issues	3
PHL 116	Bioethics	3
PHL 120	Practical Reasoning	3
PHL 204	Philosophy and Christianity	3
SPA 102	Introductory Spanish II	3
SPA 201	Intermediate Spanish I	3
SPA 202	Intermediate Spanish II	3
THR 100	Introduction to the Theatre	3
THR 200	Plays on Film	3

## Core Competency

*Demonstrate an ability to make aesthetic judgments in the arts, literature, and humanities based on relevant historical, social, or philosophical contexts.*

Requirements	Hours
<b>Core curriculum courses in which introduced:</b>	
ARH 101 The Art Experience	3
EH 216 Introduction to Literature	3
MU 120 Music Appreciation	3
PHL 100 Introduction to Philosophy	3
PHL 115 Contemporary Moral Issues	3
PHL 120 Practical Reasoning	3
PHL 204 Philosophy and Christianity	3
THR 100 Introduction to the Theatre	3
THR 105 Introduction to Dance	3
<b>Core curriculum courses in which practiced and reinforced:</b>	
ARH 203 Ancient and Medieval Art	3
ARH 204 Early Modern-Contemporary Art	3
ARH 205 Survey of African Art	3
THR 200 Plays on Film	3
EH 217 World Literature I: Before 1660	3
EH 218 World Literature II: 1660-Present	3
EH 221 British and Irish Literature I: Before 1800	3
EH 222 British and Irish Literature II: 1800-Present	3
EH 223 American Literature I: Before 1865	3
EH 224 American Literature II: 1865-Present	3

## Core Competency

*Demonstrate the ability to collect and evaluate information within the context of the scientific method and to use this ability to further one's understanding of the natural world.*

Requirements	Hours
<b>Core curriculum courses in which introduced:</b>	
AST 101 Astronomy of the Universe	3
AST 102 Astronomy of Stellar Systems	3
AST 103 Astronomy of the Solar System	3

AST 105	Extraterrestrial Life	3
BY 101	Topics in Contemporary Biology	3
CH 105	Introductory Chemistry I	3
CH 107	Introductory Chemistry II	3
CH 115	General Chemistry I	3
CH 117	General Chemistry II	3
PH 201	College Physics I	4
PH 221	General Physics I	4
PHS 101	Physical Science	4
<b>Core curriculum courses in which practiced and reinforced:</b>		
AST 111	Astronomy of the Universe Laboratory	1
AST 112	Astronomy of Stellar Systems Laboratory	1
AST 113	Astronomy of the Solar Systems Laboratory	1
AST 115	Extraterrestrial Life Laboratory	1
BY 101	Topics in Contemporary Biology	3
BY 102	Topics Contemporary Biology Laboratory	1
BY 112	Ext Topics Contemporary Biology Laboratory	1
BY 123	Introductory Biology I	4
BY 124	Introductory Biology II	4
CH 105	Introductory Chemistry I	3
CH 105	Introductory Chemistry I	3
CH 107	Introductory Chemistry II	3
CH 108	Introductory Chemistry II Laboratory	1
CH 115	General Chemistry I	3
CH 116	General Chemistry I Laboratory	1
CH 117	General Chemistry II	3
CH 118	General Chemistry II Laboratory	1
PH 201	College Physics I	4
PH 202	College Physics II	4
PH 221	General Physics I	4
PH 222	General Physics II	4

## Core Competency

*Demonstrate the ability to apply mathematical skills and quantitative reasoning to solve problems and interpret information.*

Requirements		Hours
<b>Core curriculum courses in which introduced:</b>		
FR 101	Introductory French I	3
MA 105	Pre-Calculus Algebra	3
MA 106	Pre-Calculus Trigonometry	3
MA 107	Pre-Calculus Algebra and Trigonometry	4
MA 110	Finite Mathematics	3
PHL 120	Practical Reasoning	3
PHS 101	Physical Science	4
SPA 201	Intermediate Spanish I	3
<b>Core curriculum courses in which practiced and reinforced:</b>		
MA 125	Calculus I	4
MA 126	Calculus II	4
MA 227	Calculus III	4
MA 252	Introduction to Differential Equations	3
MA 260	Introduction to Linear Algebra	3
PH 201	College Physics I	4
PH 202	College Physics II	4
PH 221	General Physics I	4
PH 222	General Physics II	4

## Core Competency

*Demonstrate the ability to reason and evaluate information within the context of the social and behavioral sciences and to use this ability to further one's understanding of the social, economic, and political environment.*

Requirements		Hours
<b>Core curriculum courses in which introduced:</b>		
AAS 200	Introduction to African-American Studies	3
ANTH 101	Introduction to Cultural Anthropology	3
ANTH 106	Introductory Archaeology	3
BY 108	Human Population and the Earth's Environment	3
BY 109	Laboratory in Environmental Science	1
ITS 101	Introduction to International Studies	3
PHL 100	Introduction to Philosophy	3
PHL 115	Contemporary Moral Issues	3
PHL 116	Bioethics	3
PHL 120	Practical Reasoning	3
PHL 125	Introduction to Ethics	3
PSC 101	Foundations of American Government	3
PSC 102	Foundations of Comparative Politics	3
PY 101	Introduction to Psychology	3
SOC 100	Introduction to Sociology	3
WS 100	Introduction to Women's and Gender Studies	3
<b>Core curriculum courses in which practiced and reinforced:</b>		
ANTH 120	Language and Culture	3
EC 210	Principles of Microeconomics	3
EC 211	Principles of Macroeconomics	3
HY 102	Western Civilization II	3
HY 105	World History 1600 to the Present	3
HY 121	The United States Since 1877	3
PHL 203	Philosophy of Religion	3
PSC 221	American State and Local Government	3
PUH 202	Introduction to Global Health	3
PY 212	Developmental Psychology	3
SOC 245	Contemporary Social Problems	3

## Core Competency

*Demonstrate knowledge of contemporary and/or historical issues.*

Requirements		Hours
<b>Core curriculum courses in which introduced:</b>		
AAS 200	Introduction to African-American Studies	3
ANTH 101	Introduction to Cultural Anthropology	3
ANTH 106	Introductory Archaeology	3
ANTH 120	Language and Culture	3
CMST 105	Introduction to Human Communication	3
BY 108	Human Population and the Earth's Environment	3
BY 109	Laboratory in Environmental Science	1
HY 101	Western Civilization I	3
HY 102	Western Civilization II	3
HY 104	World History to 1600	3
HY 105	World History 1600 to the Present	3
HY 120	The United States To 1877	3
HY 121	The United States Since 1877	3
ITS 101	Introduction to International Studies	3
PHL 100	Introduction to Philosophy	3

PHL 115	Contemporary Moral Issues	3
PHL 116	Bioethics	3
PHL 120	Practical Reasoning	3
PHL 125	Introduction to Ethics	3
PUH 202	Introduction to Global Health	3
PY 101	Introduction to Psychology	3
SOC 100	Introduction to Sociology	3
WS 100	Introduction to Women's and Gender Studies	3

**Core curriculum courses in which practiced and reinforced:**

EH 217	World Literature I: Before 1660	3
EH 218	World Literature II: 1660-Present	3
EH 221	British and Irish Literature I: Before 1800	3
EH 223	American Literature I: Before 1865	3
EH 224	American Literature II: 1865-Present	3
PHL 204	Philosophy and Christianity	3
PSC 221	American State and Local Government	3
PY 212	Developmental Psychology	3
SOC 245	Contemporary Social Problems	3

## Shared Vision for a UAB Graduate

The Shared Vision for a UAB Graduate reflects high expectations in the areas of Communication, Knowledge, Problem-Solving, and Citizenship.

### Communication - A UAB graduate

- Participates effectively in the world of ideas and information.
- Reads with comprehension, attention to detail, and an awareness of context, tone, and interconnections with other texts, life experiences, and public events.
- Writes correctly and effectively in response to specific needs and for diverse audiences and contexts.
- Speaks effectively as determined by audience, setting, and circumstances.
- Uses information technology effectively for professional communication.

### Knowledge - A UAB graduate

- Possesses a depth and breadth of knowledge sufficient for informed decision-making.
- Demonstrates substantial knowledge in a disciplinary major.
- Differentiates among methodologies, major ideas and figures, and specific information or issues relevant to the sciences and humanities.
- Uses effectively the technology appropriate for one's discipline.

### Problem-Solving - A UAB graduate

- Collects and evaluates data and analyzes complex issues, using appropriate methods.
- Demonstrates critical thinking skills by synthesizing information, making reasonable arguments, and arriving at logical conclusions.
- Demonstrates quantitative reasoning by interpreting data in multiple formats and applying quantitative methods to solve complex problems.
- Demonstrates the ability to achieve goals through collaboration.

### Citizenship - A UAB graduate

- Is aware of contemporary issues and prepared to engage responsibly in the community.
- Understands civic responsibility and engages in informed decision-making with respect to social and political issues.
- Recognizes that values and ethics are integral to one's academic, personal, and professional life.
- Respects the significant role of diversity in the contemporary world.

The Shared Vision for a UAB Graduate is achieved beginning with the first year experience and the core curriculum; continues with major courses, elective courses, and perhaps courses required for a minor or certificate; and culminates in a capstone experience.

## UAB Sustainability

UAB Sustainability understands that our future belongs to the present. We focus on sustainability and the triple bottom line theory to empower our leaders to make data-driven decisions. We partner across our institution to ensure the decisions we make now will have a positive impact on the quality of life of the UAB community for generations to come.

UAB has a special responsibility to act as a driver of sustainable solutions in our region and beyond. Our urban campus is a living laboratory, because of its:

- more than 200 classroom, office, research, and hospital buildings,
- space occupying more than 100 city blocks,
- role as one of the top employers in the region,
- role as the largest electricity user in the state, and
- responsibility as the single-biggest contributor to Birmingham's economy

## Sustainability Courses at UAB

UAB's expanding undergraduate sustainability curriculum engages academic disciplines and multidisciplinary programs to prepare our students to become environmentally and socially responsible global citizens. Each term UAB offers courses with content related to sustainability,

### Anthropology

[ANTH 104](#) Introduction to Peace Studies (3 s.h.)

[ANTH 200](#) Applied Anthropology

[ANTH 351](#) Anthropology of Human Rights

[ANTH 360](#) Ecological Anthropology

[ANTH 404](#) Human Rights, Peace, and Justice

[ANTH 413](#) Peace & Environmental Sustainability

[ANTH 437](#) Real World Remote Sensing Applications

[ANTH 483](#) Intern in Peace, Justice and Environmental Study

[ANTH 504](#) Human Rights, Peace, and Justice

[ANTH 505](#) Anthropology of Peace, Justice, and Ecology

[ANTH 513](#) Peace & Environmental Sustainability

[ANTH 652](#) Sustainable Peace Seminar

## Biology

[ENV 108](#) ( s.h.)

[ENV 109](#) ( s.h.)

[BY 124](#) Introductory Biology II

[BY 468](#) Ecological Genetics

[BY 470](#) Ecology

[BY 585](#) Northern Field Studies

[MESC 208](#) Biology and Conservation of Marine Turtles

[MESC 230](#) The Ecology of Florida Everglades

[MESC 302](#) Coastal Zone Management

[MESC 303](#) Coastal Climatology

[MESC 330](#) Marine Conservation Biology

## Civil, Construction, and Environmental Engineering

[CE 236](#) Environmental Engineering

[CE 431](#) Energy Resources

[CE 537](#) Environmental Experimental Design and Field Sampling

[CE 537L](#) Environmental Experimental Design and Field Sampling

Lab

[CE 600](#) Sustainable Construction

[CE 608](#) Green Building Design

[CE 610](#) The Engineered Environment

[CE 631](#) Environmental Law

[CE 636](#) Stormwater Pollution Management

[CE 690](#) Special Topics in (Area)

## Sustainable Smart Cities MS Program first year courses

[CESC 600](#) Principles of Sustainable Development

[CESC 602](#) Introduction to Sustainable Smart Cities

[CESC 604](#) Low-Carbon and Renewable Energy Systems for Smart Cities

[CESC 606](#) Managing Natural Resources and Sustainable Smart Cities

[CESC 608](#) Green Infrastructure and Transportation

[CESC 610](#) Health and Livability

[CESC 612](#) Green Buildings

[CESC 614](#) Smart Cities Technologies

[CESC 616](#) Big Data and Smart Cities

[CESC 618](#) Research Methods and Project Planning

[CESC 620](#) Sustainable Smart Cities Research Project

## Geography

[GEO 491](#) Environmental Policy

## Political Science and Public Administration

[PSC 103](#) Foundations of International Relations

[PSC 266](#) The United Nations

[PSC 316](#) Human Rights

[PSC 355](#) Politics of Development

[PSC 361](#) North/South International Relations

[PSC 386](#) Economics of Public Policy

[PSC 465](#) International Law

## Chemistry

[ES 101](#) Physical Geology

[ES 102](#) Physical Geology Laboratory

## Marketing, Industrial Distribution, and Economics

[EC 308](#) Economics of Environment

## Honors College, Science and Technology Honors Program

[STH 199](#) Introduction to the Scientific Process

## Environmental Health Sciences

[ENH 602](#) Environmental Management

[ENH 615](#) Environmental Justice and Ethics

[ENH 660](#) Fundamentals of Air and Water Pollution

## History

[HY 439](#) American Environmental History

## Sociology

[SOC 431](#) Environmental Sociology

[SOC 470](#) Population Dynamics

# The Vulcan Materials Academic Success Center

**The Vulcan Materials Academic Success Center (VMASC)** promotes and fosters undergraduate student success, enhances academic performance, and inspires students to achieve their academic, professional, and personal goals. Our resources are intentionally designed to facilitate experiences that encourage student persistence and prepare students for life after graduation.

## Academic Services

### Exploratory Advising

Academic advising at UAB supports the teaching and learning mission of the University by guiding students through their academic journey and helping students understand the value of achieving their goals in and out of the classroom. The Exploratory Advising initiative is designed to support students who have not declared a major, or are considering changing their major, and want to think more critically about the options among all of UAB's degree-granting programs. Our team of Academic Advisors are professionally trained to assist you as you prepare to declare your major and define your career interests. We feel strongly that academic advising captures the essence of a student's potential by focusing on the development of a mutually beneficial academic and graduation plan of action. To make an appointment with your Academic Advisor, please visit us [here](#).

## Supplemental Instruction

Supplemental Instruction (SI) is an academic support model that utilizes peer-assisted study sessions to improve student persistence and success within specific, historically difficult courses. The weekly review sessions are facilitated by "SI Leaders", students who have previously done well in the course (received an A or B) and who attend all class lectures, take notes, and work directly with the course's faculty. The program encourages collaborative learning and shows students how to integrate course content and study skills. SI is a free and voluntary service.

Supplemental Instruction is associated with improved student outcomes such that students who attend SI sessions earn one half to a whole letter grade higher than their peers who do not attend SI sessions. Data indicate that SI is an effective method to enhance student success across disciplines. More information on SI can be found [here](#).

## Tutoring

The Vulcan Material Academic Success Center provides free course-specific tutoring services to UAB undergraduate students. Tutoring is offered in both one-on-one and group sessions. Our tutoring sessions are tailored to address undergraduate students' questions and needs as we aim to foster independent learning. Appointments can be made online [here](#).

## Academic Success Workshops

Academic Success Workshops are designed to provide students with an interactive experience that will enhance their academic learning. Workshops are organized by topic and designed to meet the demands of college-level academics. Common topics presented are related to study skills, learning strategies, and time management. All workshops are facilitated by faculty or staff at UAB and are offered throughout the semester. The schedule of events may be viewed [here](#).

For more information or to make an appointment, please stop by the [Vulcan Materials Academic Success Center](#) on the second floor of the Education building, 901 13th Street South, across from the Sterne Library Starbucks, or please call 934-8184.

## Courses

### UASC 101. Exploring UAB. 3 Hours.

The purpose of this course is to assist students in their transition to UAB by providing essential navigational tools and resources to encourage student engagement and a strong persistence towards graduation. These strategies include intentional major, degree, and career outlook planning; using time more efficiently; developing academic skills in reading, note taking, studying, and test taking; enhancing critical thinking and problem solving; developing networking and communication skills; and encouraging campus involvement.

### UASC 105. Keys to Academic Success. 2 Hours.

The purpose of this course is to assist students in applying strategies for college success. These strategies include using technology and library resources for processing and retrieving information; planning and using time more efficiently; developing academic skills in reading, note taking, studying, and test taking; enhancing critical thinking and problem solving; developing networking and communication skills; encouraging campus involvement; and incorporating wellness habits.

### UASC 150. Career Planning and Management. 3 Hours.

Understanding aptitudes, abilities, and interests as related to career alternatives. Group and individual experiences aid self-direction in planning and career management. Values, preferences, skills, and personal resources matched with educational and employment opportunities using a variety of experiences and resources.

### UASC 203. Connections: The Transfer Student Seminar. 2 Hours.

This course is designed to facilitate the successful transition of UAB transfer students by reinforcing the resources and skills needed to succeed at a research university. The course will help students explore what it means to be a successful UAB student by providing information about managing transitions. Students will also be introduced to campus resources, gain knowledge of academic supports, become familiar with university policies and procedures along with participating in out of class activities.

### UASC 206. Sophomore Year Experience: Med School Prep 101. 2 Hours.

The purpose of this course is to provide students with both an introduction and understanding of the necessary requirements and skills needed in preparation for medical school. In addition, students will explore the foundations of medicine and health and actively participate in service related activities to understand the reciprocal relationship between theory and practice. Furthermore, students will use said information to formulate group presentations for future research, advocacy, or continued service.

# Collat School of Business

**Dean:** Eric P. Jack, Ph.D.

**Senior Associate Dean:** Karen N. Kennedy, Ph.D.

**Associate Dean for Research, Innovation, and Faculty Success:**

Molly McLure Wasko, Ph.D.

UAB's Collat School of Business is the only named school at the University of Alabama at Birmingham, a world-renowned academic research center. We offer nine undergraduate and three graduate degree programs in Face-to-Face and Online formats to serve the varying needs of students.

Located in the heart of Alabama's business center, the Collat School of Business offers an engaging learning environment with classrooms extending well beyond the walls of the UAB campus. Our unique location allows our faculty to integrate the practical experiences of the state's leading companies — from Fortune 500 corporations to entrepreneurial startups — into the programs we offer. Our students gain valuable, real-world experience through a wide variety of internships and other opportunities in the business community. The Collat School of Business is housed in a state of the art building designed to blend innovative classroom, team study and learning spaces.

The Collat School of Business is accredited at the baccalaureate and master's levels by AACSB International and holds supplemental AACSB International accreditation for our undergraduate and master's programs in accounting, an accomplishment held by less than 2% of business schools worldwide.

Our programs are designed to meet the many diverse educational needs of modern organizations. Additionally, our faculty members are involved in research and service activities that advance knowledge in business, mentor students and assist our stakeholders in accomplishing their unique goals.

At the undergraduate level, the Collat School of Business offers programs of study leading to the Bachelor of Science degree with majors in accounting, economics, entrepreneurship, finance, human resource management, industrial distribution, information systems, management and marketing. Each program combines a broad exposure to the arts and sciences with comprehensive preparation in all areas of business. In addition, recognizing the undeniable advantage of practical experience as part of a rich academic program, all degree-seeking students engage in at least one of several options for Experiential Learning credit. Those options include internship (paid or volunteer), study abroad, a business analysis project, a service learning project, a research project or completion of the Business Honors Program. Students work with their academic advisor to determine which option is most appropriate.

## Mission, Vision and Values Statements

### Mission Statement

At Collat, we prepare students for success as leaders and professionals, in Birmingham and beyond, using a balanced approach to teaching, research and service.

### Vision Statement

Collat is known for innovative programs, impactful scholarship and transformative service.

## Shared Values

- **Integrity** – We act ethically and do what is right.
- **Respect** – We treat others with courtesy and civility.
- **Diversity and inclusiveness** – Everybody counts every day. We actively seek varied perspectives in our decision-making.
- **Collaboration** – We trust each other and work cooperatively across disciplinary boundaries in the spirit of shared governance.
- **Excellence and achievement** – We constantly innovate, solve problems and improve ourselves and others through learning.
- **Stewardship** – Fiscal and environmental sustainability guide our decisions.
- **Accountability** – We are answerable to each other and act with the best interests of the university in mind.

## Selection of Major

All undergraduate degree programs lead to the Bachelor of Science.

Undergraduate students entering the Collat School of Business are admitted with a self-selected major classification. Students may explore business majors while classified as undeclared business majors. Students are expected to choose a degree granting major prior to completion of 60 semester hours. Transfer students who have earned 60 credit hours prior to entering UAB and are admitted as undeclared business majors must choose a degree granting major within two terms of enrollment at UAB.

## Admission Requirements

### Beginning Freshmen

Beginning freshmen, admitted with conditional or unconditional status, may enroll in the Collat School of Business.

### Two-Year College Transfers

Students considering transferring to UAB from a two-year college should consult with our Director of Transfer Student Success ( <https://www.uab.edu/business/home/admission-scholarships/bridge-to-business-transfer-program> ) to discuss transfer credits and a degree plan for UAB. The Director of Transfer Student Success will help you through a smooth transition from your previous institution to the UAB Collat School of Business. UAB's Collat School of Business requirements include those defined in the Alabama General Studies articulation program for a major in business. The public speaking requirement may be taken as part of Area II, the pre-calculus course may be taken as part of Area III and the macroeconomics and microeconomics courses may be taken as part of Area IV. Students planning to major in industrial distribution should see the footnoted exceptions to the Core Curriculum requirements in regard to elective hours.

In cases where enrollment has been interrupted by one year or more, transfer students are expected to meet catalog requirements in effect at the time that they enter UAB.

Only 60 applicable semester hours of two-year college coursework can be applied toward a UAB degree.

## Transfers from Other Institutions

Admission to the Collat School of Business is open to those students who are admitted to UAB as degree-seeking or as non degree-seeking students. Students must have a minimum 2.0 cumulative grade point average. Before an upper-level business course may be attempted, a minimum grade of **C** in the stated prerequisite(s) for the Collat School of Business course(s) is required. Students transferring from other institutions should consult with our Director of Transfer Student Success ( <https://www.uab.edu/business/home/admission-scholarships/bridge-to-business-transfer-program> ).

## Transfers within UAB

Degree-seeking students changing their major from schools and the college within UAB will be admitted to the Collat School of Business provided they have a minimum 2.0 overall grade point average. Before an upper-level business course may be attempted, a minimum grade of **C** in the stated prerequisite(s) for the Collat School of Business course(s) is required. Students considering a change of major to the Collat School of Business should meet with the academic advisor for their chosen major ( <https://www.uab.edu/business/home/student-services/advising> ).

## Students Readmitted to UAB

Degree-seeking students, non-degree seeking students and post-baccalaureate students readmitted to UAB may be admitted to the Collat School of Business.

Former students are expected to meet catalog requirements in effect at the time they re-enter UAB, when one year or more of enrollment at UAB has lapsed or when another college has been attended since last enrolling at UAB.

## Non-Degree Seeking Students

Admission of non-degree seeking students to the Collat School of Business is restricted to those students who already have a four-year degree from a regionally accredited college or university.

The following policies apply:

1. Post-baccalaureate students not seeking a UAB business degree will be classified in the major that was selected on the application or as a Collat School of Business undeclared major. They may enroll in any undergraduate business course in which the stated course prerequisite(s) has been completed with a minimum grade of **C**. Students having less than a **C** in prerequisite courses or those who completed the prerequisites many years earlier are advised to repeat the prerequisites (see specific major for any deviation).
2. Post-baccalaureate students seeking a UAB undergraduate business degree will be classified in the appropriate major. Once the decision to seek a business degree is made, post-baccalaureate students are expected to meet all catalog requirements in effect at the time of their admission or readmission to UAB.
3. Students are responsible for providing transcripts to their advisors for verification of prerequisites.

## Transient Students

Transient students who wish to attempt Collat School of Business courses should be aware of the following:

1. It is the student's responsibility to verify with the advisor at the home institution that courses taken at the Collat School of Business will transfer back to the home institution.
2. Note that if enrolled in a business course that fills and there is degree-seeking student demand, the transient students are withdrawn from the filled class.

All information regarding our business programs and the Collat School of Business is available at <http://www.uab.edu/business/>. You may check about class availability on **BlazerNet**, select the Student Services tab and scroll to class schedule.

## Curriculum Outline

The Collat School of Business reserves the right to modify curricula and specific courses of instruction, to alter requirements for graduation, and to change the majors to be awarded at any time the school may determine. Such changes may be applicable to either prospective or currently enrolled students.

The curricula that follows is formatted to show how course requirements of the Collat School of Business concur with the UAB Core Curriculum requirements. Students, in collaboration with their advisor, should sequence these requirements in a manner to meet stated prerequisite requirements for specific courses in their curriculum.

## UAB Core Curriculum Requirements

[Refer to Core Curriculum](#)

**Business students should take the following courses as a part of the Core Curriculum:**

1. Core Curriculum Area II: Humanities and Fine Art: CMST 101.
2. Core Curriculum Area II: Humanities and Fine Art, select one of the following:
  - a. ARH 101 The Art Experience
  - b. MU 120 Music Appreciation
  - c. THR 100 Introduction to the Theatre.
3. Core Curriculum Area III: Natural Science and Mathematics, select one of the following:
  - a. MA 105 Pre-Calculus Algebra
  - b. MA 125 Calculus I.
4. Core Curriculum Area IV: Social and Behavioral Science, EC 210 Principles of Microeconomics and EC 211 Principles of Macroeconomics. EC 210 and EC 211 satisfy the Common Core six-semester hour sequence requirement for all business majors.

## Academic Requirements

The following general requirements and policies apply to all students majoring in the Collat School of Business.

1. To attempt upper-level business courses (numbered 300 and above), students must have a grade of **C** or better in the stated prerequisites for each business course. **Students must also meet any specific grade requirements within their major.**
2. In cases where one year or more of non-enrollment at UAB has lapsed or when another school has been attended since the last enrollment at UAB, students are expected to meet catalog requirements in effect at the time they re-enter UAB.

- Students must obtain a grade of 'C' or better in all lower level business classes.

## GPA Graduation Requirement

The Collat School of Business GPA (grade point average) graduation requirement is in addition to the general UAB requirements. All Collat School of Business students must earn at least a 2.0 overall GPA, 2.0 institutional GPA, 2.0 Business GPA and 2.0 major GPA to be eligible for graduation. Additional requirements are required for Accounting, Finance & Information System majors.

### Accounting Majors

- Earn a minimum grade of **C** in all courses used in the accounting major.
- Earn a minimum grade of **B** in AC 200.

### Finance and Information Systems Majors

- Earn a minimum grade of **C** in all courses used in the finance and information systems majors.

Students may opt to utilize the university's course forgiveness policy to calculate the GPA. Students should process all forgiveness requests **before** applying for degree to ensure a correct graduation GPA calculation.

## Residency Requirement

Of the 24 to 27 semester hours of upper-level major courses required for a departmental major, at least 15 semester hours must be completed at UAB. In addition, 50 percent (30 to 33 semester hours) of business hours required must be taken at UAB. These hours exclude nine hours of economics and six hours of statistics.

## The Collat School of Business Majors:

- Accounting (p. 148)
- Economics (p. 165)
- Entrepreneurship (p. 154)
- Finance (p. 148)
- Human Resource Management (p. 154)
- Industrial Distribution (p. 165)
- Information Systems (p. 153)
- Management (p. 154)
- Marketing (p. 165)

## Minors in Business

The Collat School of Business offers minors in accounting, business administration, economics, entrepreneurship, finance, information systems, management, marketing, social media strategies for business, and sports and entertainment marketing. These minors are available to all UAB students with the exception of the minor in international business which is available only to School of Business majors.

The following requirements apply to minors:

- Students must meet the following grade point requirements:
  - Have a 2.0 cumulative GPA (includes all schools attended)
  - Have a 2.0 UAB GPA
- Students must have the following:
  - A minimum grade of **C** in all lower level business courses required for the minor, including minor courses transferred. All minors allow the use of the university's course forgiveness policy;
  - A minimum overall average of **C** in UAB business courses required for the minor, (check specific minor for any deviations)
  - At least 12 semester hours of the minor courses taken in the Collat School of Business (the accounting, finance, and information systems minors have additional requirements).
- All required 200-level business courses listed for selected minor must be completed, with a grade of **C**, prior to enrollment in the 300 and 400- level courses listed (check specific minor for any deviations)
- Students may enroll and receive a grade of (**A, B, C, D, or F**) for any business course a maximum of 2 (two) times only.
- Students who wish to take upper-level business courses other than those specified in the selected minor must meet all prerequisites for those courses and have permission from the Collat School of Business.
- Collat School of Business majors may also earn a business minor, **with the exception** of the minor in Business Administration. The minor must include at least nine semester hours beyond the requirement of the student's selected business major. The Collat School of Business undergraduate advisors can assist business majors in tailoring a business minor.

## Minor in Accounting

Must earn a grade of "C" or better and overall GPA of 2.0 in all courses required for this minor.

Requirements	Hours
<b>Accounting Lower-Level Requirements</b>	
<u>AC 200</u> Principles of Accounting I	3
<u>AC 201</u> Principles of Accounting II	3
<u>BUS 101</u> Introduction to Business	3
or <u>BUS 102</u> Business Foundations	
<b>Accounting Upper-Level Requirements</b>	
<u>AC 300</u> Financial Accounting I	3
<u>AC 304</u> Accounting Information Systems	3
<u>AC 310</u> Financial Accounting II	3
or <u>AC 309</u> Intermediate Accounting for Corporate Careers	
<u>AC 401</u> Cost Accounting	3
Total Hours	21

## Minor in Business Administration

Requirements	Hours
<b>Business Administration Lower-Level Requirements</b>	
Must earn a grade of "C" or better in these courses	
<u>BUS 101</u> Introduction to Business	3
or <u>BUS 102</u> Business Foundations	
<b>Business Administration Upper-Level Requirements</b>	
Must earn a grade of "C" or better in BUS 310 & 311 and have overall GPA of 2.0 in all courses required for this minor.	
<u>BUS 310</u> Accounting and Finance for Nonbusiness Majors	3
<u>BUS 311</u> Creating & Delivering Customer Value	3

<b>BUS 410</b>	Integrating Business Functions <sup>1</sup>	3
<b>Business Administration Electives</b>		
Select two courses from the following. Alternate 300/400 business courses may be selected with advisor approval (must earn an overall GPA of 2.0 in these courses.):		6
<b>BUS 350</b>	Business Communications	
<b>EC 210</b>	Principles of Microeconomics	
<b>EC 211</b>	Principles of Macroeconomics	
<b>EC 320</b>	Behavioral Economics	
<b>FN 101</b>	Personal Finance	
<b>LS 246</b>	Legal Environment of Business	
<b>MG 302</b>	Management Processes and Behavior	
<b>MK 303</b>	Basic Marketing	
Total Hours		18

<sup>1</sup> Approved elective can substitute for BUS 410.

## Minor in Economics

Must earn a grade of "C" or better and have an overall GPA of 2.0 in these courses.

Requirements	Hours
<b>Economics Lower-Level Requirements</b>	
<u>EC 210</u> Principles of Microeconomics	3
<u>EC 211</u> Principles of Macroeconomics	3
<b>Economics Upper-Level Requirements</b>	
<u>EC 304</u> Intermediate Microeconomics	3
<u>EC 305</u> Intermediate Macroeconomics	3
<b>Economics Upper-Level Electives</b>	
Select two 300-level or higher Economics (EC) course.	6
Total Hours	18

## Minor in Entrepreneurship

The Minor in Entrepreneurship prepares students for professional career success in a wide range of economic and social environments.

Rooted in the discipline of a strong entrepreneurial mindset, the minor in entrepreneurship complements and extends the knowledge gleaned from any UAB major with an emphasis on making transformational impact on one's own field and career path. The primary objective is to prepare students for success by teaching them to think and act in entrepreneurial ways.

### Eligibility

This minor is open to all students. Students must also have a minimum overall 2.0 GPA.

## Course Requirements

Requirements		Hours
Course requirements for Non-business Majors		18
ENT 270	The Entrepreneurial Mindset	
BUS 310	Accounting and Finance for Nonbusiness Majors	
ENT 421	Entrepreneurial Marketing and Sales	
ENT 425	Entrepreneurial Engagement Seminar	
ENT Practicum Experience <sup>1</sup>		
Elective <sup>2</sup>		
Course requirements for Business Majors		18
ENT 270	The Entrepreneurial Mindset	

<b>ENT 421</b>	Entrepreneurial Marketing and Sales	
<b>ENT 425</b>	Entrepreneurial Engagement Seminar	
<b>ENT Practicum Experience</b> <sup>1</sup>		
<b>Elective</b> <sup>2</sup>		
<b>Elective</b> <sup>2</sup>		

<sup>1</sup> ENT Practicum Experience choices: ENT 426, ENT 445, ENT 450, ENT 499

<sup>2</sup> ENT Electives: Non-business majors select one from: ENT 320, ENT 422 or MK 330. Business majors select two electives, including another course from the practicum list or MK 330

## Minor in Finance

Must earn a grade of "C" or better and have an overall GPA of 2.0 in all courses required for this minor.

Requirements		Hours
<b>Finance Lower-Level Requirements</b>		
AC 200	Principles of Accounting I	3
EC 210	Principles of Microeconomics	3
BUS 101	Introduction to Business	3
or BUS 102	Business Foundations	
<b>Finance Upper-Level Requirement</b>		
FN 310	Fundamentals of Financial Management	3
<b>Finance Upper-Level Elective</b>		
Select three 300-level or higher Finance (FN) courses.		9
Total Hours		21

## Minor in Information Systems

Must earn a grade of "C" or better in each course and an overall GPA of 2.0 in all courses required for this minor.

### IS Minor #1 for Business Majors

Requirements		Hours
IS 204	Introduction to Business Programming	3
IS 301	Introduction to Database Management Systems	3
IS 302	Business Data Communications	3
IS 321	Systems Analysis	3
MG 417	Project Management	3
Total Hours		15

### IS Minor #2 for Computer Science Majors

Requirements		Hours
Information Systems Lower-Level Requirements		
BUS 101	Introduction to Business	3
or BUS 102	Business Foundations	
IS 303	Information Systems	3
Information Systems Upper-Level Electives		9
IS 302	Business Data Communications	
IS 321	Systems Analysis	
MG 417	Project Management	
LS 471	Legal Elements of Fraud Investigation	
AC 472	Information Technology Auditing	
AC 473	Fraud Examination	
IS 491	Current Topics in Information Systems	
Total Hours		15

## IS Minor #3 for All Other Majors

Requirements	Hours
<b>Information Systems Lower-Level Requirements</b>	
BUS 101 Introduction to Business or BUS 102 Business Foundations	3
IS 204 Introduction to Business Programming	3
<b>Information Systems Upper-Level Requirements</b>	
IS 301 Introduction to Database Management Systems	3
IS 303 Information Systems	3
IS 321 Systems Analysis	3
MG 417 Project Management	3
Total Hours	18

## Minor in Management for Business Majors

Not available for Human Resource Management Majors.

Requirements	Hours
MG 401 Organizational Behavior	3
MG 409 Human Resource Management	3
MG 413 Employment Law	3
MG 425 Managing Through Leadership	3
Total Hours	12

## Minor in Management for Non-Business Majors

Requirements	Hours
BUS 101 Introduction to Business or BUS 102 Business Foundations	3
MG 302 Management Processes and Behavior	3
MG 401 Organizational Behavior	3
MG 409 Human Resource Management	3
MG 413 Employment Law	3
MG 425 Managing Through Leadership	3
Total Hours	18

## Minor in Marketing

Must earn a grade of "C" or better and have an overall GPA of 2.0 in all courses required for this minor.

Requirements	Hours
BUS 101 Introduction to Business or BUS 102 Business Foundations	3
EC 210 Principles of Microeconomics	3
MK 303 Basic Marketing	3
<b>Marketing Upper-Level Electives</b>	
Select three 300-level or higher Marketing (MK) courses.	9
Total Hours	18

## Minor in Human Resource Management

Not available for Management Majors.

Requirements	Hours
<b>Required Courses</b>	
BUS 101 Introduction to Business or BUS 102 Business Foundations	3
MG 302 Management Processes and Behavior	3
MG 409 Human Resource Management	3
<b>Human Resource Management Upper-level Electives (select three)</b>	
MG 411 Compensation Administration	3
MG 412 Organizational Staffing	3
MG 413 Employment Law	3
MG 414 Talent Development	3
Total Hours	18

## Minor in International Business

Students with strong professional skills and an understanding of international business are in high demand in today's global economy.

The international business minor is available to undergraduate majors as a complement to the student's major course work. Students will enhance their knowledge and understanding of the global context and practices of international business and will develop skills necessary to compete in a culturally diverse, global business world.

This minor is interdisciplinary with course work from U.S. and non-U.S. sources, in-classroom and outside-of-classroom experiences, and course work from across the UAB campus. The IB minor encourages students to gain perspectives and to experience other cultures by studying abroad. The IB program director ensures that students gain international business exposure and network with global industry professionals.

Must earn a grade of "C" or better in stated prerequisite courses and have an overall 2.0 GPA in all courses required for this minor.

Requirements	Hours
<b>Requirements for Business Majors</b>	
EC 210 Principles of Microeconomics	3
Select 15 hours from:	15
AC 440 International Accounting: From a User's Perspective <sup>1</sup>	
EC 407 International Economics <sup>1</sup>	
FN 412 International Financial Management	
MG 415 International Business Dynamics	
MK 416 International Marketing	
IB 320 Global Innovation	
IB 439 Global Business Communications	
IB 495 Business Study Abroad	
FLL 120 Foreign Cultures	
Foreign Language <sup>3</sup>	
<b>Requirements for Non-Business Majors</b>	
EC 210 Principles of Microeconomics	3
Select 3 hours from:	3
BUS 310 Accounting and Finance for Nonbusiness Majors <sup>2</sup>	
or BUS 310 Creating & Delivering Customer Value	
Select 6 hours from:	6
AC 440 International Accounting: From a User's Perspective <sup>1</sup>	
EC 407 International Economics <sup>1</sup>	
FN 412 International Financial Management	
IB 320 Global Innovation	
IB 439 Global Business Communications	
MG 415 International Business Dynamics	

MK 416	International Marketing	
Select 6 hours from:		6
FLL 120	Foreign Cultures	
IB 495	Business Study Abroad	
Foreign Language <sup>3</sup>		

- <sup>1</sup> EC 407 and AC 440 have additional prerequisites.
- <sup>2</sup> Take BUS 310 as prerequisite for AC 440 or FN 412; take BUS 311 as prerequisite for MG 415 or MK 416. Take either BUS 310 or BUS 311 as prerequisite for EC 407.
- <sup>3</sup> A maximum of 6 credit hours in Foreign Language courses may be used toward the 18 required credit hours for the International Business minor.

## Minor in Social Media Strategies for Business

Minor is open to all students with at least 45 semester hours completed and a minimum 2.5 cumulative GPA. Must earn a grade of "C" or better and overall GPA of 2.0 in all courses required for this minor.

Requirements	Hours
BUS 101 Introduction to Business (Available Fall, Spring)	3
or BUS 102 Business Foundations	
MK 410 Integrated Marketing Communication	3
MK 436 Digital Marketing Analytics	3
IS 417 Introduction to Business Intelligence (Available Fall)	3
MK 303 Basic Marketing (Available Fall, Spring)	3
or MK 471 Health Care Marketing	
MK 401 Social Media in Marketing (Available Spring)	3
Total Hours	18

## Minor in Sports and Entertainment Marketing

Must earn a grade of "C" or better and overall GPA of 2.0 in these courses.

Requirements	Hours
<b>Lower level requirement</b>	
BUS 101 Introduction to Business	3
or BUS 102 Business Foundations	
<b>Upper level requirements</b>	
MK 303 Basic Marketing	3
MK 330 Professional Selling	3
MK 401 Social Media in Marketing	3
MK 333 Sports Marketing	3
MG 430 Management and Leadership in Sports and Entertainment Organizations	3
Total Hours	18

## UAB Professional Sales Certificate Program

### Purpose

The Professional Sales Certificate is designed for undergraduate students of all majors pursuing a sales career or wishing to enhance his/her interpersonal communication skills in a business environment. This program helps students distinguish themselves as committed

professionals in sales and customer service. In addition to the course work shown below, students will be involved in out-of-class activities, including job shadowing and mentorship. Students with a Professional Sales Certificate are well-prepared for entry-level sales careers and have a competitive advantage in the job market. All majors from across UAB are eligible to compete for entrance. Classes are kept small to ensure individual attention is provided for each student.

### Eligibility

Submission of completed application form, available in CSB 257 or online at <https://www.uab.edu/business/home/businesscertificates/professional-sales-certificate>

- Achievement of an overall 2.5 G.P.A. and be in good academic standing with the university;
- Commitment to extra-curricular involvement in the Professional Sales Program activities;

## Professional Sales Certificate Requirements

Requirements	Hours
<b>GPA requirement</b>	
A 2.5 overall GPA is required in certificate courses.	
<b>Certificate Courses</b>	
MK 330 Professional Selling	3
MK 420 Sales Management	3
or MK 423 Emerging Trends in Professional Selling	
MK 425 Advanced Professional Selling	3
One course covering industry structure - per approval of Program Director	3
Total Hours	12

### Benefits

In addition to the shadowing, business contacts, and internship opportunities in the program, students will graduate with valued sales and service skills. Earning a Professional Sales Certificate differentiates students in a competitive hiring environment.

### Contacts

Mike Wittmann, Ph.D.	<a href="mailto:wittmann@uab.edu">wittmann@uab.edu</a>
John Hansen, Ph.D.	<a href="mailto:jdhanen@uab.edu">jdhanen@uab.edu</a>
Karen Kennedy, Ph.D.	<a href="mailto:knk@uab.edu">knk@uab.edu</a>
Kenneth Miller, MBA, Ed.D.	<a href="mailto:klmiller@uab.edu">klmiller@uab.edu</a>

## Undergraduate Certificate in Social Media Purpose

The objective of the social media certificate is to help our students and working professionals advance in their careers by improving understanding about how to use the latest social media technologies to benefit organizational stakeholders, such as managers, organizations, employees, customers and partners. Our emphasis is on the application of new and emerging social media technologies, to serve those currently working in IS and marketing related fields, and to prepare individuals from other fields to build the skills needed to succeed in social media careers.

## Eligibility

Open to all students majoring in business. Students must have an overall GPA of 2.5 or higher to be admitted to this certificate program.

Requirements		Hours
IS 417	Introduction to Business Intelligence	3
or IS 418	Applied Data Science for Information Systems	
MK 401	Social Media in Marketing	3
MK 410	Integrated Marketing Communication	3
MK 449	Integrated Marketing Communications Practicum	3
Total Hours		12

## Interprofessional Nonprofit Leadership Undergraduate Certificate

Requirements		Hours
MG 305	Nonprofit Organization Mgmt/SL	3
MG 405	Nonprofit Strategy and Entrepreneurship	3
<b>Electives</b> <sup>1</sup>		6
Courses must be selected outside the major course of study.		

<sup>1</sup> Electives may be selected from: BUS 311, BUS 350, MG 302, MG 409, MG 401, MG 425, CHHS 350, CHHS 415, CHHS 420, CHHS 425, CHHS 435, CHHS 460, CHHS 452, CJ 400, C

## Certificate in Information Systems

### Purpose

The objective of the Certificate in Information Systems (IS) is to recognize post-graduate students who successfully complete a rigorous program of six undergraduate IS courses that are required for entry into our graduate Management Information Systems (MIS) program. These students have an undergraduate degree in a different field and are interested in a career change to information systems.

### Eligibility

The entry requirements for the Certificate in IS are an undergraduate degree from a regionally accredited university with a grade point average equivalent to that required to be accepted as a degree seeking student in the Collat School of Business (completed undergraduate degree with a GPA of 2.0 or higher).

The certificate will require the successful completion of 18 credit hours (6 courses), with a grade of 2.0 or better for each course.

## Information Systems Certificate Requirements

Requirements		Hours
<b>GPA Requirement</b>		
A minimum GPA of 2.0 is required in each certificate course.		
<b>Required Coursework</b>		
BUS 350	Business Communications	3
IS 204	Introduction to Business Programming	3
IS 301	Introduction to Database Management Systems	3
IS 302	Business Data Communications	3
IS 303	Information Systems	3
IS 321	Systems Analysis	3
Total Hours		18

## Benefits

This certificate serves as an intermediary credential for these students as they transition into the IT industry and/or continue their studies. Earning a Information Systems Certificate differentiates students in a competitive hiring environment.

## Certificate in Accounting

The Accounting Certificate provides students with a solid foundation in accounting principles and how to apply them in practice.

## Who Should Complete the Accounting Certificate

Prospective students who are looking to transition into the accounting industry, gain accounting knowledge to enhance their already established career and /or enter UAB's Master of Accounting (MAc) Program.

The Accounting Certificate is designed to prepare students for success in the Master of Accounting program. The MAc program requires completion of the AC certificate with a grade of B or better in all courses for those who do not already have a bachelor's degree in accounting from a regionally accredited university, or have a bachelor's degree in accounting that was received more than five years before desired term of enrollment or a GPA below 3.0 and/or below a grade of B in accounting courses.

In some cases, prospective MAc students may be able to waive the Accounting Certificate requirement through appealing to the Director of Accounting Programs. Applicants might be able to waive all eight courses, take some of the courses, or have the appeal denied.

## The Accounting Certificate Curriculum

The Accounting Certificate requires that students earn a C or better in the following eight courses. Some courses require a minimum grade of B for prerequisite coursework. See all minimum grade requirements listed in the prerequisites for each course:

Requirements		Hours
AC 200	Principles of Accounting I	3
AC 201	Principles of Accounting II	3
AC 300	Financial Accounting I	3
AC 304	Accounting Information Systems	3
AC 310	Financial Accounting II	3
AC 401	Cost Accounting	3
AC 402	Income Taxation I	3
AC 430	Financial Accounting III	3
Total Hours		24

## Honors in Business

### Purpose

The Collat School of Business Honors Program is designed for qualified and self-motivated students pursuing business-related undergraduate degrees or otherwise having a demonstrated interest in business. Through a mentored program format, students will develop research and communication skills in preparation for a professional career and/or graduate study. Although students may focus their research into any of the disciplines in the Collat School of Business, the Business Honors Program has overarching themes of leadership and ethics.

## Eligibility

Entry into the Collat School of Business Honors Program is by invitation. Students may apply to be considered for an invitation.

To be eligible for the Collat School of Business Honors Program, students must:

- Have earned a 3.5 GPA in Business Courses;
- Have earned a 3.0 GPA overall;
- Have a major or minor in the Collat School of Business or be invited to submit an application;
- Have submitted a Business Honors Program Application form or be invited to submit an application;
- Have been selected from application and transcript evaluation.

## Requirements

- Enroll Spring Semester of junior year in BUS 300 Introduction to Leadership Seminar for 3 credit hours;
- Enroll Fall Semester of senior year in BUS 496, Business Honors Seminar II (Independent Research), for three credit hours
- Enroll Spring Semester of senior year in BUS 495 Business Honors Seminar I (Strategic Leadership), for three credit hours
- Present your research in a public forum, such as at the Undergraduate Research Expo.

## Benefits

In addition to educational benefits and enhanced credentials for graduate school or professional pursuits, students with business majors or minors will graduate "With Honors in Business" or "With Honors in Economics".

## Contact

For more information and/or admission to the Collat School of Business Honors Program, contact:

## Collat School of Business Honors Program Director

Dr. Barbara A. Wech \* 710 13th Street South • Birmingham, AL • E-mail: [bawech@uab.edu](mailto:bawech@uab.edu)

## AC-Accounting Courses

### AC 200. Principles of Accounting I. 3 Hours.

Basic concepts with focus on how accounting events affect financial statements. Emphasizes preparation, communication and use of external financial reports, accrual versus cash, receivables, payables, inventory, recording long-term operational assets, long-term liabilities, stockholders, equity, recording procedures, and financial statement analysis dealing with the benefits and risks associated with that information.

**Prerequisites:** BUS 110 [Min Grade: C]

### AC 201. Principles of Accounting II. 3 Hours.

Basic concepts associated with internal reporting. Use of relevant information for planning, control, and decision making. Cost behavior, cost allocation, product costing, budgeting, responsibility accounting, and capital budgeting.

**Prerequisites:** AC 200 [Min Grade: C]

### AC 299. Competency Exam for AC 200. 0 Hours.

Provides a review of introductory financial accounting and an introductory financial accounting competency exam.

**Prerequisites:** AC 200 [Min Grade: D]

### AC 300. Financial Accounting I. 3 Hours.

The course covers basic financial accounting with an emphasis on recording transactions and preparing financial statements. Topics include the accounting cycle, accrual accounting, and the preparation of the income statement, balance sheet, and statement of cash flows.

**Prerequisites:** MA 105 [Min Grade: C](Can be taken Concurrently) and AC 200 [Min Grade: B]

### AC 304. Accounting Information Systems. 3 Hours.

Transaction processing cycles of accounting system; internal control, development, and control of information systems; emerging development of information technology.

**Prerequisites:** (AC 201 [Min Grade: C] and GPAO 2.00)

### AC 305. Professional Development in Accountancy. 1 Hour.

This course will introduce students to the accounting profession, the recruitment process for internships and entry-level positions in accounting; the traditions, expectations and ethical demands of the profession; and the availability of diverse career options.

### AC 309. Intermediate Accounting for Corporate Careers. 3 Hours.

The course explores the major components of the balance sheet elements assets, liabilities and equity as well as revenue recognition.

**Prerequisites:** AC 300 [Min Grade: C]

### AC 310. Financial Accounting II. 3 Hours.

Continuation of AC 300. Inventories, plant assets, intangible assets, current liabilities, long-term debt and stockholders' equity.

**Prerequisites:** AC 300 [Min Grade: B]

### AC 364. Taxation and the Working Poor. 3 Hours.

Students will explore the objectives and consequences of the U.S. federal tax system in relation to the working poor. Topics covered will include the Earned Income Tax Credit, progressive and regressive taxes, and income redistribution as the result of tax provisions. In addition, students will study common mis-perceptions of those living in poverty. The course will consist of classroom instruction, tax preparation training, completion of a tax certification test, and volunteer tax preparation at a community-based site. This course is open to both business and non-business majors and assumes no prior knowledge of accounting or tax. The course is a service-learning course and will satisfy the experiential-learning requirement in the Collat School of Business.

**Prerequisites:** GPAO 2.00

### AC 401. Cost Accounting. 3 Hours.

Basic theory and procedures involving cost determination, analysis, and control. Cost allocations, application of overhead, budgeting, standard costs, job order, process and by-product costing, spoilage, and quantitative techniques. Junior standing required.

**Prerequisites:** (AC 300 [Min Grade: C] and GPAO 2.00) or (AC 320 [Min Grade: C] and GPAO 2.00)

### AC 402. Income Taxation I. 3 Hours.

Fundamentals and basic concepts of taxation of various entities, with emphasis on federal income taxation of individuals.

**Prerequisites:** AC 300 [Min Grade: C]

### AC 413. Internal Auditing. 3 Hours.

Theory and practice of internal auditing and application of internal auditing principles and techniques to selected audit problems.

**Prerequisites:** (AC 300 [Min Grade: C] and AC 304 [Min Grade: C] and GPAO 2.00)

**AC 414. Governmental and Not-for-Profit Accounting. 3 Hours.**

Budgetary and fund accounting as applied to municipalities, other governmental units, and institutions operating as nonprofit entities.

**Prerequisites:** (AC 300 [Min Grade: C] and AC 304 [Min Grade: C] and GPAO 2.00)

**AC 423. External Auditing. 3 Hours.**

This course covers the major phases of an external audit including preliminary engagement procedures, planning the audit, evaluation of ICFR, substantive audit procedures, and reporting.

**Prerequisites:** AC 309 [Min Grade: C](Can be taken Concurrently) or AC 310 [Min Grade: C](Can be taken Concurrently)

**AC 430. Financial Accounting III. 3 Hours.**

Accounting for Dilutive Securities and Earnings per Share, Investments, Revenue Recognition, Income Taxes, Pensions and Post-retirement Benefits, Leases, Accounting Changes and Error Analysis, and the Statement of Cash Flows.

**Prerequisites:** AC 310 [Min Grade: B]

**AC 440. International Accounting: From a User's Perspective. 3 Hours.**

Development of international accounting knowledge needed to make informed decisions in a global business environment.

**Prerequisites:** AC 300 [Min Grade: C]

**AC 441. International Accounting: Study Abroad. 3 Hours.**

Development of international accounting knowledge needed to make informed decisions in a global business environment through study abroad.

**Prerequisites:** AC 440 [Min Grade: C]

**AC 452. Income Taxation II. 3 Hours.**

Completion of fundamentals of taxation for individuals. Basic concepts and laws applicable to partnerships and corporations. Tax research techniques and tax planning concepts.

**Prerequisites:** (AC 402 [Min Grade: C] and GPAO 2.00)

**AC 464. Accounting Internship. 1-3 Hour.**

Work experience enabling students to better integrate academic knowledge with practical applications by exposure to accounting practice and business environment.

**Prerequisites:** AC 300 [Min Grade: C] and AC 304 [Min Grade: C] and AC 310 [Min Grade: C] and (AC 402 [Min Grade: C] or AC 423 [Min Grade: C])

**AC 472. Information Technology Auditing. 3 Hours.**

Introduction to the practice of information technology auditing. An emphasis is placed on information technology auditing standards and methodology, as well as guidance on auditing general computer controls and application controls.

**Prerequisites:** AC 304 [Min Grade: C]

**AC 473. Fraud Examination. 3 Hours.**

Advanced forensic accounting concepts with a primary focus on occupational fraud and abuse--its origins, perpetration, prevention, and detection.

**Prerequisites:** AC 304 [Min Grade: C] and AC 300 [Min Grade: C]

**AC 474. Forensic Accounting Practicum. 1-3 Hour.**

Work experience requiring the application of forensic accounting concepts and methods.

**Prerequisites:** (AC 472 [Min Grade: C] and AC 473 [Min Grade: C] and LS 471 [Min Grade: C] and GPAO 2.00)

**AC 480. Advanced Accounting. 3 Hours.**

Business combinations, consolidated financial statements, multinational accounting, and partnerships.

**Prerequisites:** AC 430 [Min Grade: B]

**AC 490. Advanced Topics in Accounting. 3 Hours.**

Contemporary professional accounting issues. Preq: Permission of instructor.

**Prerequisites:** GPAO 2.00

**AC 495. Data Analytics for Accounting. 3 Hours.**

This course focuses on how data analytics is utilized across a variety of accounting disciplines. Students will learn the fundamentals of data analysis and interpretation of output. Students who complete this course will obtain an introductory framework regarding the various ways data analytics is utilized in the accounting profession.

**Prerequisites:** (AC 300 [Min Grade: C] and AC 304 [Min Grade: C]) and AC 310 [Min Grade: C] and AC 401 [Min Grade: C] and AC 402 [Min Grade: C] and AC 413 [Min Grade: C]

**AC 499. Directed Readings. 1-3 Hour.**

Readings and independent study in selected areas.

**Prerequisites:** GPAO 2.00

## BUS-Business Courses

**BUS 101. Introduction to Business. 3 Hours.**

This course will enable students to understand the breadth of business opportunities and careers as well as assist in their transition to college and the Collat School of Business through the inclusion of First Year Experience (FYE).

**BUS 102. Business Foundations. 3 Hours.**

This course will enable students to understand the breadth of business opportunities and careers as well as introduce them to the Collat School of Business.

**BUS 110. Essentials of Financial Literacy. 3 Hours.**

An introductory course dealing with the mathematics of money and financial literacy.

**BUS 300. Business Honors Research Methods. 3 Hours.**

First of three required courses for students participating in the Collat School of Business Honors Program. Course provides student with an overview of leadership literature and with necessary research, writing and communication skills for successful participation in the Collat School of Business Honors Program.

**Prerequisites:** (GPAT and GPAO 2.00) or (GPAU 2.00 and GPAO 2.00)

**BUS 301. Business Honors Reading Seminar. 1 Hour.**

This course will facilitate development of an acceptable Business Honors Thesis/Project Proposal to be submitted to the Collat School of Business Honors Committee by exposing students to a selection of books and periodicals that are not typically assigned in other courses. Book selections will vary from semester to semester. Students will read, discuss, and write a review of each assigned work. Preq: Acceptance into a UAB Honors Program or permission of instructor. May be repeated with permission of Honors Program Director.

**Prerequisites:** (GPAT and GPAO 2.00) or (GPAU 2.00 and GPAO 2.00)

**BUS 305. Professional Development for Today's Workplace. 1 Hour.**

This course prepares students for experiential learning and internship opportunities. Students will gain an understanding of networking, personal branding, career planning, strategic career search, interviewing techniques, salary negotiation, and professional etiquette in today's global workplace.

**BUS 310. Accounting and Finance for Nonbusiness Majors. 3 Hours.**

An introduction to accounting, financial reporting and the basic principles of business finance. Not open to majors in the Collat School of Business.

**Prerequisites:** (BUS 101 [Min Grade: C] or BUS 102 [Min Grade: C]) and GPAO 2.00

**BUS 311. Creating & Delivering Customer Value. 3 Hours.**

.An introduction of managerial and marketing principles used to create and deliver customer value in organizations.

**Prerequisites:** (GPAO 2.00 and BUS 102 [Min Grade: C]) or BUS 101 [Min Grade: C]

**BUS 350. Business Communications. 3 Hours.**

BUS 350 provides effective communication skills for business contexts. This course is writing intensive and emphasizes grammar, mechanics, word usage, formatting, and style appropriate for professional business messages.

**Prerequisites:** (EH 102 [Min Grade: C]) or (EH 107 [Min Grade: C]) and GPAO 2.00

**BUS 400. Business Honors Seminar. 3 Hours.**

This course will facilitate completion of an accepted Business Honors Thesis/Project Proposal. Students conduct independent research and present work in progress. Acceptance to the Collat School of Business Honors Program required.

**Prerequisites:** (BUS 300 [Min Grade: C] and GPAT and GPAO 2.00) or (BUS 300 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**BUS 410. Integrating Business Functions. 3 Hours.**

Course integrates various elements that impact the success of business enterprises. Not open to majors in the Collat School of Business.

**Prerequisites:** (GPAT and GPAO 2.00 and BUS 310 [Min Grade: C] and BUS 311 [Min Grade: C]) or (GPAU 2.00 and GPAO 2.00 and BUS 310 [Min Grade: C] and BUS 311 [Min Grade: C])

**BUS 450. Strategic Management Capstone Experience. 3 Hours.**

Senior seminar integrating functional business fields of accounting, economics, finance, information systems, management, marketing, production policy and decision making. This course is writing intensive and students must demonstrate an ability to write to appropriate audiences and incorporate pertinent external sources. Strong emphasis on ethical reasoning and decision-making and relating material to contemporary business events and issues. Must be senior in last term.

**Prerequisites:** (FN 310 [Min Grade: C] and GPAO 2)

**BUS 495. Business Honors Seminar, I. 3 Hours.**

Study of the strategy-setting process for a business or other complex organization with emphasis on role of chief executive officer and other leaders in that process. Research, analysis, communications and presentation skills practiced.

**BUS 496. Business Honors Seminar, II. 3 Hours.**

Continuation of BUS 495, overview of business ethics and emphasis on skills required to complete final work project for the Collat School of Business Honors Program. Good standing in the Collat School of Business Honors Program and second semester senior standing required.

**Prerequisites:** GPAO 2.00

**DB - Distribution Courses****DB 305. Entering the Profession. 3 Hours.**

This course will prepare students to enter the industrial distribution profession. Professional development topics include: resume building, soft-skills and interview preparation, internships, expectations for entry-level positions and career paths, as well as expectations and ethical demands of the profession.

**DB 320. Distribution Management. 3 Hours.**

Introduction to basic problems, concepts and management practices of distribution firms and manufacturing relationships. History of types of distributor organizations, functions and role of industrial distribution in the economy.

**Prerequisites:** MK 303 [Min Grade: C](Can be taken Concurrently)

**DB 400. Analytics in Distribution. 3 Hours.**

This course provides tools and approaches to measure the effectiveness of distributor strategies and tactics and support data-driven decision-making. A central theme of the course is "what to measure" and "how to measure" with regard to customer-facing, supplier-facing, and internal activities. The course also focuses on constructing and interpreting performance "dashboards" that highlight the performance indicators most relevant to a distributor.

**Prerequisites:** DB 320 [Min Grade: C] and QM 215 [Min Grade: C]

**DB 410. Creative Solutions in Distribution. 3 Hours.**

This course focuses on enhancing students' abilities to use design approaches and tools for identifying and implementing innovation and growth opportunities in the channel of distribution for business-to-business firms.

**Prerequisites:** DB 320 [Min Grade: C]

**DB 430. Distribution Operations. 3 Hours.**

The course emphasizes distribution operations decision making. There are heavy emphases on profitability analysis, margin management, pricing and price negotiations, and managing inventory investments.

**Prerequisites:** DB 320 [Min Grade: C] and AC 200 [Min Grade: C] and AC 201 [Min Grade: C] and EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and QM 214 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C] and (BUS 101 [Min Grade: C] or BUS 102 [Min Grade: C]) and BUS 110 [Min Grade: C]

**DB 435. Distribution Policies and Quality Issues. 3 Hours.**

The course examines issues involved in customer relationship strategy and management in industrial and medical business markets. Topics include channel strategy and management, B2B e-commerce strategy and applications, strategic account management processes and systems, customer profitability and lifetime value, multi-channel selling models, negotiations and other operational strategies and technologies used by distributors and manufacturers.

**Prerequisites:** DB 320 [Min Grade: C]

**DB 495. Distribution Directed Studies Practicum. 3 Hours.**

Issues in managing distributors, both as suppliers for and customers of manufacturers and other businesses. Students work with host distributor/manufacturer on current and future distribution problem areas. Students develop an in-depth research analysis of the host distributor/manufacturer.

## EC-Economics Courses

### EC 110. Economics and Society. 3 Hours.

Economic principles and development of economic analysis. Combines key elements of EC 210 and EC 211. Primarily intended for majors in School of Education seeking to meet certification requirements; also open to students outside School of Business who wish to survey economics in one course. Not open to entering freshmen; not open to majors in School of Business or economics majors in the College of Arts and Sciences.

### EC 210. Principles of Microeconomics. 3 Hours.

This course is an introduction to microeconomic analysis. Students will learn why markets often function well without any centralized control and reasons why they sometimes do not, and why basic microeconomic models often are able to explain, predict and improve the world around us. The emphasis is on how the intuitive notions of optimization and equilibrium provide a unifying framework for understanding human behavior, as well as simple ways in which economists use real-world data to answer specific questions.

### EC 211. Principles of Macroeconomics. 3 Hours.

This course is an introduction to macroeconomic analysis, which pertains to the overall economy. We study economy-wide phenomena such as the growth rate of national economic output, rates of inflation and unemployment, and learn how macroeconomists design government policies that improve aggregate economic performance.

### EC 300. Economic History of the U.S.. 3 Hours.

This course spans the economic history of the U.S. from colonial times to present. Topics covered include the U.S. Constitution, national economy, wars, ethnicity, race, gender, distribution of wealth and power, social conflict and reform, entrepreneurs, workers, workplace, popular culture, and foreign affairs.

### EC 301. Money and Banking. 3 Hours.

Money supply, banking system, and other financial institutions; how money affects aggregate economic activity.

**Prerequisites:** EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and GPAO 2.00

### EC 302. Law and Economics. 3 Hours.

This is an introduction to Law and Economics, that is, the application of economic analysis to legal questions. The course offers a survey of core issues (including property, contracts, and torts), an exposition of alternative approaches to those issues, and a discussion of important implications for economics, law, political science, philosophy, public administration, and sociology. The instructor encourages students to concurrently sign up for the course Cooperation and Competition (EC 330).

**Prerequisites:** (GPAT and GPAO 2.00) or (EC 210 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

### EC 303. Labor Economics. 3 Hours.

Economic analysis in dealing with major aspects of such problems as employment, wages, hours, unionism, labor-management relations, and social security. Influence of psychological and institutional factors.

**Prerequisites:** GPAT and GPAO 2.00 and EC 210 [Min Grade: C] and EC 211 [Min Grade: C] or GPAU 2.00 and GPAO 2.00 and EC 210 [Min Grade: C] and EC 211 [Min Grade: C]

### EC 304. Intermediate Microeconomics. 3 Hours.

Advanced economic principles underlying value and production with additional training in application of these principles to problems of analysis.

**Prerequisites:** EC 210 [Min Grade: C] and GPAO 2.00

### EC 305. Intermediate Macroeconomics. 3 Hours.

Forces determining income and employment in economic systems, with special reference to the United States and other Industrialized Countries. Causes of unemployment and inflation. Role of government in maintaining stable prices and sustained growth.

**Prerequisites:** GPAT and GPAO 2.00 and EC 211 [Min Grade: C] or GPAU 2.00 and GPAO 2.00 and EC 211 [Min Grade: C]

### EC 306. Health Care Economics. 3 Hours.

This course seeks to apply economic analysis to issues in health care. Students will review the basic tools of economic analysis and discuss the evolving trends and institutional features in the health care industry. Students will then use an economic way of thinking to address contemporary health care issues from an economic perspective. This will include consideration of the supply and demand for health care, hospitals, insurance and managed care, health labor markets, chronic disease, prescription drugs, and government policy.

**Prerequisites:** EC 210 [Min Grade: C]

### EC 308. Economics of Environment. 3 Hours.

Use of economic analysis to examine interaction between economic institutions and physical environment. Specific topics: social costs and benefits of economic growth, interactions between private business and public welfare, and socioeconomic systems and goals.

**Prerequisites:** (GPAO 2.00 and EC 210 [Min Grade: C])

### EC 310. Managerial Economics. 3 Hours.

Economic theory and its application to managerial decision making process. Demand analysis, estimation, cost analysis, market analysis, pricing strategy.

**Prerequisites:** (EC 211 [Min Grade: C] and EC 210 [Min Grade: C] and GPAO 2.00)

### EC 314. Natural Resource Economics. 3 Hours.

Natural resource economics applies the tools of economics to the problems facing the environment. This ranges from non-renewable resource extraction and pollution control, to non-market valuation and sustainable development. The focus is to encourage students, regardless of major, to apply foundational economic tools (taught and/or refreshed in the first few weeks) to an area where normative assessments are typically applied.

### EC 320. Behavioral Economics. 3 Hours.

Incorporation of psychology into models of economic behavior. These models are applied to a variety of fields including industrial organization, marketing, and negotiation.

**Prerequisites:** (EC 210 [Min Grade: C] and GPAO 2.00)

### EC 330. Game Theory. 3 Hours.

This course studies strategic interaction between economic agents. Topics include finding Nash equilibria in sequential- and simultaneous-move games, game-changing strategic moves & their credibility, manipulating information, cooperation & coordination, auctions, bargaining, voting and incentives. The emphasis is on developing strategic intuition and understanding how and why results in experimental and real-world play often differ from those predicted by the underlying theory.

**Prerequisites:** (EC 210 [Min Grade: C] and GPAO 2.00)

### EC 401. Mathematical Approach in Economics and Business. 3 Hours.

Mathematical approach in economics and business.

**Prerequisites:** (EC 304 [Min Grade: C] or EC 310 [Min Grade: C] and GPAT and GPAO 2.00) or (EC 304 [Min Grade: C] or EC 310 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**EC 402. Law and Economics. 3 Hours.**

Let's say that you own a home on a nice half-acre lot. What does that ownership mean? Can you do anything you wish with your property? Can you add on 5 additional levels to your home, making it a 7-story monolith? Can you start a chicken farm on your land? If you can't, then is it really your property? Law and economics explains property rights and the appropriate rules for competing uses of property. What if you slip on a grape in the fruit section at the local grocery store and break your hip? Is the store responsible for your medical expenses or are you? Should the justice system require that the store make sure that nobody ever slips on a stray grape? How much responsibility does the shopper have to take the proper amount of care in walking through a produce section? Law and economics helps to analyze the effects of different rules regarding accidents and liability. What is the best way to punish a murderer? Is the same punishment appropriate for someone who has engaged in securities fraud? If not, what is the best way to punish the fraudulent broker? Is punishment supposed to be a deterrent or is it meant to be retribution? Does your answer to the previous question lead you to different punishment conclusions? Law and economics helps determine what are efficient and effective punishment rules.

**EC 403. Monetary Economics. 3 Hours.**

Current theories of monetary policy and management, historical development of theory and practice, contemporary policies employed by monetary authorities, institutions concerned, evaluation of policies and reform, and interrelations between monetary factors and economic processes.

**Prerequisites:** (EC 304 [Min Grade: C] and EC 301 [Min Grade: C] or EC 305 [Min Grade: C] and GPAT and GPAO 2.00) or (EC 304 [Min Grade: C] and EC 301 [Min Grade: C] or EC 305 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**EC 404. Topics in Public Policy. 3 Hours.**

Topics in Public Policy.

**Prerequisites:** (EC 304 [Min Grade: C] and GPAT and GPAO 2.00) or (EC 304 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**EC 405. Economic Development and Growth. 3 Hours.**

Problems of economic development; growth of less developed economies compared with those of advanced economies. Theories of economic development. Policy measures to promote development of growth, with emphasis on measures to accelerate development of countries.

**Prerequisites:** (EC 304 [Min Grade: C] and GPAT and GPAO 2.00) or (EC 304 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**EC 407. International Economics. 3 Hours.**

Analysis of theoretical principles underlying international trade and investment, and international monetary relations. Study includes the effects on domestic and foreign economies of commercial, monetary and fiscal policies. (Also IB 407).

**Prerequisites:** (EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and GPAO 2.00)

**EC 408. Topics in the History of Economic Theory. 3 Hours.**

The development of economic thought from antiquity to the end of the twentieth century, with emphasis on the synthesis of evolving ideas constituting current economic theory.

**Prerequisites:** (EC 211 [Min Grade: C] and EC 210 [Min Grade: C] and GPAT and GPAO 2.00) or (EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**EC 409. Econometrics. 3 Hours.**

This course is an introduction to micro-econometric empirical methods. Students will learn how to specify and estimate regression equations, various econometric models and the appropriate situations for using them, the implications of estimated parameters, and the conditions under which causal effects are identified. The focus is on application, i.e. conceptualization, interpretation and hands-on data analysis.

**Prerequisites:** EC 210 [Min Grade: C] and QM 214 [Min Grade: C]

**EC 411. Public Finance. 3 Hours.**

Principles of taxation, government expenditures, borrowing, and fiscal administration.

**Prerequisites:** (EC 304 [Min Grade: C] and GPAO 2.00)

**EC 413. Urban Economics. 3 Hours.**

Economic issues and structure of metropolitan areas. Economic growth and decay of urban regions. Specific topics: housing, education, employment, political economy, and public safety.

**Prerequisites:** EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and GPAT and GPAO 2.00 and EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and GPAU 2.00 and GPAO 2.00

**EC 414. Industrial Organization. 3 Hours.**

Structure and performance of monopolistic and oligopolistic industries, emphasizing efficiency, pricing policies, and investment decisions. Extent and nature of concentration in economy as whole.

**Prerequisites:** (EC 304 [Min Grade: C] and GPAO 2.00)

**EC 415. Sports Economics. 3 Hours.**

The study of the economics of sports allows the student to see how various tools and theories can actually be applied to solving problems the student may see presented frequently in the mainstream news. By studying the economics of sports it is hoped that the student can approach economics in the context of a subject the student already finds interesting. Furthermore, In the end this class is not only designed to be interesting, but also a rigorous introduction to the application of economic theory.

**Prerequisites:** EC 210 [Min Grade: C]

**EC 420. Applied Forecasting. 3 Hours.**

Practical use of various forecasting techniques on business and economic data. Topics include dynamic regression models, exponential smoothing, forecast criteria, moving averages, seasonality, and univariate Box Jenkins ARIMA modeling.

**Prerequisites:** (EC 210 [Min Grade: C] and GPAT and GPAO 2.00) or (EC 210 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**EC 425. Applied Regression Analysis. 3 Hours.**

Simple, multilinear, and polynomial regression analysis. Model selection, inferential procedures, and application with computer.

**Prerequisites:** (QM 215 [Min Grade: C] and GPAT and GPAO 2.00) or (QM 215 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**EC 440. Economics for Educators. 3 Hours.**

Students will gain an understanding of both basic economic principles and entrepreneurship and learn innovative methods of transferring economic knowledge to elementary and secondary students. Students will also become well-versed in the National and Alabama State standards of learning. Only open to education majors and certified teachers in K-12. This class is not open to economics or business majors.

**EC 450. Economics, Institutions & Law. 3 Hours.**

The course will study the microeconomic and macroeconomic consequences of different institutional environments and arrangements of designed incentives. This will include political, regulatory and legal structures and rules, both as pertain to actual institutions at the macro level (e.g., the Federal Reserve, the IMF, the World Bank) and regulated structures at the micro level (households and firms). The presumed conceptual frameworks will be based on intermediate microeconomics and introductory macroeconomics. Normative justification of institutional designs will be addressed. EC 320 is a recommended prerequisite.

**Prerequisites:** (EC 211 [Min Grade: C] and EC 304 [Min Grade: C] and GPAT and GPAO 2.00) or (EC 211 [Min Grade: C] and EC 304 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**EC 460. Economics Internship. 1-3 Hour.**

The economics internship program offers qualified students the opportunity to gain first-hand experience in local organizations for a term while receiving academic credit. Participating organizations are expecting to receive high-quality work from the students they sponsor. The active participation by students in actual business decisions of the sponsoring organization is the primary interest of the internship.

**Prerequisites:** (EC 304 [Min Grade: C] and EC 305 [Min Grade: C] and EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and GPAO 2.00)

**EC 490. Advanced Topics in Economics. 3 Hours.**

Selected topics in economics.

**Prerequisites:** GPAO 2.00

**EC 499. Directed Readings in Economics. 1-3 Hour.**

Investigation of specific areas in economics.

**Prerequisites:** GPAO 2.00

## ENT-Technology Entrepreneurship Courses

**ENT 270. The Entrepreneurial Mindset. 3 Hours.**

The course instills an entrepreneurial mindset by teaching students high-impact entrepreneurship concepts, transformational entrepreneurial paradigms, and bold professional practices. Risky and uncertain environments, personal authenticity and confidence, project failure and success, creativity, stimulating and leading growth, building a team, and making money and impact are among the topics.

**ENT 320. Entrepreneurial Accounting and Finance. 3 Hours.**

Students will learn how key principles of accounting and finance relate to entrepreneurial career paths and how these functions relate to each other in the context of entrepreneurial ventures. The course covers a diverse range of topics within this realm, including financial statements, assembling a team of advisors, entrepreneurial investing, building a business case, company valuation, pro forma statements, and entrepreneurial fundraising.

**Prerequisites:** ENT 270 [Min Grade: C] and (BUS 310 [Min Grade: C] or FN 310 [Min Grade: C])

**ENT 350. Social and Community Enterprise. 3 Hours.**

Entrepreneurial ventures often perform outside non-profit or for-profit realms and can make impact in economic, social, and natural environments simultaneously. These social enterprises feature novel business models and unique environments such as technology-based communities, institutional and legal contexts, public good scenarios, monopoly situations, and market failure cases where traditional for-profit ventures fail but social enterprises thrive.

**Prerequisites:** ENT 270 [Min Grade: C]

**ENT 421. Entrepreneurial Marketing and Sales. 3 Hours.**

This course helps students identify, validate, and engage entrepreneurial opportunities in market settings. Based on individual-level sales and firm-level marketing concepts, students learn to formulate business ideas, build business models, and transact business. Students also learn to analyze markets and conduct research in industrial settings, entrepreneurial sectors, and other environments.

**Prerequisites:** (MK 303 [Min Grade: C] or BUS 311 [Min Grade: C]) and ENT 270 [Min Grade: C]

**ENT 422. Entrepreneurial Strategy and Operations. 3 Hours.**

This course explores strategic decisions that early-stage entrepreneurs face when building and growing their businesses. From a very practical and experiential perspective, students learn how to formulate new venture business models, research competitive environments, examine venture assumptions, develop strategic plans. They also learn how to structure new ventures, conceptualize supply and value chains, and measure venture performance.

**Prerequisites:** ENT 270 [Min Grade: C]

**ENT 424. Entrepreneurial New Product and Service Development. 3 Hours.**

Students will learn how entrepreneurs develop various types of innovations (e.g., technological, mechanical, algorithmic, process, etc.) into new products or services ready to enter markets or community environments in the context of entrepreneurial ventures. This course begins by focusing on the output of innovation activity - innovations themselves - and clarifies the process of developing them into market-ready product or service applications.

**Prerequisites:** ENT 270 [Min Grade: C]

**ENT 425. Entrepreneurial Engagement Seminar. 3 Hours.**

This course revisits selected entrepreneurship concepts from ENT 270, adds a model of strategic entrepreneurship, and undertakes team-based outreach consulting projects, with entrepreneurial ventures in the Birmingham region. The entrepreneur clients appraise the effects of the team deliverables on their ventures, which assists with grading. The course yields unmatched networking experiences and real-world practical application of entrepreneurship concepts.

**Prerequisites:** ENT 270 [Min Grade: C]

**ENT 426. Practicum in Commercialization. 3 Hours.**

This course offers qualified students the chance to gain first hand experience in product commercialization while receiving academic credit. Students work in cross-disciplinary teams with senior engineering students to develop a commercialization plan corresponding to an original product design.

**ENT 445. Entrepreneurial Internship. 3 Hours.**

Standard internship with entrepreneurial business or organization. Junior standing and 2.0 minimum overall GPA. Must be currently enrolled in the Collat School of Business as a degree-seeking student or declared minor in business.

**Prerequisites:** GPAO 2.00

**ENT 450. I-Corps Lean Startup. 3 Hours.**

Student teams will execute the Lean Startup approach to develop a business model following the highly successful I-Corps methodology. This is a team-based course where students will spend the semester exploring the viability of a new business venture. Students will be organized into startup teams and be expected to fully execute all areas of the business model canvas by testing their business assumptions through customer/stakeholder interviews. Students must apply for enrollment with the instructor. This course has a major group project component.

**ENT 499. Directed Study in Entrepreneurship. 3 Hours.**

Supervised project in a specific area of entrepreneurship. This is an experiential course for completion of a minor in entrepreneurship. Course may be on-line or face-to-face.

**FN-Finance Courses****FN 101. Personal Finance. 3 Hours.**

Selected aspects of finance encountered by an individual during his or her lifetime. Lower-level elective credit only. Not applicable to the finance major. Open to all UAB students.

**FN 102. Money and Society. 3 Hours.**

The basic principles of the use of money in society are presented in a decision making framework. The objective of this course is to provide students with the tools necessary to analyze financial issues from a global and societal perspective.

**FN 103. Money Management 101. 1 Hour.**

Covers selected aspects of financial planning encountered by an individual during his or her lifetime. Cannot count as credit toward the finance major. Cannot be taken if FN 101 has been taken.

**FN 104. Debt Management 101. 1 Hour.**

Covers selected aspects of managing credit and insurance needs that an individual might encounter during his or her lifetime. Does not count toward the finance major. Cannot be taken if FN 101 has been taken.

**FN 105. Saving and Investing 101. 1 Hour.**

Covers selected aspects of managing investments that an individual might encounter during his or her lifetime. Does not count toward the finance major. Cannot be taken if FN 101 has been taken.

**FN 201. Investigations into Financial Inclusion. 3 Hours.**

This course applies a structured process of change to individual and societal issues of financial inclusion. Students co-investigate what constitutes financial stability personally and in relation to their broader community. Assessment, analysis, and planning for change are key components of the course.

**FN 305. Entering the Profession. 1 Hour.**

This course will prepare students to enter the finance profession. Professional development topics include: resume building, soft-skills and interview prep, internships, entry-level positions and career paths in finance, as well as expectations and ethical demands of the profession.

**FN 310. Fundamentals of Financial Management. 3 Hours.**

Basic principles of financial management emphasizing the time value of money, stock and bond valuation, and capital budgeting; risk/return analysis, cost of capital, capital structure and cash flow analysis.

**Prerequisites:** AC 200 [Min Grade: C] and EC 210 [Min Grade: C]

**FN 320. Financial Research Methods. 3 Hours.**

Introduction to commercial and publicly available financial research databases and the basics of data analysis.

**Prerequisites:** FN 310 [Min Grade: C]

**FN 325. Financial Analysis & Forecasting. 3 Hours.**

This course provides the student with a broad study of the basic concepts and tools of finance statement analysis from the point of view of the corporate financial manager. It is a decision-oriented course designed to present a working knowledge as well as a theoretical understanding of the essentials of financial statement analysis and forecasting.

**Prerequisites:** FN 310 [Min Grade: C]

**FN 330. Quantitative Financial Analysis. 3 Hours.**

Introduction to the basic quantitative tools of finance with a focus on the use of statistics in financial analysis.

**Prerequisites:** QM 215 [Min Grade: C] and AC 201 [Min Grade: C]

**FN 350. Investments. 3 Hours.**

Fundamentals of investments with an emphasis on equity and fixed-income securities.

**Prerequisites:** FN 310 [Min Grade: C]

**FN 351. Bond Portfolio Management. 3 Hours.**

Fixed income markets and instruments, including valuation and portfolio strategies. Derivatives of fixed income securities.

**Prerequisites:** (FN 310 [Min Grade: C] and GPAT and GPAO 2.00) or (FN 310 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**FN 357. Securities Analysis. 3 Hours.**

This course focuses on the fundamental principles and techniques of security analysis. Investment theory with emphasis on valuation of equity investment instruments.

**Prerequisites:** FN 310 [Min Grade: C]

**FN 358. Green and Gold Fund Financial Analyst. 1 Hour.**

The Green and Gold Fund is UAB's innovative, student-managed investment portfolio. Students gain real-world portfolio management and security analysis experience through the application of professional investment strategies and sound risk management principles. Students enrolled in FN 358 must hold the position of Analyst.

**FN 359. Green and Gold Fund Portfolio Management. 1-3 Hour.**

The Green and Gold Fund is UAB's innovative, student-managed investment portfolio. Students gain real-world portfolio management and security analysis experience through the application of professional investment strategies and sound risk management principles. Students enrolled in FN 359 must hold the position of CIO, Chief Economist or Portfolio Manager. Permission of the Green and Gold Fund faculty advisor required.

**Prerequisites:** FN 310 [Min Grade: C] and FN 350 [Min Grade: C] or FN 490 [Min Grade: C]

**FN 360. Fundamentals of Healthcare Financial Management. 3 Hours.**

Basic principles of healthcare financial management emphasizing time value of money, stock and bond valuation, and capital budgeting; risk/return analysis, cost of capital, capital structure, and cash flow analysis in the context of Healthcare organizations.

**Prerequisites:** AC 201 [Min Grade: C] and EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C]

**FN 370. Principles of Real Estate. 3 Hours.**

Upper division course designed to provide the student with a solid foundation for making real estate decisions. Course involves computer-based assignments.

**Prerequisites:** AC 200 [Min Grade: C] and EC 210 [Min Grade: C] and QM 214 [Min Grade: C]

**FN 410. Corporate Finance. 3 Hours.**

Analysis of long-term corporate financial management; detailed stock and bond valuation, cost of capital, capital budgeting, cash-flow analysis, capital structure, and dividend policy.

**Prerequisites:** (FN 310 [Min Grade: C] and GPAO 2.00)

**FN 411. Advanced Financial Management. 3 Hours.**

Case method approach to study of applied and special topics in financial management; spreadsheet applications used in analysis of initial public offerings, imbedded options, leases, mergers, bankruptcy, and pension plan management.

**Prerequisites:** (FN 410 [Min Grade: C] and GPAT and GPAO 2.00) or (FN 410 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**FN 412. International Financial Management. 3 Hours.**

Financial analysis and decision making in international context. All traditional areas of corporate finance explored.

**Prerequisites:** FN 310 [Min Grade: C] or BUS 310 [Min Grade: C]

**FN 420. Financial Sales & Trading. 3 Hours.**

This course introduces interactive trading in financial instruments. Students learn the principles of asset price discovery through real-time trading in a variety of markets, including equities, bonds, options and derivatives. Topics addressed include asset valuation, portfolio management, and risk management in the context of real-time trading of financial instruments.

**Prerequisites:** (FN 310 [Min Grade: C] and FN 350 [Min Grade: C] and FN 351 [Min Grade: C] and GPAT and GPAO 2.00) or (FN 310 [Min Grade: C] and FN 350 [Min Grade: C] and FN 351 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**FN 429. Short-Term Financial Management. 3 Hours.**

This course covers the principles of short-term financial management. Specific topics include liquidity, management of working capital, corporate cash management, and short term investing and borrowing.

**FN 452. Management of Financial Intermediaries. 3 Hours.**

Roles, activities, and functions of financial institutions and their interrelationships.

**Prerequisites:** FN 310 [Min Grade: C]

**FN 453. Derivatives. 3 Hours.**

Domestic and international risk management issues. Tools to measure and manage interest rate; exchange rate and commodity price risks.

**Prerequisites:** (FN 350 [Min Grade: C] and FN 410 [Min Grade: C] and GPAU 2.00)

**FN 460. Finance Internship. 1-3 Hour.**

A work experience to enable students to better integrate academic knowledge with practical applications and to enhance students' educational experiences by making subsequent study more meaningful. Permission of the instructor required.

**Prerequisites:** (FN 310 [Min Grade: C] and GPAO 2.00)

**FN 470. Real Estate Finance. 3 Hours.**

A study of the instruments, techniques and institutions of real estate finance and the use of financial analysis in real estate decisions.

**Prerequisites:** (FN 370 [Min Grade: C] and GPAO 2.00)

**FN 475. Real Estate Investment Analysis. 3 Hours.**

A study of investment analysis for real estate decisions, including taxation, risk, financial leverage, land use and market analysis will be covered in depth.

**Prerequisites:** (FN 310 [Min Grade: C] or BUS 310 [Min Grade: C]) and FN 370 [Min Grade: C]

**FN 490. Advanced Topics in Finance. 3 Hours.**

Issues and problems in selected areas of finance.

**Prerequisites:** GPAO 2.00

**FN 496. Business Analysis and Valuation Using Financial Statements. 3 Hours.**

This case-based accounting and finance capstone course articulates the linkage between accounting and finance and provides a framework for using financial statement data in business analysis and valuation contexts. Topics include business strategy, accounting and financial analysis, financial forecasting, and an introduction to business valuation.

**Prerequisites:** FN 410 [Min Grade: C] or AC 300 [Min Grade: C] or AC 320 [Min Grade: C]

**FN 499. Directed Readings in Finance. 1-3 Hour.**

Supervised study of specific areas of finance.

**Prerequisites:** GPAO 2.00

**IB-International Business Courses****IB 320. Global Innovation. 3 Hours.**

This course provides students with fundamental knowledge of world economies, the nature of innovation, and the cultural and country characteristics that drive innovation. Students engage in self-assessment and self-reflection to identify and develop their cultural intelligence. Furthermore, students learn research tools to conduct comparative analysis of countries based on the key success factors of an innovation "ecosystem."

**Prerequisites:** EC 211 [Min Grade: C]

**IB 439. Global Business Communications. 3 Hours.**

An advanced business communications course for undergraduates focusing on global communication skills required of students entering today's international business environment.

**Prerequisites:** EH 101 [Min Grade: C] and EH 102 [Min Grade: C] and BUS 350 [Min Grade: C]

**IB 495. Business Study Abroad. 3 Hours.**

Academic course of study in a business discipline which takes place in a foreign location. Sophomore standing, UAB GPA minimum 2.7 and permission of Collat School of Business faculty sponsor.

**Prerequisites:** GPAO 2.00

**IS-Information Systems Courses****IS 204. Introduction to Business Programming. 3 Hours.**

An introductory course addressing the concepts, structures, and use of an event-driven programming language to implement business solutions. Emphasis is placed on developing general problem-solving strategies and implementing solutions through algorithm development.

**Prerequisites:** MA 105 [Min Grade: C]

**IS 301. Introduction to Database Management Systems. 3 Hours.**

An introductory course on database management systems. Emphasis is placed on providing students with the fundamental knowledge necessary to model business data needs, design logical data models, and design, implement, and use of a physical database in application development.

**Prerequisites:** IS 321 [Min Grade: C]

**IS 302. Business Data Communications. 3 Hours.**

A study of data communications technologies used for business. The technologies include local and wide area networks, as well as telephony. Network management and security are also emphasized.

**IS 303. Information Systems. 3 Hours.**

A survey course covering the theory and application of management information systems in business environments. Includes planning, development and implementation of business strategies that leverage information systems for competitive advantage.

**Prerequisites:** GPAO 2.00

**IS 321. Systems Analysis. 3 Hours.**

Focuses on the planning, decision making tasks and requisite skills necessary for the analysis of information systems.

**Prerequisites:** GPAO 2.00

**IS 413. Introduction to Information Security. 3 Hours.**

This course serves as an introduction to the field of information security where students will develop a basic understanding of the information security principles. Students will be able to understand the business value of information security and its legal/ ethical considerations. Students will also gain an appreciation for security planning and risk management and how risk may be mitigated through technical, physical, and administrative controls.

**IS 414. Information Security Planning and Management. 3 Hours.**

Primary objectives of the course are for the student to develop an understanding of key information security concepts, develop an understanding of how people, technology, and organizational policies should be developed and managed to safeguard an organization's information resources, learn how to manage under uncertainty and risk, develop policies and procedures to make information systems secure, and learn how to audit and recover from security breaches.

**Prerequisites:** IS 413 [Min Grade: C]

**IS 417. Introduction to Business Intelligence. 3 Hours.**

This course covers topics of knowledge management and business intelligence from an organizational IT perspective. The content of the course includes discussion of and readings on the nature of knowledge; knowledge discovery, generation, capture, transfer, sharing, and application; and includes discussion of the core IT capabilities necessary to deliver Business Intelligence in organizations. The development and use of data warehouses and data marts to support business analytics is discussed.

**IS 418. Applied Data Science for Information Systems. 3 Hours.**

A course in Business Analytics focusing on the extraction and preparation of data for analysis, applying analysis methods, and reporting analysis results. Students will also examine issues related to data stewardship and provenance.

**IS 464. IS Internship. 1-3 Hour.**

Work experience enabling students to better integrate academic knowledge with practical applications by exposure to information systems and the business environment. 2.0 GPA in IS courses and permission of instructor required. Must be an Information Systems major. Sponsoring business may require additional courses.

**Prerequisites:** GPAO 2.00

**IS 491. Current Topics in Information Systems. 3 Hours.**

A study of selected current developments in information systems emphasizing development and managerial implications. Permission of instructor required.

**Prerequisites:** GPAO 2.00

**IS 499. Directed Readings. 1-3 Hour.**

Readings and independent study in selected areas.

**LCB - FLC in Business Courses****LCB 101. Dollars and Sense/SL. 3 Hours.**

This anchor course will take a practical approach to introducing students to the very real issue of managing their finances in the college environment by engaging them in creating a lifetime financial plan as well as participating in a service learning project. Topics of this course include financial literacy and the mathematics of money. This is a designated service-learning course integrating academic learning, civic learning and meaningful service to the community.

**LCB 102. Roadmap Professional Succes. 3 Hours.**

What is professionalism? What does it mean to be a professional? This course will use your experiences and define these difficult terms together. Then explore many aspects of professionalism including ethical decision making, communication, creative thinking, emotional intelligence, and expectations of professional standards. You will learn by practicing and helping others, guest speakers, readings, class discussions, and a variety of other learning tools. Open to all majors, this course is designed to help you now as you go through school and build your resume as well as after graduation as you BECOME a professional.

**LCB 103. I Lead: Access Ldshp Potential. 3 Hours.**

This anchor course will examine qualities of effective leaders and how leadership skills can affect everything from your personal relationships to your career development. Students will develop their own leadership goals and show specific plans to achieve these goals. Self assessment tools will be used in this course to help students identify what type of leadership qualities and characteristics they have.

**LCB 106. Global Perspective. 3 Hours.**

This FLC will examine how understanding the global marketplace will be essential for students in the 21st century. This FLC is designed to start students on a path to develop a perspective that appreciates the complexities of international culture and business.

**LCB 107. Developing the Leader Within. 3 Hours.**

This course will examine qualities of leaders who inspire others to work together to succeed. The role of leadership in personal and professional development will be explored. Through self-assessment, students will learn to recognize their individual strengths and opportunities for improvement as leaders. Students will develop their own leadership goals and show specific plans to achieve these goals.

**LCB 108. Ingenuity and Innovation. 3 Hours.**

This course focuses on how to create innovative solutions to real marketplace problems. It has an experiential learning format that emphasizes open-minded inquiry to uncover unsolved problems and practical creativity to create solutions. Topics include creativity, ideation, environmental screening, idea evaluation and entrepreneurship.

**LS-Legal Studies Courses****LS 246. Legal Environment of Business. 3 Hours.**

This course is required for all students in the Collat School of Business. Students acquire a general knowledge of the legal environment of business.

**LS 457. Business Law for Accountants. 3 Hours.**

Legal forms of business organization, including partnerships and corporations. Commercial paper, especially negotiable instruments; sales under Uniform Commercial Code; other CPA examination material. Junior standing required.

**Prerequisites:** (LS 246 [Min Grade: C] and GPAO 2.00)

**LS 471. Legal Elements of Fraud Investigation. 3 Hours.**

Key legal principles and courtroom procedures relevant to forensic accounting, and survey of related topics--criminology theories, evidence management, and litigation services.

**Prerequisites:** (LS 246 [Min Grade: C] and GPAO 2.00)

**MG-Management Courses****MG 302. Management Processes and Behavior. 3 Hours.**

This Introductory course covers the four functions of management: planning, organizing, leading, and controlling. Strategic planning, teamwork, diversity, communication, and globalization are emphasized also.

**Prerequisites:** GPAO 2.00

**MG 304. Managerial Spreadsheet Analytics. 3 Hours.**

This course provides an introduction to concepts and methods of business analytics with a focus on the application of spreadsheet modeling and analysis to managerial decision making.

**Prerequisites:** QM 214 [Min Grade: C]

**MG 305. Nonprofit Organization Mgmt/SL. 3 Hours.**

The purpose of this course is to expose students to the historical origins of NPOs/NGOs, their favored tax status, and demands of transparency and accountability of achieving their stated missions. This course also exposes students to the challenges of managing a voluntary workforce, identifying revenue streams to fund activities, and developing strategies to ensure value creation in the nonprofit setting. This course is experiential. Students will explore the various aspects of the nonprofit sector academically and will also get first hand experience with a chosen NPO/NGO.

**MG 306. Managing Innovation. 3 Hours.**

This course addresses selected challenges and opportunities related to managing innovation. The purpose of this course is to provide an overview of the role of creativity and innovation in organizations, examine the managerial strategies and tactics for fostering innovation, and to help students enhance their own ability to innovate.

**MG 309. Hogwarts School of Leadership. 3 Hours.**

The Harry Potter book/movie series is full of insights about life matters. They also teach us about how to be better business managers in addressing adversity, success, leadership, and ethics. In this class, we will examine various leadership theories and popular management/leadership books and understand them in terms of the characters and situations presented in the Harry Potter book/movie series. In order to be successful in the course, students should have read most, and preferably all, of the Harry Potter books prior to the beginning of the semester. Being very familiar with all of the movies is also acceptable.

**MG 401. Organizational Behavior. 3 Hours.**

Organizational behavior is the study of individuals and their behavior in the workplace. The course looks at behaviors across individual, group, and organizational levels. Broad topics include organizational behavior and leadership, understanding individuals in organizations, motivating employees, building relationships, and creating change.

**Prerequisites:** (MG 302 [Min Grade: C] and GPAO 2.00)

**MG 403. Operations Management. 3 Hours.**

This course covers the strategic, tactical, and integrative roles of Operations in the management of service and manufacturing organizations in a globally competitive economy. Students will learn how to maximize efficiency and value in a business environment. Topics include productivity, design and process strategies, sustainability, ethics, quality management, supply chain strategies, scheduling, forecasting, inventory management, facilities location and layout strategies, maintenance and reliability.

**Prerequisites:** AC 201 [Min Grade: C] and EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C] and MG 302 [Min Grade: C]

**MG 405. Nonprofit Strategy and Entrepreneurship. 3 Hours.**

This course takes students on the journey from a promising program idea through the steps necessary to create a viable strategic plan for your program's business model. Working as individuals and small teams, students will work with an assigned nonprofit organization (NPO) start-up, or established NPO, seeking the next steps for their program idea. These steps include analyzing and defending a suggested business model and strategic analysis where individuals or teams suggest improvements and next steps for this NPO. Along the way students will meet and interact with local nonprofits and engage in thought-provoking brainstorming sessions with some of Birmingham's most innovative and creative nonprofits.

**MG 409. Human Resource Management. 3 Hours.**

This course covers managerial problems associated with the acquisition, development, motivation, and compensation of human resources. Personnel problems such as employment, employee education and training, labor relations, industrial health and safety, and wage and salary administration.

**Prerequisites:** (MG 302 [Min Grade: C] and GPAO 2.00)

**MG 410. Labor-Management Relations. 3 Hours.**

Analysis of managerial issues and opportunities associated with the development of labor-management relations policy. The impact of public policy, significance of pressure groups, negotiations and administration of the collective bargaining agreements, along with the role of the National Labor Relations Board (NLRB) and Labor Relations(LA) as a matter of policy.

**Prerequisites:** (MG 302 [Min Grade: C] and GPAO 2.00)

**MG 411. Compensation Administration. 3 Hours.**

This course covers compensation administration in public and private organizations, with emphasis on determination of range, salary levels, and structures. Job evaluation, pay systems, and wage and benefits legal issues are covered.

**Prerequisites:** (MG 409 [Min Grade: C] and GPAO 2.00)

**MG 412. Organizational Staffing. 3 Hours.**

Primary focus is on the employee recruiting and selection functions within organizations. Strategic staffing, Federal laws and regulations impacting staffing activities, recruitment and selection practices, hiring decision approaches, job analysis and measurement in selection will also be covered in detail.

**Prerequisites:** MG 409 [Min Grade: C] and QM 215 [Min Grade: C]

**MG 413. Employment Law. 3 Hours.**

Management of legal risks arising from hiring, promotion, and other human resources transactions, including risks arising under anti-discrimination laws (e.g., Title VII of Civil Rights Act of 1964) and income security laws (e.g., Fair Labor Standards Act and Family Medical Leave Act).

**Prerequisites:** GPAO 2.00

**MG 414. Talent Development. 3 Hours.**

This course focuses on strategies and practices for training and developing employee capabilities that improve individual and organizational success. Specific focus is placed on building personal, professional, and organizational capabilities that fosters growth. Topics include talent development methods and assessment, learning styles, delivery methods including elearning, and employee development.

**Prerequisites:** MG 409 [Min Grade: C]

**MG 415. International Business Dynamics. 3 Hours.**

Essential information that managers need to know about international business. We will consider cultural, political, and geographic differences and develop strategies to attempt to maximize business opportunities in view of these differences.

**Prerequisites:** MG 302 [Min Grade: C] or BUS 311 [Min Grade: C]

**MG 416. Supply Chain Management. 3 Hours.**

Course takes operational view of the mechanism for matching supply and demand through the management of material and information flow. This framework is used to understand strategic, design and operational issues insupply management.

**Prerequisites:** (MG 403 [Min Grade: C] and GPAO 2.00)

**MG 417. Project Management. 3 Hours.**

The course covers project management principles, methods, techniques, and tools from the perspective of the manager who must plan, schedule, organize and control non-routine activities to achieve schedule, budget and performance objectives. It traverses the life-cycle of a project and the knowledge areas that are applicable at each stage.

**Prerequisites:** MG 302 [Min Grade: C]

**MG 418. Quality Management. 3 Hours.**

Concepts, techniques, and organizational requirements to ensure that quality is provided to consumer. Breadth of quality efforts, statistical quality control methods, quality circle principles, and quality assurance activities in various enterprises.

**Prerequisites:** (MG 403 [Min Grade: C] and GPAT and GPAO 2.00) or (MG 403 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**MG 425. Managing Through Leadership. 3 Hours.**

Provide students with a comprehensive understanding of leadership as a phenomenon, with an emphasis on developing the skills to lead others. Major theories of leadership will be examined and students will gain insights about their individual strengths and weaknesses. Through hands-on experiences and workshops, students will develop and acquire the skills to lead high-performance teams that can optimize their productivity and deliver high-quality results.

**MG 430. Management and Leadership in Sports and Entertainment Organizations. 3 Hours.**

Students will gain an understanding of leadership requirements and challenges in the sports and entertainment industries. Topics include: problem solving and decision making, culture, human resource management, teams, communication, motivation, leadership, facilities and events. This is a service/experiential learning designated course.

**Prerequisites:** GPAO 2.00

**MG 438. Managerial Communication Skills. 3 Hours.**

An advanced business communications course for undergraduates focusing on the verbal and nonverbal communication skills required of managers in today's business environment.

**MG 445. Management Internship. 1-3 Hour.**

Offers qualified undergraduate students the chance to gain first-hand experience in a local business while receiving academic credit. Must be a management major, at least junior standing, C or better in MG 302 and GPA of 2.0 overall. Sponsoring business may require additional courses.

**Prerequisites:** MG 302 [Min Grade: C] and GPAO 2.0

**MG 490. Management Seminar/SL. 3 Hours.**

Selected management topics. This is a designated service-learning course integrating academic learning, civic learning and meaningful service to the community.

**Prerequisites:** GPAU 2.00 and GPAO 2.00 and MG 302 [Min Grade: C]

**MG 492. Current Topics in Production and Operations Management. 3 Hours.**

Selected topics in production and operations management.

**Prerequisites:** (MG 403 [Min Grade: C] and GPAT and GPAO 2.00) or (MG 403 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**MG 493. Current Topics in Human Resource Management. 3 Hours.**

Current development and issues in human resource management.

**Prerequisites:** (MG 409 [Min Grade: C] and GPAT and GPAO 2.00) and (MG 409 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**MG 499. Directed Study in Management. 1-3 Hour.**

Specific areas in management.

**Prerequisites:** (GPAT and GPAO 2.00) or (GPAU 2.00 and GPAO 2.00)

**MK-Marketing Courses****MK 101. Introduction to Consumer Marketing. 3 Hours.**

Survey course designed to provide understanding of business marketing practices and consumer decision making processes. Open to all UAB students.

**MK 303. Basic Marketing. 3 Hours.**

Survey course of the modern business process for planning, distributing, promoting and pricing of products (goods and services) for domestic and international organizations.

**Prerequisites:** GPAO 2

**MK 310. Consumer Behavior. 3 Hours.**

This course focuses on models and concepts that help managers understand and act upon consumer behavior. The course is designed to enhance student understanding of consumer behavior, and provide opportunities for students to apply this knowledge. The course is presented from the perspective of a marketing manager.

**Prerequisites:** MK 303 [Min Grade: C]

**MK 312. Retail Marketing. 3 Hours.**

Business to consumer marketing with consideration for location, organization, buying, receiving stock inventory and control, policies, pricing, services, control and personnel management within retail establishments.

**Prerequisites:** (MK 303 [Min Grade: C] and GPAO 2.00)

**MK 330. Professional Selling. 3 Hours.**

The course focuses on the fundamentals of professional selling and the professionalization of the field. The course combines personal selling theory with actual practice. Students develop the analytical and communicative skills useful in their future business relationship-building activities. Analytical skills are developed through an assignment that requires students to research, design, and present their own comprehensive sales scenario. Students practice their communicative skills through in-class role playing.

**Prerequisites:** GPAO 2.0

**MK 333. Sports Marketing. 3 Hours.**

Strategic analysis, positioning and marketing of professional and amateur sports events and organizations. The goal is to provide students with a comprehensive view of all that is required to successfully market a sporting organization or event. Junior standing required.

**Prerequisites:** GPAO 2.00

**MK 401. Social Media in Marketing. 3 Hours.**

Survey course of the unique aspects of marketing through social media. The focus is on the application of new and emerging social media communications systems and practices that are becoming major elements in integrated marketing communication programs.

**Prerequisites:** MK 303 [Min Grade: C]

**MK 405. Marketing Analytics. 3 Hours.**

This course focuses on the analysis and use of data to make better strategic and tactical marketing decisions.

**Prerequisites:** MK 303 [Min Grade: C] and QM 215 [Min Grade: C]

**MK 408. Marketing Research. 3 Hours.**

Research techniques in marketing with application of research findings to decision making and formulation of marketing strategies.

**Prerequisites:** (MK 303 [Min Grade: C] and AC 201 [Min Grade: C] and EC 211 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C] and GPAO 2.00)

**MK 410. Integrated Marketing Communication. 3 Hours.**

Considers the organizations coordinated and strategic use of communication tools used in marketing including advertising, sales promotion, direct marketing, interactive media, publicity/public relations, sponsorship marketing, point-of-purchase communications and personal selling.

**Prerequisites:** (MK 303 [Min Grade: C] and AC 201 [Min Grade: C] and EC 211 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C] and GPAO 2.00)

**MK 416. International Marketing. 3 Hours.**

International marketing activities, including environmental issues, marketing strategy and tactical considerations in entering foreign markets.

**Prerequisites:** MK 303 [Min Grade: C] or BUS 311 [Min Grade: C]

**MK 418. Digital Marketing. 3 Hours.**

Overview of various digital marketing strategies, tools, and metrics used to deliver value to businesses and consumers.

**Prerequisites:** MK 303 [Min Grade: C]

**MK 419. Services Marketing. 3 Hours.**

Understanding service customers, customer satisfaction, motivating service employees, improving service quality and role of services in strategy planning.

**Prerequisites:** (MK 303 [Min Grade: C] and AC 201 [Min Grade: C] and EC 211 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C] and GPAT and GPAO 2.00) or (MK 303 [Min Grade: C] and AC 201 [Min Grade: C] and EC 211 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**MK 420. Sales Management. 3 Hours.**

The course focuses on the fundamentals of professional selling and the professionalization of the field. The course combines personal selling theory with actual practice. Students develop the analytical and communicative skills useful in their future business relationship-building activities. Analytical skills are developed through an assignment that requires students to research, design, and present their own comprehensive sales scenario. Students practice their communicative skills through in-class role playing.

**Prerequisites:** MK 330 [Min Grade: C](Can be taken Concurrently)

**MK 423. Emerging Trends in Professional Selling. 3 Hours.**

Emerging Trends in Professional Selling is a module-based course that focuses on advanced selling topics in the business-to-business context that are both relevant and timely. The course will introduce students to these topics while focusing on the skills necessary for success as it relates to each topic. Topics may include, but are not limited to, inside selling, virtual selling, social selling, team-based selling, strategic account management, customer relationship management (CRM) software utilization, and sales negotiations. Topics focused upon will be reviewed on an annual basis to ensure relevance in relation to industry, and corresponding student, needs.

**Prerequisites:** MK 330 [Min Grade: C]

**MK 425. Advanced Professional Selling. 3 Hours.**

This course builds upon the basic selling skills learned in MK 330 and other communications courses. The students will focus on enhancing value-adding selling skills and developing long-term, mutually-beneficial customer relationships in a B2B context.

**Prerequisites:** MK 330 [Min Grade: C]

**MK 436. Digital Marketing Analytics. 3 Hours.**

Exploration of measuring and analyzing digital marketing strategies. Students will acquire industry certification in addition to creating an online marketing strategy with an emphasis on campaign optimization.

**Prerequisites:** MK 303 [Min Grade: C]

**MK 440. Small Business Consulting and Research. 3 Hours.**

Applied field work integrating functional business fields of management, finance, accounting, marketing, economics, production policy, and decision making related to small business enterprises.

**Prerequisites:** FN 310 [Min Grade: C] and MG 302 [Min Grade: C] and MK 303 [Min Grade: C]

**MK 445. Marketing Internship. 1-3 Hour.**

Offers qualified undergraduate students the chance to gain first-hand experience in a local business while receiving academic credit. Marketing major and junior standing required. Sponsoring business may require additional courses.

**Prerequisites:** (MK 303 [Min Grade: C] and GPAU 2.00 and AC 201 [Min Grade: C] and EC 211 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C] and GPAT and GPAO 2.00) or (MK 303 [Min Grade: B] and AC 201 [Min Grade: C] and EC 211 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**MK 449. Integrated Marketing Communications Practicum. 3 Hours.**

Students will use their marketing knowledge to create social media marketing plans for local organizations, primarily focusing on the tactical aspects of integrated marketing communications. This practicum is a requirement for those seeking to obtain an undergraduate social media marketing certificate.

**Prerequisites:** MK 303 [Min Grade: C]

**MK 450. Strategic Marketing. 3 Hours.**

Course addresses problems of marketing management with emphasis on planning, implementing and controlling marketing activities with individual firms.

**Prerequisites:** (BUS 350 [Min Grade: C] and FN 310 [Min Grade: C] and MK 312 [Min Grade: C] and MK 320 [Min Grade: C] and MK 408 [Min Grade: C] and MK 410 [Min Grade: C] and GPAO 2.00)

**MK 471. Health Care Marketing. 3 Hours.**

This class is designed for upper level students with an interest in and/or who seek employment in the healthcare industry. It is also appropriate for seniors in Medical Equipment Sales and Distribution. The primary objective of this course is to provide students with a comprehensive overview of the marketing fundamentals in the health care environment. The course examines health care organizations as customers in a Business to Business environment as well as the special challenges in implementing marketing strategies.

**MK 490. Special Topics in Marketing. 3 Hours.**

Selected marketing topics not covered in other marketing courses.

**Prerequisites:** (MK 303 [Min Grade: C] and GPAO 2.00)

**MK 499. Directed Readings in Marketing. 1-3 Hour.**

Specific areas in marketing.

**Prerequisites:** GPAO 2.00

**QM-Quantitative Methods Courses****QM 214. Quantitative Analysis I. 3 Hours.**

This course is an introductory course to statistics and data analyses for business students. Students will be exposed to basic statistical concepts and procedures to handle the data. Students are expected to recognize the nature of their data, select appropriate procedures, perform requisite calculations, demonstrate computer proficiency, and explain the results to layperson.

**Prerequisites:** (MA 105 [Min Grade: C] or MA 106 [Min Grade: C] or MA 109 [Min Grade: C] or MA 125 [Min Grade: C]) and BUS 110 [Min Grade: C]

**QM 215. Quantitative Analysis II. 3 Hours.**

QM215 is the sequel of QM214 and a continuation of introductory statistics and data analyses. Built upon students' understanding of descriptive statistics and probability, this course exposes students to inferential statistics. Upon finishing the course, students are expected to know how to formulate hypotheses, collect data, select appropriate model(s), conduct statistical analyses, and present statistical findings with proper support of statistical graphs.

**Prerequisites:** QM 214 [Min Grade: C]

**QM 350. Quantitative Methods for Finance. 3 Hours.**

Development of the mathematical foundations of undergraduate level financial modeling and analysis, including applications of calculus, probability theory, linear algebra and Monte Carlo simulation to the measurement of asset returns and the assessment of risk, to the pricing of options and other financial derivatives, and to the solution of important financial optimization problems.

**Prerequisites:** (QM 215 [Min Grade: C] and CS 101 [Min Grade: C] and GPAO 2.00)

**QM 420. Applied Forecasting. 3 Hours.**

Practical use of various forecasting techniques on business and economic data. Topics include dynamic regression models, exponential smoothing, forecast criteria, moving averages, seasonality, and univariate Box Jenkins ARIMA modeling. Completion of all pre-business requirements required.

**Prerequisites:** (GPAT and GPAO 2.00 and AC 201 [Min Grade: C] and EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C]) or (GPAU 2.00 and GPAO 2.00 and AC 201 [Min Grade: C] and EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C])

**QM 490. Advanced Topics in Statistics/Management Science. 3 Hours.**

Statistics/management science application to problems in business and economics.

**Prerequisites:** (GPAT and GPAO 2.00) or (GPAU 2.00 and GPAO 2.00)

**QM 499. Directed Readings in Quantitative Methods. 1-3 Hour.**

Readings and independent study in selected areas.

**Prerequisites:** (GPAT and GPAO 2.00) or (GPAU 2.00 and GPAO 2.00) and EC 211 [Min Grade: C] and QM 215 [Min Grade: C] and EC 210 [Min Grade: C]

## Department of Accounting and Finance

**Chair:** Stephanie Yates, Ph.D

The Department of Accounting and Finance strives to provide a quality, practice-oriented educational experience to a diverse undergraduate and graduate student population. The faculty contributes to the understanding and application of knowledge through its teaching, research and service activities.

The Department is responsible for courses, concentrations, majors and minors in accounting and finance. Below is an overview of each major. Detailed degree requirements are located on the Majors Tab above.

### Accounting Major

The objective of the major in accounting is to provide conceptual accounting and business knowledge as a foundation for professional careers in public accounting, private or industrial accounting, and governmental or not-for-profit accounting, or for pursuing study at the graduate level.

The various accounting career choices available to students mandate different course emphasis, and our curriculum offers a selection of course choices. Students may further specialize by pursuing the concentration in forensic accounting and information technology auditing.

### Finance Major

The finance curriculum is designed to provide an understanding of financial operating and investment problems in both financial and non-financial businesses. Careers are available in areas such as government, securities businesses, banking, insurance, real estate, savings and other financial intermediaries, and in the financial management of non-financial businesses.

## Uniform CPA Exam

As of January 1, 2016, the State of Alabama requires that applicants for the Uniform CPA Exam hold a baccalaureate degree from an accredited institution and possess a total of 120 semester hours of post-secondary education, including at least 24 semester hours of accounting at the upper-division or graduate level. However, 150 semester hours are required to be certified as a public accountant.

There are two ways that UAB students can meet these requirements:

1. By obtaining an undergraduate accounting degree (or its equivalent) and completing certain additional coursework as specified under state law. Students interested in this option should contact an undergraduate advisor in The Department of Accounting and Finance for specific guidance. Students interested in this option and that hold degrees from other institutions should contact an undergraduate business advisor as well as apply to the university as a post baccalaureate degree-seeking student.
2. By obtaining a Master of Accounting degree. The Department of Accounting and Finance offers a master's program that is fully accredited by AACSB International. Students interested in this option should refer to the UAB Graduate School Catalog for admission policies.

## Other Professional Accounting Certifications

Other examinations leading to professional certification (CMA, CIA, CFA, etc.) generally do not require academic coursework beyond the baccalaureate degree. Students interested in other accounting certifications should contact an undergraduate Accounting advisor or a member of the accounting faculty for further information.

## Major in Accounting

### Requirements

### Hours

Students must earn a minimum grade of a B in AC 200. Students who wish to pursue a career path in public accounting must earn a minimum grade of a B for the financial accounting course sequence of AC 300, AC 310, and AC 430. A minimum grade of C is required for all other accounting courses for all career paths. At least 15 hours of the major course requirements must be earned at UAB.

Core Curriculum		41
Lower Level Business Requirements		
AC 200	Principles of Accounting I	3
AC 201	Principles of Accounting II	3
BUS 101	Introduction to Business	3
or BUS 102	Business Foundations	
BUS 110	Essentials of Financial Literacy	3
LS 246	Legal Environment of Business	3
QM 214	Quantitative Analysis I	3
QM 215	Quantitative Analysis II	3
Upper Level Business Requirements		
AC 305	Professional Development in Accountancy	1
BUS 350	Business Communications	3
FN 310	Fundamentals of Financial Management	3
IS 303	Information Systems	3
MG 302	Management Processes and Behavior	3
MG 403	Operations Management	3
or DB 320	Distribution Management	

MK 303	Basic Marketing	3
BUS 450	Strategic Management Capstone Experience <sup>2</sup>	3
or BUS 495	Business Honors Seminar, I	
International Business <sup>5</sup>		3
Experiential Learning <sup>3</sup>		
Accounting Major Courses		
AC 300	Financial Accounting I <sup>4</sup>	3
AC 304	Accounting Information Systems <sup>4</sup>	3
AC 401	Cost Accounting	3
AC 309	Intermediate Accounting for Corporate Careers	3
or AC 310	Financial Accounting II	
AC 402	Income Taxation I	3
AC 413	Internal Auditing	3
or AC 423	External Auditing	
Choose one:		3
AC 414	Governmental and Not-for-Profit Accounting	
AC 430	Financial Accounting III	
AC 452	Income Taxation II	
Accounting Major Elective		3
General Electives		9
Total Hours		120

<sup>2</sup> Business Honors students take BUS 495.

<sup>3</sup> All business majors are required to participate in experiential education. This requirement may carry 0 - 3 credit hours. This requirement may be met by satisfactory completion of one of the following courses or other course/project approved by your academic advisor:  
 AC 364, AC 464, AC 474, BUS 496, DB 495, EC 460, ENT 445, ENT 426, FN 460, FN 358, FN 359, IB 495, IS 464, MG 445, MK 425, MK 445. Please see your advisor for specific requirements for your major.

<sup>4</sup> May be taken concurrently.

<sup>5</sup> Students select one from: AC 440, MG 415, MK 416, EC 407, IB 320, IB 439, IB 495, or FN 412.

## Major in Finance

### Requirements

### Hours

Finance majors must earn a minimum grade of C in all finance courses and have an overall 2.0 GPA in all major courses. At least 15 hours of the major must be taken at UAB. The university course forgiveness policy may be applied to any finance concentration.

Upper-Level Requirements		
Core Curriculum		41
Lower Level Business Requirements		
AC 200	Principles of Accounting I	3
AC 201	Principles of Accounting II	3
BUS 101	Introduction to Business	3
or BUS 102	Business Foundations	
BUS 110	Essentials of Financial Literacy	3
LS 246	Legal Environment of Business	3
QM 214	Quantitative Analysis I	3
QM 215	Quantitative Analysis II	3
Upper Level Business Requirements		
BUS 305	Professional Development for Today's Workplace	1
BUS 350	Business Communications	3
IS 303	Information Systems	3
MK 303	Basic Marketing	3

FN 310	Fundamentals of Financial Management	3
MG 302	Management Processes and Behavior	3
QM 350	Quantitative Methods for Finance	3
or FN 330	Quantitative Financial Analysis	
FN 412	International Financial Management (Satisfies International Business Requirement)	3
BUS 450	Strategic Management Capstone Experience <sup>2</sup>	3
or BUS 495	Business Honors Seminar, I	
<b>Experiential Learning<sup>3</sup></b>		
<b>Finance Major Courses</b>		
FN 325	Financial Analysis & Forecasting	3
FN 350	Investments	3
FN 410	Corporate Finance	3
Choose four 300/400 level FN courses <sup>4</sup>		12
<b>General Electives</b>		<b>6</b>
Total Hours		114

<sup>2</sup> Business Honors students take BUS 495.

<sup>3</sup> All business majors are required to participate in experiential education. This requirement may carry 0 - 3 credit hours. This requirement may be met by satisfactory completion of one of the following courses or other course/project approved by the department chair: AC 364, AC 464, AC 474, BUS 496, DB 495, EC 460, ENT 445, ENT 426, FN 460, FN 358, FN 359, IB 495, IS 464, MG 445, MK 425, MK 445 Please see your advisor for specific options for your major.

<sup>4</sup> You may choose one of these classes to apply toward the 12 hours in FN electives for this major: AC 300, AC 401, AC 402, or EC 420.

## Proposed Program of Study for a Major in Accounting

### Freshman

First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
MA 105		3 CMST 101	3
BUS 101		3 BUS 110	3
Core Curriculum Area IV: Social & Behavioral Science		3 Core Curriculum Area II: Humanities and Fine Art <sup>1</sup>	3
Core Curriculum Area III: Natural Science with Lab		4 Core Curriculum Area IV: History <sup>2</sup>	3
		16	15

### Sophomore

First Term	Hours	Second Term	Hours
QM 214		3 LS 246	3
AC 200 (must earn a grade of B or better)		3 QM 215	3
EC 210		3 AC 201	3
Core Curriculum Area II: Literature		3 EC 211	3
Core Curriculum Area III: Natural Science (with laboratory)		4 Core Curriculum Area II	3
		16	15

### Junior

First Term	Hours	Second Term	Hours
BUS 350		3 MK 303	3
MG 302		3 AC 310	3
AC 304		3 AC 402	3

AC 300	3 AC 401	3
AC 305	1 MG 403	3
		13
		15

### Senior

First Term	Hours	Second Term	Hours
FN 310		3 BUS 450 <sup>4</sup>	3
AC 413		3 International Business Elective <sup>3</sup>	3
IS 303		3 Accounting Elective (400 level)	3
AC 430		3 General Elective	6
Experiential Requirement		3	
		15	15

Total credit hours: 120

<sup>1</sup> Select one of the following courses: ARH 101, MU 120 or THR 100.

<sup>2</sup> Select one of the following courses: HY 101, HY 102, HY 104, HY 105, HY 120 or HY 121.

<sup>3</sup> Select one of the following: AC 440, FN 412, EC 407, MK 416 or MG 415.

<sup>4</sup> Business Honors students take BUS 495.

## Proposed Program of Study for a Major in Finance with a Concentration in Financial Management

### Freshman

First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
MA 105		3 CMST 101	3
BUS 101		3 BUS 110	3
Core Curriculum Area II: Humanities and Fine Arts <sup>1</sup>		3 Core Curriculum Area III: Natural Science (with laboratory)	4
Core Curriculum Area IV: Social & Behavioral Science		3 Core Curriculum Area IV: History <sup>2</sup>	3
		15	16

### Sophomore

First Term	Hours	Second Term	Hours
QM 214		3 LS 246	3
AC 200		3 QM 215	3
EC 210		3 AC 201	3
Core Curriculum Area II: Literature		3 EC 211	3
Core Curriculum Area III: Natural Science (with laboratory)		4 Core Curriculum Area II	3
		16	15

### Junior

First Term	Hours	Second Term	Hours
QM 350		3 IS 303	3
FN 310		3 FN 410	3
FN 325		3 FN 412	3
BUS 305		1 MK 303	3
BUS 350		3 FN 370	3
		13	15

### Senior

First Term	Hours	Second Term	Hours
FN 350		3 BUS 450	3

FN 320	3 FNMG Concentration Elective	3
MG 302	3 FNMG Concentration Elective	3
FNMG Concentration Elective	3 Experiential requirement	3
FNMG Concentration Elective	3 General Electives	3
15		15

Total credit hours: 120

## Proposed Program of Study for a Major in Finance with a Concentration in Investments and Institutions

### Freshman

First Term	Hours	Second Term	Hours
EH 101	3	EH 102	3
MA 105	3	CMST 101	3
BUS 101	3	BUS 110	3
Core Curriculum Area IV: Social and Behavioral Science <sup>2</sup>	3	Core Curriculum Area IV: History <sup>1</sup>	3
Core Curriculum Area II: Fine Art	3	Core Curriculum Area III: Natural Science (with laboratory)	4
15		16	

### Sophomore

First Term	Hours	Second Term	Hours
QM 214	3	LS 246	3
AC 200	3	QM 215	3
EC 210	3	AC 201	3
Core Curriculum Area II: Literature	3	EC 211	3
Core Curriculum Area III: Natural Science (with laboratory)	4	Core Curriculum Area II	3
16		15	

### Junior

First Term	Hours	Second Term	Hours
BUS 305	1	IS 303	3
QM 350	3	FN 410	3
FN 325	3	FN 412	3
FN 310	3	MK 303	3
BUS 350	3	FN 370	3
13		15	

### Senior

First Term	Hours	Second Term	Hours
FN 350	3	BUS 450	3
FN 320	3	I and I Concentration Elective	3
MG 302	3	I and I Concentration Elective	3
I and I Concentration Elective	3	General Electives	3
I and I Concentration Elective	3	Experiential Requirement	3
15		15	

Total credit hours: 120

## Proposed Program of Study for a Major in Finance with a Real Estate Concentration

### Freshman

First Term	Hours	Second Term	Hours
EH 101	3	EH 102	3
MA 105	3	CMST 101	3
BUS 101	3	BUS 110	3
Core Curriculum Area II: Humanities, Fine Arts <sup>1</sup>	3	Core Curriculum Area IV: History <sup>1</sup>	3
Core Curriculum Area IV: Social and Behavioral Science	3	Core Curriculum Area III: Natural Science (with laboratory)	4
15		16	

### Sophomore

First Term	Hours	Second Term	Hours
QM 214	3	LS 246	3
AC 200	3	QM 215	3
EC 210	3	AC 201	3
Core Curriculum Area II: Literature	3	EC 211	3
Core Curriculum Area III: Natural Science (with laboratory)	4	Core Curriculum Area II	3
16		15	

### Junior

First Term	Hours	Second Term	Hours
QM 350	3	FN 370	3
FN 310	3	IS 303	3
FN 325	3	FN 410	3
BUS 305	1	FN 412	3
BUS 350	3	MK 303	3
13		15	

### Senior

First Term	Hours	Second Term	Hours
FN 320	3	FN 475	3
FN 470	3	BUS 450	3
FN 350	3	Experiential Requirement	3
MG 302	3	Real Estate Concentration Elective	3
FN 452	3	General Elective	3
15		15	

Total credit hours: 120

<sup>1</sup> Select one of the following courses: ARH 101, MU 120, THR 100

<sup>2</sup> Select one of the following courses:  
HY 101, HY 102, HY 104, HY 105, HY 120, HY 121

## AC-Accounting Courses

### AC 200. Principles of Accounting I. 3 Hours.

Basic concepts with focus on how accounting events affect financial statements. Emphasizes preparation, communication and use of external financial reports, accrual versus cash, receivables, payables, inventory, recording long-term operational assets, long-term liabilities, stockholders, equity, recording procedures, and financial statement analysis dealing with the benefits and risks associated with that information.

**Prerequisites:** BUS 110 [Min Grade: C]

**AC 201. Principles of Accounting II. 3 Hours.**

Basic concepts associated with internal reporting. Use of relevant information for planning, control, and decision making. Cost behavior, cost allocation, product costing, budgeting, responsibility accounting, and capital budgeting.

**Prerequisites:** AC 200 [Min Grade: C]

**AC 299. Competency Exam for AC 200. 0 Hours.**

Provides a review of introductory financial accounting and an introductory financial accounting competency exam.

**Prerequisites:** AC 200 [Min Grade: D]

**AC 300. Financial Accounting I. 3 Hours.**

The course covers basic financial accounting with an emphasis on recording transactions and preparing financial statements. Topics include the accounting cycle, accrual accounting, and the preparation of the income statement, balance sheet, and statement of cash flows.

**Prerequisites:** MA 105 [Min Grade: C](Can be taken Concurrently) and AC 200 [Min Grade: B]

**AC 304. Accounting Information Systems. 3 Hours.**

Transaction processing cycles of accounting system; internal control, development, and control of information systems; emerging development of information technology.

**Prerequisites:** (AC 201 [Min Grade: C] and GPAO 2.00)

**AC 305. Professional Development in Accountancy. 1 Hour.**

This course will introduce students to the accounting profession, the recruitment process for internships and entry-level positions in accounting; the traditions, expectations and ethical demands of the profession; and the availability of diverse career options.

**AC 309. Intermediate Accounting for Corporate Careers. 3 Hours.**

The course explores the major components of the balance sheet elements assets, liabilities and equity as well as revenue recognition.

**Prerequisites:** AC 300 [Min Grade: C]

**AC 310. Financial Accounting II. 3 Hours.**

Continuation of AC 300. Inventories, plant assets, intangible assets, current liabilities, long-term debt and stockholders' equity.

**Prerequisites:** AC 300 [Min Grade: B]

**AC 364. Taxation and the Working Poor. 3 Hours.**

Students will explore the objectives and consequences of the U.S. federal tax system in relation to the working poor. Topics covered will include the Earned Income Tax Credit, progressive and regressive taxes, and income redistribution as the result of tax provisions. In addition, students will study common mis-perceptions of those living in poverty. The course will consist of classroom instruction, tax preparation training, completion of a tax certification test, and volunteer tax preparation at a community-based site. This course is open to both business and non-business majors and assumes no prior knowledge of accounting or tax. The course is a service-learning course and will satisfy the experiential-learning requirement in the Collat School of Business.

**Prerequisites:** GPAO 2.00

**AC 401. Cost Accounting. 3 Hours.**

Basic theory and procedures involving cost determination, analysis, and control. Cost allocations, application of overhead, budgeting, standard costs, job order, process and by-product costing, spoilage, and quantitative techniques. Junior standing required.

**Prerequisites:** (AC 300 [Min Grade: C] and GPAO 2.00) or (AC 320 [Min Grade: C] and GPAO 2.00)

**AC 402. Income Taxation I. 3 Hours.**

Fundamentals and basic concepts of taxation of various entities, with emphasis on federal income taxation of individuals.

**Prerequisites:** AC 300 [Min Grade: C]

**AC 413. Internal Auditing. 3 Hours.**

Theory and practice of internal auditing and application of internal auditing principles and techniques to selected audit problems.

**Prerequisites:** (AC 300 [Min Grade: C] and AC 304 [Min Grade: C] and GPAO 2.00)

**AC 414. Governmental and Not-for-Profit Accounting. 3 Hours.**

Budgetary and fund accounting as applied to municipalities, other governmental units, and institutions operating as nonprofit entities.

**Prerequisites:** (AC 300 [Min Grade: C] and AC 304 [Min Grade: C] and GPAO 2.00)

**AC 423. External Auditing. 3 Hours.**

This course covers the major phases of an external audit including preliminary engagement procedures, planning the audit, evaluation of ICFR, substantive audit procedures, and reporting.

**Prerequisites:** AC 309 [Min Grade: C](Can be taken Concurrently) or AC 310 [Min Grade: C](Can be taken Concurrently)

**AC 430. Financial Accounting III. 3 Hours.**

Accounting for Dilutive Securities and Earnings per Share, Investments, Revenue Recognition, Income Taxes, Pensions and Post-retirement Benefits, Leases, Accounting Changes and Error Analysis, and the Statement of Cash Flows.

**Prerequisites:** AC 310 [Min Grade: B]

**AC 440. International Accounting: From a User's Perspective. 3 Hours.**

Development of international accounting knowledge needed to make informed decisions in a global business environment.

**Prerequisites:** AC 300 [Min Grade: C]

**AC 441. International Accounting: Study Abroad. 3 Hours.**

Development of international accounting knowledge needed to make informed decisions in a global business environment through study abroad.

**Prerequisites:** AC 440 [Min Grade: C]

**AC 452. Income Taxation II. 3 Hours.**

Completion of fundamentals of taxation for individuals. Basic concepts and laws applicable to partnerships and corporations. Tax research techniques and tax planning concepts.

**Prerequisites:** (AC 402 [Min Grade: C] and GPAO 2.00)

**AC 464. Accounting Internship. 1-3 Hour.**

Work experience enabling students to better integrate academic knowledge with practical applications by exposure to accounting practice and business environment.

**Prerequisites:** AC 300 [Min Grade: C] and AC 304 [Min Grade: C] and AC 310 [Min Grade: C] and (AC 402 [Min Grade: C] or AC 423 [Min Grade: C])

**AC 472. Information Technology Auditing. 3 Hours.**

Introduction to the practice of information technology auditing. An emphasis is placed on information technology auditing standards and methodology, as well as guidance on auditing general computer controls and application controls.

**Prerequisites:** AC 304 [Min Grade: C]

**AC 473. Fraud Examination. 3 Hours.**

Advanced forensic accounting concepts with a primary focus on occupational fraud and abuse--its origins, perpetration, prevention, and detection.

**Prerequisites:** AC 304 [Min Grade: C] and AC 300 [Min Grade: C]

**AC 474. Forensic Accounting Practicum. 1-3 Hour.**

Work experience requiring the application of forensic accounting concepts and methods.

**Prerequisites:** (AC 472 [Min Grade: C] and AC 473 [Min Grade: C] and LS 471 [Min Grade: C] and GPAO 2.00)

**AC 480. Advanced Accounting. 3 Hours.**

Business combinations, consolidated financial statements, multinational accounting, and partnerships.

**Prerequisites:** AC 430 [Min Grade: B]

**AC 490. Advanced Topics in Accounting. 3 Hours.**

Contemporary professional accounting issues. Preq: Permission of instructor.

**Prerequisites:** GPAO 2.00

**AC 495. Data Analytics for Accounting. 3 Hours.**

This course focuses on how data analytics is utilized across a variety of accounting disciplines. Students will learn the fundamentals of data analysis and interpretation of output. Students who complete this course will obtain an introductory framework regarding the various ways data analytics is utilized in the accounting profession.

**Prerequisites:** (AC 300 [Min Grade: C] and AC 304 [Min Grade: C]) and AC 310 [Min Grade: C] and AC 401 [Min Grade: C] and AC 402 [Min Grade: C] and AC 413 [Min Grade: C]

**AC 499. Directed Readings. 1-3 Hour.**

Readings and independent study in selected areas.

**Prerequisites:** GPAO 2.00

## FN-Finance Courses

**FN 101. Personal Finance. 3 Hours.**

Selected aspects of finance encountered by an individual during his or her lifetime. Lower-level elective credit only. Not applicable to the finance major. Open to all UAB students.

**FN 102. Money and Society. 3 Hours.**

The basic principles of the use of money in society are presented in a decision making framework. The objective of this course is to provide students with the tools necessary to analyze financial issues from a global and societal perspective.

**FN 103. Money Management 101. 1 Hour.**

Covers selected aspects of financial planning encountered by an individual during his or her lifetime. Cannot count as credit toward the finance major. Cannot be taken if FN 101 has been taken.

**FN 104. Debt Management 101. 1 Hour.**

Covers selected aspects of managing credit and insurance needs that an individual might encounter during his or her lifetime. Does not count toward the finance major. Cannot be taken if FN 101 has been taken.

**FN 105. Saving and Investing 101. 1 Hour.**

Covers selected aspects of managing investments that an individual might encounter during his or her lifetime. Does not count toward the finance major. Cannot be taken if FN 101 has been taken.

**FN 201. Investigations into Financial Inclusion. 3 Hours.**

This course applies a structured process of change to individual and societal issues of financial inclusion. Students co-investigate what constitutes financial stability personally and in relation to their broader community. Assessment, analysis, and planning for change are key components of the course.

**FN 305. Entering the Profession. 1 Hour.**

This course will prepare students to enter the finance profession. Professional development topics include: resume building, soft-skills and interview prep, internships, entry-level positions and career paths in finance, as well as expectations and ethical demands of the profession.

**FN 310. Fundamentals of Financial Management. 3 Hours.**

Basic principles of financial management emphasizing the time value of money, stock and bond valuation, and capital budgeting; risk/return analysis, cost of capital, capital structure and cash flow analysis.

**Prerequisites:** AC 200 [Min Grade: C] and EC 210 [Min Grade: C]

**FN 320. Financial Research Methods. 3 Hours.**

Introduction to commercial and publicly available financial research databases and the basics of data analysis.

**Prerequisites:** FN 310 [Min Grade: C]

**FN 325. Financial Analysis & Forecasting. 3 Hours.**

This course provides the student with a broad study of the basic concepts and tools of finance statement analysis from the point of view of the corporate financial manager. It is a decision-oriented course designed to present a working knowledge as well as a theoretical understanding of the essentials of financial statement analysis and forecasting.

**Prerequisites:** FN 310 [Min Grade: C]

**FN 330. Quantitative Financial Analysis. 3 Hours.**

Introduction to the basic quantitative tools of finance with a focus on the use of statistics in financial analysis.

**Prerequisites:** QM 215 [Min Grade: C] and AC 201 [Min Grade: C]

**FN 350. Investments. 3 Hours.**

Fundamentals of investments with an emphasis on equity and fixed-income securities.

**Prerequisites:** FN 310 [Min Grade: C]

**FN 351. Bond Portfolio Management. 3 Hours.**

Fixed income markets and instruments, including valuation and portfolio strategies. Derivatives of fixed income securities.

**Prerequisites:** (FN 310 [Min Grade: C] and GPAT and GPAO 2.00) or (FN 310 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**FN 357. Securities Analysis. 3 Hours.**

This course focuses on the fundamental principles and techniques of security analysis. Investment theory with emphasis on valuation of equity investment instruments.

**Prerequisites:** FN 310 [Min Grade: C]

**FN 358. Green and Gold Fund Financial Analyst. 1 Hour.**

The Green and Gold Fund is UAB's innovative, student-managed investment portfolio. Students gain real-world portfolio management and security analysis experience through the application of professional investment strategies and sound risk management principles. Students enrolled in FN 358 must hold the position of Analyst.

**FN 359. Green and Gold Fund Portfolio Management. 1-3 Hour.**

The Green and Gold Fund is UAB's innovative, student-managed investment portfolio. Students gain real-world portfolio management and security analysis experience through the application of professional investment strategies and sound risk management principles. Students enrolled in FN 359 must hold the position of CIO, Chief Economist or Portfolio Manager. Permission of the Green and Gold Fund faculty advisor required.

**Prerequisites:** FN 310 [Min Grade: C] and FN 350 [Min Grade: C] or FN 490 [Min Grade: C]

**FN 360. Fundamentals of Healthcare Financial Management. 3 Hours.**

Basic principles of healthcare financial management emphasizing time value of money, stock and bond valuation, and capital budgeting; risk/return analysis, cost of capital, capital structure, and cash flow analysis in the context of Healthcare organizations.

**Prerequisites:** AC 201 [Min Grade: C] and EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C]

**FN 370. Principles of Real Estate. 3 Hours.**

Upper division course designed to provide the student with a solid foundation for making real estate decisions. Course involves computer-based assignments.

**Prerequisites:** AC 200 [Min Grade: C] and EC 210 [Min Grade: C] and QM 214 [Min Grade: C]

**FN 410. Corporate Finance. 3 Hours.**

Analysis of long-term corporate financial management; detailed stock and bond valuation, cost of capital, capital budgeting, cash-flow analysis, capital structure, and dividend policy.

**Prerequisites:** (FN 310 [Min Grade: C] and GPAO 2.00)

**FN 411. Advanced Financial Management. 3 Hours.**

Case method approach to study of applied and special topics in financial management; spreadsheet applications used in analysis of initial public offerings, imbedded options, leases, mergers, bankruptcy, and pension plan management.

**Prerequisites:** (FN 410 [Min Grade: C] and GPAT and GPAO 2.00) or (FN 410 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**FN 412. International Financial Management. 3 Hours.**

Financial analysis and decision making in international context. All traditional areas of corporate finance explored.

**Prerequisites:** FN 310 [Min Grade: C] or BUS 310 [Min Grade: C]

**FN 420. Financial Sales & Trading. 3 Hours.**

This course introduces interactive trading in financial instruments. Students learn the principles of asset price discovery through real-time trading in a variety of markets, including equities, bonds, options and derivatives. Topics addressed include asset valuation, portfolio management, and risk management in the context of real-time trading of financial instruments.

**Prerequisites:** (FN 310 [Min Grade: C] and FN 350 [Min Grade: C] and FN 351 [Min Grade: C] and GPAT and GPAO 2.00) or (FN 310 [Min Grade: C] and FN 350 [Min Grade: C] and FN 351 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**FN 429. Short-Term Financial Management. 3 Hours.**

This course covers the principles of short-term financial management. Specific topics include liquidity, management of working capital, corporate cash management, and short term investing and borrowing.

**FN 452. Management of Financial Intermediaries. 3 Hours.**

Roles, activities, and functions of financial institutions and their interrelationships.

**Prerequisites:** FN 310 [Min Grade: C]

**FN 453. Derivatives. 3 Hours.**

Domestic and international risk management issues. Tools to measure and manage interest rate; exchange rate and commodity price risks.

**Prerequisites:** (FN 350 [Min Grade: C] and FN 410 [Min Grade: C] and GPAU 2.00)

**FN 460. Finance Internship. 1-3 Hour.**

A work experience to enable students to better integrate academic knowledge with practical applications and to enhance students' educational experiences by making subsequent study more meaningful. Permission of the instructor required.

**Prerequisites:** (FN 310 [Min Grade: C] and GPAO 2.00)

**FN 470. Real Estate Finance. 3 Hours.**

A study of the instruments, techniques and institutions of real estate finance and the use of financial analysis in real estate decisions.

**Prerequisites:** (FN 370 [Min Grade: C] and GPAO 2.00)

**FN 475. Real Estate Investment Analysis. 3 Hours.**

A study of investment analysis for real estate decisions, including taxation, risk, financial leverage, land use and market analysis will be covered in depth.

**Prerequisites:** (FN 310 [Min Grade: C] or BUS 310 [Min Grade: C]) and FN 370 [Min Grade: C]

**FN 490. Advanced Topics in Finance. 3 Hours.**

Issues and problems in selected areas of finance.

**Prerequisites:** GPAO 2.00

**FN 496. Business Analysis and Valuation Using Financial Statements. 3 Hours.**

This case-based accounting and finance capstone course articulates the linkage between accounting and finance and provides a framework for using financial statement data in business analysis and valuation contexts. Topics include business strategy, accounting and financial analysis, financial forecasting, and an introduction to business valuation.

**Prerequisites:** FN 410 [Min Grade: C] or AC 300 [Min Grade: C] or AC 320 [Min Grade: C]

**FN 499. Directed Readings in Finance. 1-3 Hour.**

Supervised study of specific areas of finance.

**Prerequisites:** GPAO 2.00

## Department of Management, Information Systems and Quantitative Methods

**Chair:** Allen Gorman, Ph.D.

The Department of Management, Information Systems and Quantitative Methods supports the mission of the Collat School of Business through the department's majors and course offerings. The department offers an educational foundation that prepares students for professional careers and enables them to pursue graduate studies.

The department is responsible for courses, concentrations, majors and minors in management, information systems, entrepreneurship and quantitative methods. Below is an overview of each major. Detailed degree requirements are located on the Majors Tab above.

## Management Major

The management major is designed to provide students with the ability to be effective decision makers in an organizational setting. The objective of the major is to enable students to acquire the knowledge and skills necessary for gaining entry into a management career and for sustaining successful performance throughout that career. Internships and elective courses in entrepreneurship are also available. Management majors have the option of choosing a concentration in **Business Administration** or **Operations Management**. A student not choosing a concentration will have a **Management** degree with no concentration.

## Human Resource Management Major

The human resource management major is designed to provide students with the skills necessary to enter a career in human resource management. The knowledge and skills acquired in this program enable students to enter a broad range of human resource management jobs, preparing them for their careers as well as professional certification.

## Entrepreneurship Major

The entrepreneurship major instills students with a powerful and transformational grasp of how new ventures, businesses, and other organizations grow, adapt, and thrive in entrepreneurial ways. Entrepreneurship students learn how to turn problems and inefficiencies into opportunities in markets, communities, and in larger organizational settings. Entrepreneurship program alumni launch their professional careers with existing successful entrepreneurial ventures, with entrepreneurial teams or innovative departments in established companies, or they launch their own entrepreneurial venture while in the program.

## Information Systems Major

The information systems major is designed to provide students with the foundational knowledge and managerial skills to pursue a career in information systems, systems analysis and design, IT project management, cyber security, data analytics, and/or the implementation of a complex information system. Information Systems majors have the option of choosing a concentration in **Cyber Security Management** or **Data Analytics**. A student not choosing a concentration will have an **Information Systems** degree with no concentration.

## Management Major

Management majors have the option of choosing a concentration in either **Business Administration** or **Operations Management**. A student not choosing a concentration will have a **Management** degree with no concentration.

## Major in Management

The management major is designed for students who seek to develop a broad exposure to the management discipline rather than pursue any emphasis. This major includes courses in human resources, organizational behavior, leadership and employment law.

Requirements	Hours
<b>Grade and GPA Requirement</b>	
Students must earn at least a grade of C in all stated prerequisite courses for the human resource management major. An overall 2.0 GPA in all courses used in the major is also required. At least 15 hours of the major courses must be taken at UAB. The universities course forgiveness policy may be applied to this major.	

### Required Courses

Core Curriculum		41
Lower Level Business		
AC 200	Principles of Accounting I	3
AC 201	Principles of Accounting II	3
LS 246	Legal Environment of Business	3
QM 214	Quantitative Analysis I	3
QM 215	Quantitative Analysis II	3
BUS 101	Introduction to Business	3
	or BUS 102 Business Foundations	
BUS 110	Essentials of Financial Literacy	3
Upper Level Business Requirements		
BUS 305	Professional Development for Today's Workplace	1
BUS 350	Business Communications	3
FN 310	Fundamentals of Financial Management	3
MG 302	Management Processes and Behavior	3
MG 403	Operations Management	3
	or DB 320 Distribution Management	
IS 303	Information Systems	3
MK 303	Basic Marketing	3
BUS 450	Strategic Management Capstone Experience <sup>2</sup>	3
	or BUS 495 Business Honors Seminar, I	
	International Business <sup>3</sup>	3
	Experiential Learning <sup>4</sup>	
Management Major Courses		
MG 401	Organizational Behavior	3
MG 409	Human Resource Management	3
MG 417	Project Management	3
MG 425	Managing Through Leadership	3
Management Electives <sup>5</sup>		
Choose 4 (12 hours) MG 300/400 courses or other upper level courses with approval of major advisor		12
General Electives		
Choose 9 hours of General Electives.		9
Total Hours		120

Please note the hours to degree may vary due to prerequisite requirements. For undergraduate programs, at minimum of 120 hours of undergraduate credit is required for degree. General electives may be taken to meet the hour requirement if necessary.

<sup>2</sup> BUS 495 is the capstone experience for Business Honors students.

<sup>3</sup> International Business Courses include: EC 407, FN 412, MG 415, MK 416, AC 440, IB 320, IB 439 and IB 495.

<sup>4</sup> All business majors are required to participate in experiential education. Experiential education can carry 0 - 3 credit hours. This requirement may be met by satisfactory completion of AC 364, AC 464, AC 474, BUS 496, DB 495, EC 460, ENT 445, ENT 426, FN 460, FN 358, FN 359, IB 495, IS 464, MG 445, MK 425, or MK 445. Other courses may be approved by your Program. You may access details about options for satisfying this degree requirement here: <https://www.uab.edu/business/home/undergraduate/experiential-learning-requirement>. Please see your academic advisor for specific requirements for your major.

<sup>5</sup> Students may NOT apply MG 415 to this requirement and the IB requirement. COURSE USED ONLY ONCE.

## Major in Management with Business Administration Concentration

The business administration concentration is designed for students who seek more flexibility within the management major by allowing them to select courses from other disciplines to round out the major. Besides providing greater flexibility, the student can select advanced studies in other areas of business such as finance, information systems, economics and marketing.

Requirements	Hours
<b>Core Curriculum</b>	<b>41</b>
<b>Lower Level Business Requirements</b>	
AC 200 Principles of Accounting I	3
AC 201 Principles of Accounting II	3
BUS 101 Introduction to Business	3
or BUS 102 Business Foundations	
BUS 110 Essentials of Financial Literacy	3
LS 246 Legal Environment of Business	3
QM 214 Quantitative Analysis I	3
QM 215 Quantitative Analysis II	3
<b>Upper Level Business Requirements</b>	
BUS 305 Professional Development for Today's Workplace	1
BUS 350 Business Communications	3
FN 310 Fundamentals of Financial Management	3
IS 303 Information Systems	3
MG 302 Management Processes and Behavior	3
MG 403 Operations Management	3
MK 303 Basic Marketing	3
BUS 450 Strategic Management Capstone Experience <sup>2</sup>	3
or BUS 495 Business Honors Seminar, I	
International Business <sup>3</sup>	3
Experiential Learning <sup>4</sup>	
<b>Management Major Courses</b>	
MG 401 Organizational Behavior	3
MG 409 Human Resource Management	3
MG 417 Project Management	3
<b>Business Administration Concentration Courses</b>	
Upper level FN	3
Upper level EC	3
Upper level MK	3
Upper level advisor approved Business Electives	6
<b>General Electives</b>	<b>9</b>
Total Hours	120

<sup>2</sup> Business Honors students take BUS 495.

<sup>3</sup> International Business courses include: EC 407, FN 412, MG 415, MK 416, AC 440, IB 320, IB 439, and AC 440.

<sup>4</sup> All business majors are required to participate in experiential education. This requirement may carry 0-3 credit hours. This requirement may be met by satisfactory completion of one of the following courses or other course/project approved by your Program: AC 464, AC 474, BUS 496, DB 495, EC 460, ENT 426, ENT 445, FN 460, IB 495, IS 464, MG 445, MK 425, MK 445. A description of options to satisfy this degree requirement may be accessed here: <https://www.uab.edu/business/home/undergraduate/experiential-learning-requirement>. Please see your advisor for specific requirements for your major.

## Major in Management with Operations Management Concentration

The operations management concentration is designed for students who seek to pursue a career in operations management. The curriculum provide students with the background to be able to execute operations in organizations as well as to manage projects within and across entities within the organization.

Requirements	Hours
<b>Grade and GPA Requirement</b>	
Students must earn a grade of C or better in all stated prerequisites for all major courses, have an overall 2.0 GPA and have an overall 2.0 GPA in all major courses.	
<b>Core Curriculum</b>	<b>41</b>
<b>Lower Level Business Requirements</b>	
AC 200 Principles of Accounting I	3
AC 201 Principles of Accounting II	3
BUS 101 Introduction to Business	3
or BUS 102 Business Foundations	
BUS 110 Essentials of Financial Literacy	3
LS 246 Legal Environment of Business	3
QM 214 Quantitative Analysis I	3
QM 215 Quantitative Analysis II	3
<b>Upper Level Business Requirements</b>	
BUS 305 Professional Development for Today's Workplace	1
BUS 350 Business Communications	3
FN 310 Fundamentals of Financial Management	3
IS 303 Information Systems	3
MG 302 Management Processes and Behavior	3
MG 403 Operations Management	3
MK 303 Basic Marketing	3
BUS 450 Strategic Management Capstone Experience <sup>2</sup>	3
or BUS 495 Business Honors Seminar, I	
International Business <sup>3</sup>	3
Experiential Learning <sup>4</sup>	
<b>Management Major Courses</b>	
MG 401 Organizational Behavior	3
MG 409 Human Resource Management	3
MG 417 Project Management	3
MG 425 Managing Through Leadership	3
<b>Production &amp; Operations Management Concentration</b>	<b>6</b>
MG 416 Supply Chain Management	
DB 320 Distribution Management	
MG Elective courses numbered 300:499	6
<b>General Electives</b>	<b>9</b>
Total Hours	120

<sup>2</sup> Business Honors students take BUS 495.

<sup>3</sup> International Business courses include: EC 407, FN 412, MG 415, MK 416, AC 440, IB 320, IB 439, IB 495, and AC 440.

- <sup>4</sup> All business majors are required to participate in experiential education. This requirement may carry 0-3 credit hours. This requirement may be met by satisfactory completion of one of the following courses or other course/project approved by your Program: AC 464, AC 474, BUS 496, DB 495 EC 460, ENT 426 ENT 445, FN 460, IB 495, IS 464, MG 445, MK 425, MK 445 A description of options to satisfy this degree requirement may be accessed here: <http://www.uab.edu/business/home/degrees-certificates/undergraduate/experiential-learning-requirement>. Please see your advisor for specific requirements for your major.

## Major in Human Resource Management

The human resource management major is designed to provide students with the skills necessary to enter a career in human resource management. The knowledge and skills acquired in this program enable students to enter a broad range of human resource management jobs, preparing them for their careers as well as professional certification.

Requirements	Hours
<b>Grade and GPA requirement</b>	
Students must earn at least a grade of C in all stated prerequisite courses for the human resource management major. An overall 2.0 GPA in all courses used in the major is also required. At least 15 hours of the major courses must be taken at UAB. The university's course forgiveness policy may be applied to this major.	
<b>Required courses:</b>	
<b>Core Curriculum</b>	<b>41</b>
<b>Lower Level Business Requirements</b>	
AC 200 Principles of Accounting I	3
AC 201 Principles of Accounting II	3
BUS 101 Introduction to Business	3
or BUS 102 Business Foundations	
BUS 110 Essentials of Financial Literacy	3
LS 246 Legal Environment of Business	3
QM 214 Quantitative Analysis I	3
QM 215 Quantitative Analysis II	3
<b>Upper Level Business Requirements</b>	
BUS 305 Professional Development for Today's Workplace	1
BUS 350 Business Communications	3
FN 310 Fundamentals of Financial Management	3
IS 303 Information Systems	3
MG 302 Management Processes and Behavior	3
MG 403 Operations Management	3
MK 303 Basic Marketing	3
BUS 450 Strategic Management Capstone Experience <sup>2</sup>	3
or BUS 495 Business Honors Seminar, I	
International Business <sup>3</sup>	3
Experiential Learning <sup>4</sup>	
<b>Human Resource Management Major Courses</b>	
MG 401 Organizational Behavior	3
MG 409 Human Resource Management	3
MG 411 Compensation Administration	3
MG 412 Organizational Staffing	3
MG 413 Employment Law	3
MG 414 Talent Development	3
<b>Select 2 MG elective courses with Advisor approval</b>	<b>6</b>

General Electives	9
Total Hours	120
<sup>2</sup> Business Honors students take BUS 495.	
<sup>3</sup> International Business courses include: EC 407, FN 412, MG 415, MK 416, IB 320, IB 439, IB 495, AC 440.	
<sup>4</sup> All business majors are required to participate in experiential education. This requirement may carry 0-3 credit hours. This requirement may be met by satisfactory completion of one of the following courses or other course/project approved by your Program: AC 464, AC 474, BUS 496, DB 495, EC 460, ENT 426, ENT 445, FN 460, IB 495, IS 464, MG 445, MK 425, MK 445. A description of options to satisfy this degree requirement may be accessed here: <a href="https://www.uab.edu/business/home/undergraduate/experiential-learning-requirement">https://www.uab.edu/business/home/undergraduate/experiential-learning-requirement</a> . Please see your advisor for specific requirements for your major.	

## Major in Information Systems

The information systems major is designed to provide students with the foundational knowledge and managerial skills to pursue a career in information systems, systems analysis and design, IT project management, cyber security, data analytics, and/or the implementation of a complex information system.

Students must have a minimum grade of C in all information systems courses, numbered 200 and above, that are applied to the major. The grade of C is a prerequisite for all information systems courses numbered 300 or above. In addition, students must have a grade of C or better and an overall C average in all major courses. At least 15 hours of the major must be taken at UAB. The university's course forgiveness policy may be applied to this major.

Requirements	Hours
<b>Information Systems Requirements</b>	
<b>Core Curriculum</b>	<b>41</b>
<b>Lower Level Business Requirements</b>	
AC 200 Principles of Accounting I	3
AC 201 Principles of Accounting II	3
BUS 101 Introduction to Business	3
or BUS 102 Business Foundations	
BUS 110 Essentials of Financial Literacy	3
LS 246 Legal Environment of Business	3
QM 214 Quantitative Analysis I	3
QM 215 Quantitative Analysis II	3
<b>Upper Level Business Requirements</b>	
BUS 305 Professional Development for Today's Workplace	1
BUS 350 Business Communications	3
FN 310 Fundamentals of Financial Management	3
IS 303 Information Systems	3
MG 302 Management Processes and Behavior	3
MG 403 Operations Management	3
MK 303 Basic Marketing	3
BUS 450 Strategic Management Capstone Experience <sup>2</sup>	3
or BUS 495 Business Honors Seminar, I	
International Business <sup>3</sup>	3
Experiential Learning <sup>4</sup>	
<b>Information Systems Major Courses</b>	
IS 204 Introduction to Business Programming	3
IS 301 Introduction to Database Management Systems	3

IS 302	Business Data Communications	3
IS 321	Systems Analysis	3
MG 417	Project Management	3
<b>Information Systems Electives</b>		<b>9</b>
<b>General Electives</b>		<b>9</b>
Total Hours		120

<sup>2</sup> Business Honors students take BUS 495.

<sup>3</sup> International Business courses include: EC 407, FN 412, MG 415, MK 416, IB 320, IB 439, IB 495, or AC 440

<sup>4</sup> All business majors are required to participate in experiential education. This requirement may carry 0-3 credit hours. This requirement may be met by satisfactory completion of one of the following courses or other course/project approved by your Program: AC 464, AC 474, BUS 496, DB 495, EC 460, ENT 426, ENT 445, FN 460, IB 495, IS 464, MG 445, MK 425, MK 445. A description of options to satisfy this degree requirement may be accessed here: <https://www.uab.edu/business/home/undergraduate/experiential-learning-requirement>. Please see your advisor for specific requirements for your major.

## Major in Information Systems with Concentration in Cybersecurity Management

Requirements		Hours
<b>Core Curriculum</b>		<b>41</b>
<b>Lower Level Business Requirements</b>		
AC 200	Principles of Accounting I	3
AC 201	Principles of Accounting II	3
BUS 101	Introduction to Business	3
or BUS 102	Business Foundations	
BUS 110	Essentials of Financial Literacy	3
LS 246	Legal Environment of Business	3
QM 214	Quantitative Analysis I	3
QM 215	Quantitative Analysis II	3
<b>Upper Level Business Requirements</b>		
BUS 305	Professional Development for Today's Workplace	1
BUS 350	Business Communications	3
FN 310	Fundamentals of Financial Management	3
IS 303	Information Systems	3
MG 302	Management Processes and Behavior	3
MG 403	Operations Management	3
MG 415	International Business Dynamics	3
MK 303	Basic Marketing	3
BUS 450	Strategic Management Capstone Experience <sup>2</sup>	3
or BUS 495	Business Honors Seminar, I	
Experiential Learning <sup>3</sup>		
<b>Information Systems Major Courses</b>		
IS 204	Introduction to Business Programming	3
IS 301	Introduction to Database Management Systems	3
IS 321	Systems Analysis	3
MG 417	Project Management	3
<b>Cybersecurity Management Concentration</b>		
IS 302	Business Data Communications	3
IS 413	Introduction to Information Security	3
IS 414	Information Security Planning and Management	3
Information Systems Elective		3

General Electives	9
Total Hours	120

<sup>2</sup> Business Honors students take BUS 495.

<sup>3</sup> All business majors are required to participate in experiential education. This requirement may carry 0-3 credit hours. This requirement may be met by satisfactory completion of one of the following courses or other course/project approved by your Program: AC 464, AC 474, BUS 496, DB 495, EC 460, ENT 426, ENT 445, FN 460, IB 495, IS 464, MG 445, MK 425, MK 445. A description of options to satisfy this degree requirement may be accessed here: <https://www.uab.edu/business/home/undergraduate/experiential-learning-requirement>. Please see your advisor for specific requirements for your major.

## Major in Information Systems with Concentration in Data Analytics

Requirements		Hours
<b>Core Curriculum</b>		<b>41</b>
<b>Lower Level Business Requirements</b>		
AC 200	Principles of Accounting I	3
AC 201	Principles of Accounting II	3
BUS 101	Introduction to Business	3
or BUS 102	Business Foundations	
BUS 110	Essentials of Financial Literacy	3
LS 246	Legal Environment of Business	3
QM 214	Quantitative Analysis I	3
QM 215	Quantitative Analysis II	3
<b>Upper Level Business Requirements</b>		
BUS 305	Professional Development for Today's Workplace	1
BUS 350	Business Communications	3
FN 310	Fundamentals of Financial Management	3
IS 303	Information Systems	3
MG 302	Management Processes and Behavior	3
MG 403	Operations Management	3
MG 415	International Business Dynamics	3
MK 303	Basic Marketing	3
BUS 450	Strategic Management Capstone Experience <sup>2</sup>	3
or BUS 495	Business Honors Seminar, I	
Experiential Learning <sup>3</sup>		
<b>Information Systems Major Courses</b>		
IS 204	Introduction to Business Programming	3
IS 302	Business Data Communications	3
IS 321	Systems Analysis	3
MG 417	Project Management	3
<b>Data Analytics Concentration</b>		
IS 301	Introduction to Database Management Systems	3
IS 417	Introduction to Business Intelligence	3
IS 418	Applied Data Science for Information Systems	3
Information Systems Elective		3
General Electives		9
Total Hours		120

- <sup>2</sup> Business Honors students take BUS 495.
- <sup>3</sup> All business majors are required to participate in experiential education. This requirement may carry 0-3 credit hours. This requirement may be met by satisfactory completion of one of the following courses or other course/project approved by your Program: AC 464, AC 474, BUS 496, DB 495, EC 460, ENT 426, ENT 445, FN 460, I description of options to satisfy this degree requirement may be accessed here: <https://www.uab.edu/business/home/undergraduate/experiential-learning-requirement>. Please see your advisor for specific requirements for your major.
- <sup>4</sup> IS 301 will also fulfill Data Analytics Concentration.

## Major in Entrepreneurship

The entrepreneurship major instills students with a powerful and transformational grasp of how new ventures, businesses, and other organizations grow, adapt, and thrive in entrepreneurial ways. Entrepreneurship students learn how to turn problems and inefficiencies into opportunities in markets, communities, and in larger organizational settings. Entrepreneurship program alumni launch their professional careers with existing successful entrepreneurial ventures, with entrepreneurial teams or innovative departments in established companies, or they launch their own entrepreneurial venture while in the program.

Students must earn at least a grade of C in all stated prerequisite courses for the human resource management major. An overall 2.0 GPA in all courses used in the major is also required. At least 15 hours of the major courses must be taken at UAB. The universities course forgiveness policy may be applied to this major.

## Major in Entrepreneurship

Requirements	Hours
<b>Core Curriculum Requirements</b>	<b>41</b>
<b>Lower-level Business Core</b>	
BUS 101 Introduction to Business or BUS 102 Business Foundations	3
BUS 110 Essentials of Financial Literacy	3
AC 200 Principles of Accounting I	3
AC 201 Principles of Accounting II	3
LS 246 Legal Environment of Business	3
QM 214 Quantitative Analysis I	3
QM 215 Quantitative Analysis II	3
<b>Upper-level Business Core</b>	
BUS 305 Professional Development for Today's Workplace	1
BUS 350 Business Communications	3
FN 310 Fundamentals of Financial Management	3
MG 302 Management Processes and Behavior	3
IS 303 Information Systems	3
MK 303 Basic Marketing	3
International Business <sup>1</sup>	3
MG 403 Operations Management or DB 320 Distribution Management	3
BUS 450 Strategic Management Capstone Experience	3
<b>Entrepreneurship Major Requirements</b>	
ENT 270 The Entrepreneurial Mindset	3
ENT 320 Entrepreneurial Accounting and Finance	3
ENT 421 Entrepreneurial Marketing and Sales	3
ENT 422 Entrepreneurial Strategy and Operations	3

ENT 350	Social and Community Enterprise	3
ENT 425	Entrepreneurial Engagement Seminar	3
<b>Major Electives</b>		<b>6</b>
ENT 424	Entrepreneurial New Product and Service Development	
ENT 426	Practicum in Commercialization	
ENT 445	Entrepreneurial Internship	
ENT 450	I-Corps Lean Startup	
ENT 499	Directed Study in Entrepreneurship	
IB 495	Business Study Abroad	
HC 314	Honors Seminar in Business	
MK 330	Professional Selling	
<b>General Electives</b>		<b>9</b>
<b>Total Hours</b>		<b>120</b>

- <sup>1</sup> Select from EC 407, FN 412, MG 415, MK 416, AC 440, IB 320, IB 439, or IB 495.

## Proposed Program of Study for a Major in Management with a Business Administration Concentration

<b>Freshman</b>			
First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
MA 105		3 CMST 101	3
BUS 101		3 BUS 110	3
Core Curriculum Area II: Humanities, Fine Arts <sup>1</sup>		3 Core Curriculum Area III: Natural Science (with laboratory)	4
Core Curriculum Area IV: Social and Behavioral Science		3 Core Curriculum Area IV: History <sup>2</sup>	3
		<b>15</b>	<b>16</b>
<b>Sophomore</b>			
First Term	Hours	Second Term	Hours
QM 214		3 LS 246	3
AC 200		3 QM 215	3
EC 210		3 AC 201	3
Core Curriculum Area II: Literature		3 EC 211	3
Core Curriculum Area III: Natural Science (with laboratory)		4 Core Curriculum Area II	3
		<b>16</b>	<b>15</b>
<b>Junior</b>			
First Term	Hours	Second Term	Hours
BUS 350		3 MG 409	3
MK 303		3 MG 417	3
MG 302 <sup>4</sup>		3 International Business Elective <sup>3</sup>	3
EC 304 or 320		3 FN 310	3
BUS 305		1	
MG 403		3	
		<b>16</b>	<b>12</b>
<b>Senior</b>			
First Term	Hours	Second Term	Hours
MG 401		3 BUS 450	3
IS 303		3 Finance Elective <sup>6</sup>	3
MG 445		3 Business Course Elective	3

Marketing Elective <sup>5</sup>	3 General Electives	6
Business Course Elective	3	
	15	15

Total credit hours: 120

- <sup>1</sup> Select one from the following courses: ARH 101, MU 120 or THR 100.
- <sup>2</sup> Select one course from the following: HY 101, HY 102, HY 104, HY 105, HY 120, or HY 121.
- <sup>3</sup> Choose from AC 440, EC 407, MG 415, MK 416, FN 412, IB 320, IB 439 or IB 495.
- <sup>4</sup> Junior standing required (60 semester hours credit)
- <sup>5</sup> Select one from: Any 300/400 MK course.
- <sup>6</sup> Select one from: Any 300/400 FN course.

## Proposed Program of Study for a Major in Management

### Freshman

First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
MA 105		3 CMST 101	3
BUS 101		3 BUS 110	3
Core Curriculum Area IV: Social & Behavioral Science		3 Core Curriculum Area IV: History <sup>2</sup>	3
Core Curriculum Area II: Humanities, Fine Art <sup>1</sup>		3 Core Curriculum Area III: Natural Science (with laboratory)	4
	15		16

### Sophomore

First Term	Hours	Second Term	Hours
QM 214		3 LS 246	3
AC 200		3 QM 215	3
EC 210		3 AC 201	3
Core Curriculum Area II: Literature		3 EC 211	3
Core Curriculum Area III: Natural Science (with laboratory)		4 Core Curriculum Area II	3
	16		15

### Junior

First Term	Hours	Second Term	Hours
BUS 305		1 MG 413 <sup>4</sup>	3
BUS 350		3 MG 409	3
MK 303		3 MG 403	3
MG 302 <sup>4</sup>		3 FN 310	3
IS 303		3	
MG 425		3	
	16		12

### Senior

First Term	Hours	Second Term	Hours
MG 401		3 BUS 450	3
MG 416		3 MG 417	3
MG 445		3 International Business Elective <sup>3</sup>	3

Management Electives	6 General Electives	6
	15	15

Total credit hours: 120

- <sup>1</sup> Select one from: ARH 101, MU 120 or THR 100.
- <sup>2</sup> Select one from: HY 101, HY 102, HY 104, HY 105, HY 120 or HY 121.
- <sup>3</sup> Select one from: MG 415, MK 416, FN 412, EC 407, AC 440, IB 320, IB 439 or IB 495.
- <sup>4</sup> Junior Standing (60 semester hours of credit).

## Proposed Program of Study for a Major in Human Resource Management

### Freshman

First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
MA 105		3 CMST 101	3
BUS 101		3 BUS 110	3
Core Curriculum Area II: Humanities, Fine Art <sup>1</sup>		3 Core Curriculum Area IV: History <sup>2</sup>	3
Core Curriculum Area IV: Social and Behavioral Science		3 Core Curriculum Area III: Natural Science (with laboratory)	4
	15		16

### Sophomore

First Term	Hours	Second Term	Hours
QM 214		3 LS 246	3
AC 200		3 QM 215	3
EC 210		3 AC 201	3
Core Curriculum Area III: Natural Science (with laboratory)		4 EC 211	3
		Core Curriculum Area II	3
	13		15

### Junior

First Term	Hours	Second Term	Hours
BUS 305		1 MG 409	3
BUS 350		3 MG 413 <sup>4</sup>	3
MK 303		3 International Business Elective <sup>3</sup>	3
MG 302 <sup>4</sup>		3 MG 414	3
FN 310		3 Core Curriculum Area II: Literature	3
IS 303		3	
	16		15

### Senior

First Term	Hours	Second Term	Hours
MG 401		3 BUS 450	3
MG 411		3 MG 412	3
Management Electives (300/400 level)		6 MG 403	3
General Elective		3 General Electives	6
	15		15

Total credit hours: 120

- <sup>1</sup> Select one from: ARH 101, MU 120 or THR 100.
- <sup>2</sup> Select one from: HY 101, HY 102, HY 104, HY 105, HY 120 or HY 121.
- <sup>3</sup> Select one from: MG 415, MK 416, FN 412, EC 407, AC 440, IB 320, IB 439 or IB 495.
- <sup>4</sup> Junior Standing (60 semester hours of credit)

## Proposed Program of Study for a Major in Information Systems

### Freshman

First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
MA 105		3 CMST 101	3
BUS 101		3 BUS 110	3
Core Curriculum Area II: Humanities, Fine Art <sup>1</sup>		3 Core Curriculum Area III: Natural Science (with laboratory)	4
Core Curriculum Area IV: Social and Behavioral Science		3 Core Curriculum Area IV: History <sup>2</sup>	3
	15		16

### Sophomore

First Term	Hours	Second Term	Hours
QM 214		3 LS 246	3
AC 200		3 QM 215	3
EC 210		3 AC 201	3
Core Curriculum Area II: Literature		3 EC 211	3
Core Curriculum Area III: Natural Science (with laboratory)		4 IS 204	3
	16		15

### Junior

First Term	Hours	Second Term	Hours
BUS 305		1 FN 310	3
BUS 350		3 IS 301	3
IS 303		3 MG 403	3
IS 321		3 IS 302	3
MK 303		3 Core Curriculum Area II	3
MG 302		3	
	16		15

### Senior

First Term	Hours	Second Term	Hours
MG 417		3 BUS 450	3
IS 302		3 Information Systems Elective	3
Experiential Education Requirement		International Business Elective <sup>3</sup>	3
Information Systems Elective		3 General Elective	3
General Electives		6	
	15		12

Total credit hours: 120

## Proposed Program of Study for a Major in Information Systems with a Concentration in Data Analytics

### Freshman

First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
MA 105		3 CMST 101	3
BUS 101		3 BUS 110	3
Core Curriculum Area II: Humanities, Fine Art <sup>1</sup>		3 Core Curriculum Area III: Natural Science (with laboratory)	4
Core Curriculum Area IV: Social and Behavioral Science		3 Core Curriculum Area IV: History <sup>2</sup>	3
	15		16

### Sophomore

First Term	Hours	Second Term	Hours
QM 214		3 LS 246	3
AC 200		3 QM 215	3
EC 210		3 AC 201	3
Core Curriculum Area II: Literature		3 EC 211	3
Core Curriculum Area III: Natural Science (with laboratory)		4 IS 204	3
	16		15

### Junior

First Term	Hours	Second Term	Hours
BUS 305		1 IS 301	3
BUS 350		3 IS 302	3
IS 303		3 FN 310	3
IS 321		3 MG 403	3
MK 303		3 Core Curriculum Area II: Humanities, Fine Art <sup>1</sup>	3
MG 302		3	
	16		15

### Senior

First Term	Hours	Second Term	Hours
MG 417		3 BUS 450	3
IS 417		3 IS 418	3
Information Systems Elective		3 International Business Elective <sup>3</sup>	3
General Electives		6 General Elective	3
	15		12

Total credit hours: 120

## Proposed Program of Study for a Major in Information Systems with a Concentration in Cybersecurity Management

### Freshman

First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
MA 105		3 CMST 101	3
BUS 101		3 BUS 110	3
Core Curriculum Area II: Humanities, Fine Art <sup>1</sup>		3 Core Curriculum Area III: Natural Science (with laboratory)	4

Core Curriculum Area IV: Social and Behavioral Science	3	Core Curriculum Area IV: History <sup>2</sup>	3
	15		16

**Sophomore**

First Term	Hours	Second Term	Hours
QM 214		3 LS 246	3
AC 200		3 QM 215	3
EC 210		3 AC 201	3
Core Curriculum Area II: Literature		3 EC 211	3
Core Curriculum Area III: Natural Science (with laboratory)		4 IS 204	3
	16		15

**Junior**

First Term	Hours	Second Term	Hours
BUS 305		1 FN 310	3
BUS 350		3 IS 301	3
IS 303		3 MG 403	3
IS 321		3 IS 302	3
MK 303		3 Core Curriculum Area II: Humanities, Fine Art	3
MG 302		3	
	16		15

**Senior**

First Term	Hours	Second Term	Hours
MG 417		3 BUS 450	3
IS 413		3 IS 414	3
Information Systems Elective		3 International Business Elective <sup>3</sup>	3
Experiential Education Requirement		General Elective	3
General Electives		6	
	15		12

Total credit hours: 120

<sup>1</sup> Select one from: ARH 101, MU 120 or THR 100.<sup>2</sup> Select one from : HY 101, HY 102, HY 104, HY 105, HY 120 or HY 121.<sup>3</sup> Select one from MG 415, MK 416, EC 407, FN 412, IB 320, IB 439, IB 495 or AC 440.

## Proposed Program of Study for a Major in Management with a Concentration in Operations Management

**Freshman**

First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
MA 105		3 CMST 101	3
BUS 110		3 Core Curriculum Area II: Fine Art <sup>1</sup>	3
BUS 101		3 Core Curriculum Area IV: History <sup>2</sup>	3
Core Curriculum Area IV: Social and Behavioral Science		3 Core Curriculum Area III: Natural Science (with laboratory)	4
	15		16

**Sophomore**

First Term	Hours	Second Term	Hours
QM 214		3 LS 246	3
AC 200		3 QM 215	3
EC 210		3 AC 201	3
Core Curriculum Area III: Natural Science (with laboratory)		4 EC 211	3
Core Curriculum Area II: Literature		3 Core Curriculum Area II	3
	16		15

**Junior**

First Term	Hours	Second Term	Hours
BUS 305		1 MG 403	3
BUS 350		3 MG 401	3
MK 303		3 MG 409	3
MG 302		3 IS 303	3
FN 310		3 International Business requirement <sup>4</sup>	3
	13		15

**Senior**

First Term	Hours	Second Term	Hours
MG 417		3 BUS 450	3
MG 425		3 Major Electives <sup>3</sup>	6
MG 445		3 General Electives	6
Major Electives <sup>3</sup>		6	
	15		15

Total credit hours: 120

<sup>1</sup> Select one from: ARH 101, MU 120 or THR 100<sup>2</sup> Select one from: HY 101, HY 102, HY 120 or HY 121<sup>3</sup> Select four from MG 416, MG 413, MG 418, MG 445, and any 300/400 advisor approved course.<sup>4</sup> Choose from MG 415, MK 416, EC 407, FN 412, AC 440, IB 320, IB 439 or IB 495

## Proposed Program of Study for a Major in Entrepreneurship

**Freshman**

First Term	Hours	Second Term	Hours
EH 101		3 BUS 110	3
BUS 101		3 EH 102	3
MA 105		3 CMST 101	3
Core Curriculum Area II: Humanities, Fine Art <sup>1</sup>		3 Core Curriculum Area II: Humanities	3
Core Curriculum Area IV: Social and Behavioral Science, History <sup>2</sup>		3 Core Curriculum Area IV: Natural Science (with Lab)	4
	15		16

**Sophomore**

First Term	Hours	Second Term	Hours
ENT 270		3 ENT Elective	3
AC 200		3 AC 201	3
EC 210		3 EC 211	3
QM 214		3 QM 215	3

Core Curriculum Area IV: Natural Science (with Lab)		4 Core Curriculum Area IV: Social and Behavioral Science		3
		16		15
<b>Junior</b>				
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>	
ENT 350	3	ENT 422	3	
ENT 421	3	BUS 350	3	
LS 246	3	MG 302	3	
FN 310	3	ENT 320	3	
MK 303	3	BUS 305	1	
		Core Curriculum Area II: Humanities and Fine Art, Literature	3	
		15		16
<b>Senior</b>				
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>	
ENT Elective	3	ENT 425	3	
MG 403	3	BUS 450	3	
IS 303	3	International Business <sup>3</sup>	3	
General Elective	3	General Elective	3	
General Elective	3			
		15		12
Total credit hours: 120				

<sup>1</sup> Select one from: ARH 101, MU 120, or THR 100.

<sup>2</sup> Select one from: HY 101, HY 102, HY 104, HY 105, HY 120 or HY 121.

<sup>3</sup> Select one from: MG 415, MK 416, FN 412, EC 407, AC 440, IB 320, IB 439 or IB 495.

## IS-Information Systems Courses

### IS 204. Introduction to Business Programming. 3 Hours.

An introductory course addressing the concepts, structures, and use of an event-driven programming language to implement business solutions. Emphasis is placed on developing general problem-solving strategies and implementing solutions through algorithm development.

**Prerequisites:** MA 105 [Min Grade: C]

### IS 301. Introduction to Database Management Systems. 3 Hours.

An introductory course on database management systems. Emphasis is placed on providing students with the fundamental knowledge necessary to model business data needs, design logical data models, and design, implement, and use of a physical database in application development.

**Prerequisites:** IS 321 [Min Grade: C]

### IS 302. Business Data Communications. 3 Hours.

A study of data communications technologies used for business. The technologies include local and wide area networks, as well as telephony. Network management and security are also emphasized.

### IS 303. Information Systems. 3 Hours.

A survey course covering the theory and application of management information systems in business environments. Includes planning, development and implementation of business strategies that leverage information systems for competitive advantage.

**Prerequisites:** GPAO 2.00

### IS 321. Systems Analysis. 3 Hours.

Focuses on the planning, decision making tasks and requisite skills necessary for the analysis of information systems.

**Prerequisites:** GPAO 2.00

### IS 413. Introduction to Information Security. 3 Hours.

This course serves as an introduction to the field of information security where students will develop a basic understanding of the information security principles. Students will be able to understand the business value of information security and its legal/ ethical considerations. Students will also gain an appreciation for security planning and risk management and how risk may be mitigated through technical, physical, and administrative controls.

### IS 414. Information Security Planning and Management. 3 Hours.

Primary objectives of the course are for the student to develop an understanding of key information security concepts, develop an understanding of how people, technology, and organizational policies should be developed and managed to safeguard an organization's information resources, learn how to manage under uncertainty and risk, develop policies and procedures to make information systems secure, and learn how to audit and recover from security breaches.

**Prerequisites:** IS 413 [Min Grade: C]

### IS 417. Introduction to Business Intelligence. 3 Hours.

This course covers topics of knowledge management and business intelligence from an organizational IT perspective. The content of the course includes discussion of and readings on the nature of knowledge; knowledge discovery, generation, capture, transfer, sharing, and application; and includes discussion of the core IT capabilities necessary to deliver Business Intelligence in organizations. The development and use of data warehouses and data marts to support business analytics is discussed.

### IS 418. Applied Data Science for Information Systems. 3 Hours.

A course in Business Analytics focusing on the extraction and preparation of data for analysis, applying analysis methods, and reporting analysis results. Students will also examine issues related to data stewardship and provenance.

### IS 464. IS Internship. 1-3 Hour.

Work experience enabling students to better integrate academic knowledge with practical applications by exposure to information systems and the business environment. 2.0 GPA in IS courses and permission of instructor required. Must be an Information Systems major. Sponsoring business may require additional courses.

**Prerequisites:** GPAO 2.00

### IS 491. Current Topics in Information Systems. 3 Hours.

A study of selected current developments in information systems emphasizing development and managerial implications. Permission of instructor required.

**Prerequisites:** GPAO 2.00

### IS 499. Directed Readings. 1-3 Hour.

Readings and independent study in selected areas.

## MG-Management Courses

### MG 302. Management Processes and Behavior. 3 Hours.

This Introductory course covers the four functions of management: planning, organizing, leading, and controlling. Strategic planning, teamwork, diversity, communication, and globalization are emphasized also.

**Prerequisites:** GPAO 2.00

### MG 304. Managerial Spreadsheet Analytics. 3 Hours.

This course provides an introduction to concepts and methods of business analytics with a focus on the application of spreadsheet modeling and analysis to managerial decision making.

**Prerequisites:** QM 214 [Min Grade: C]

**MG 305. Nonprofit Organization Mgmt/SL. 3 Hours.**

The purpose of this course is to expose students to the historical origins of NPOs/NGOs, their favored tax status, and demands of transparency and accountability of achieving their stated missions. This course also exposes students to the challenges of managing a voluntary workforce, identifying revenue streams to fund activities, and developing strategies to ensure value creation in the nonprofit setting. This course is experiential. Students will explore the various aspects of the nonprofit sector academically and will also get first hand experience with a chosen NPO/NGO.

**MG 306. Managing Innovation. 3 Hours.**

This course addresses selected challenges and opportunities related to managing innovation. The purpose of this course is to provide an overview of the role of creativity and innovation in organizations, examine the managerial strategies and tactics for fostering innovation, and to help students enhance their own ability to innovate.

**MG 309. Hogwarts School of Leadership. 3 Hours.**

The Harry Potter book/movie series is full of insights about life matters. They also teach us about how to be better business managers in addressing adversity, success, leadership, and ethics. In this class, we will examine various leadership theories and popular management/leadership books and understand them in terms of the characters and situations presented in the Harry Potter book/movie series. In order to be successful in the course, students should have read most, and preferably all, of the Harry Potter books prior to the beginning of the semester. Being very familiar with all of the movies is also acceptable.

**MG 401. Organizational Behavior. 3 Hours.**

Organizational behavior is the study of individuals and their behavior in the workplace. The course looks at behaviors across individual, group, and organizational levels. Broad topics include organizational behavior and leadership, understanding individuals in organizations, motivating employees, building relationships, and creating change.

**Prerequisites:** (MG 302 [Min Grade: C] and GPAO 2.00)

**MG 403. Operations Management. 3 Hours.**

This course covers the strategic, tactical, and integrative roles of Operations in the management of service and manufacturing organizations in a globally competitive economy. Students will learn how to maximize efficiency and value in a business environment. Topics include productivity, design and process strategies, sustainability, ethics, quality management, supply chain strategies, scheduling, forecasting, inventory management, facilities location and layout strategies, maintenance and reliability.

**Prerequisites:** AC 201 [Min Grade: C] and EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C] and MG 302 [Min Grade: C]

**MG 405. Nonprofit Strategy and Entrepreneurship. 3 Hours.**

This course takes students on the journey from a promising program idea through the steps necessary to create a viable strategic plan for your program's business model. Working as individuals and small teams, students will work with an assigned nonprofit organization (NPO) start-up, or established NPO, seeking the next steps for their program idea. These steps include analyzing and defending a suggested business model and strategic analysis where individuals or teams suggest improvements and next steps for this NPO. Along the way students will meet and interact with local nonprofits and engage in thought-provoking brainstorming sessions with some of Birmingham's most innovative and creative nonprofits.

**MG 409. Human Resource Management. 3 Hours.**

This course covers managerial problems associated with the acquisition, development, motivation, and compensation of human resources. Personnel problems such as employment, employee education and training, labor relations, industrial health and safety, and wage and salary administration.

**Prerequisites:** (MG 302 [Min Grade: C] and GPAO 2.00)

**MG 410. Labor-Management Relations. 3 Hours.**

Analysis of managerial issues and opportunities associated with the development of labor-management relations policy. The impact of public policy, significance of pressure groups, negotiations and administration of the collective bargaining agreements, along with the role of the National Labor Relations Board (NLRB) and Labor Relations(LA) as a matter of policy.

**Prerequisites:** (MG 302 [Min Grade: C] and GPAO 2.00)

**MG 411. Compensation Administration. 3 Hours.**

This course covers compensation administration in public and private organizations, with emphasis on determination of range, salary levels, and structures. Job evaluation, pay systems, and wage and benefits legal issues are covered.

**Prerequisites:** (MG 409 [Min Grade: C] and GPAO 2.00)

**MG 412. Organizational Staffing. 3 Hours.**

Primary focus is on the employee recruiting and selection functions within organizations. Strategic staffing, Federal laws and regulations impacting staffing activities, recruitment and selection practices, hiring decision approaches, job analysis and measurement in selection will also be covered in detail.

**Prerequisites:** MG 409 [Min Grade: C] and QM 215 [Min Grade: C]

**MG 413. Employment Law. 3 Hours.**

Management of legal risks arising from hiring, promotion, and other human resources transactions, including risks arising under anti-discrimination laws (e.g., Title VII of Civil Rights Act of 1964) and income security laws (e.g., Fair Labor Standards Act and Family Medical Leave Act).

**Prerequisites:** GPAO 2.00

**MG 414. Talent Development. 3 Hours.**

This course focuses on strategies and practices for training and developing employee capabilities that improve individual and organizational success. Specific focus is placed on building personal, professional, and organizational capabilities that fosters growth. Topics include talent development methods and assessment, learning styles, delivery methods including elearning, and employee development.

**Prerequisites:** MG 409 [Min Grade: C]

**MG 415. International Business Dynamics. 3 Hours.**

Essential information that managers need to know about international business. We will consider cultural, political, and geographic differences and develop strategies to attempt to maximize business opportunities in view of these differences.

**Prerequisites:** MG 302 [Min Grade: C] or BUS 311 [Min Grade: C]

**MG 416. Supply Chain Management. 3 Hours.**

Course takes operational view of the mechanism for matching supply and demand through the management of material and information flow. This framework is used to understand strategic, design and operational issues in supply management.

**Prerequisites:** (MG 403 [Min Grade: C] and GPAO 2.00)

**MG 417. Project Management. 3 Hours.**

The course covers project management principles, methods, techniques, and tools from the perspective of the manager who must plan, schedule, organize and control non-routine activities to achieve schedule, budget and performance objectives. It traverses the life-cycle of a project and the knowledge areas that are applicable at each stage.

**Prerequisites:** MG 302 [Min Grade: C]

**MG 418. Quality Management. 3 Hours.**

Concepts, techniques, and organizational requirements to ensure that quality is provided to consumer. Breadth of quality efforts, statistical quality control methods, quality circle principles, and quality assurance activities in various enterprises.

**Prerequisites:** (MG 403 [Min Grade: C] and GPAT and GPAO 2.00) or (MG 403 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**MG 425. Managing Through Leadership. 3 Hours.**

Provide students with a comprehensive understanding of leadership as a phenomenon, with an emphasis on developing the skills to lead others. Major theories of leadership will be examined and students will gain insights about their individual strengths and weaknesses. Through hands-on experiences and workshops, students will develop and acquire the skills to lead high-performance teams that can optimize their productivity and deliver high-quality results.

**MG 430. Management and Leadership in Sports and Entertainment Organizations. 3 Hours.**

Students will gain an understanding of leadership requirements and challenges in the sports and entertainment industries. Topics include: problem solving and decision making, culture, human resource management, teams, communication, motivation, leadership, facilities and events. This is a service/experiential learning designated course.

**Prerequisites:** GPAO 2.00

**MG 438. Managerial Communication Skills. 3 Hours.**

An advanced business communications course for undergraduates focusing on the verbal and nonverbal communication skills required of managers in today's business environment.

**MG 445. Management Internship. 1-3 Hour.**

Offers qualified undergraduate students the chance to gain first-hand experience in a local business while receiving academic credit. Must be a management major, at least junior standing, C or better in MG 302 and GPA of 2.0 overall. Sponsoring business may require additional courses.

**Prerequisites:** MG 302 [Min Grade: C] and GPAO 2.0

**MG 490. Management Seminar/SL. 3 Hours.**

Selected management topics. This is a designated service-learning course integrating academic learning, civic learning and meaningful service to the community.

**Prerequisites:** GPAU 2.00 and GPAO 2.00 and MG 302 [Min Grade: C]

**MG 492. Current Topics in Production and Operations Management. 3 Hours.**

Selected topics in production and operations management.

**Prerequisites:** (MG 403 [Min Grade: C] and GPAT and GPAO 2.00) or (MG 403 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**MG 493. Current Topics in Human Resource Management. 3 Hours.**

Current development and issues in human resource management.

**Prerequisites:** (MG 409 [Min Grade: C] and GPAT and GPAO 2.00) and (MG 409 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**MG 499. Directed Study in Management. 1-3 Hour.**

Specific areas in management.

**Prerequisites:** (GPAT and GPAO 2.00) or (GPAU 2.00 and GPAO 2.00)

## QM-Quantitative Methods Courses

**QM 214. Quantitative Analysis I. 3 Hours.**

This course is an introductory course to statistics and data analyses for business students. Students will be exposed to basic statistical concepts and procedures to handle the data. Students are expected to recognize the nature of their data, select appropriate procedures, perform requisite calculations, demonstrate computer proficiency, and explain the results to layperson.

**Prerequisites:** (MA 105 [Min Grade: C] or MA 106 [Min Grade: C] or MA 109 [Min Grade: C] or MA 125 [Min Grade: C]) and BUS 110 [Min Grade: C]

**QM 215. Quantitative Analysis II. 3 Hours.**

QM215 is the sequel of QM214 and a continuation of introductory statistics and data analyses. Built upon students' understanding of descriptive statistics and probability, this course exposes students to inferential statistics. Upon finishing the course, students are expected to know how to formulate hypotheses, collect data, select appropriate model(s), conduct statistical analyses, and present statistical findings with proper support of statistical graphs.

**Prerequisites:** QM 214 [Min Grade: C]

**QM 350. Quantitative Methods for Finance. 3 Hours.**

Development of the mathematical foundations of undergraduate level financial modeling and analysis, including applications of calculus, probability theory, linear algebra and Monte Carlo simulation to the measurement of asset returns and the assessment of risk, to the pricing of options and other financial derivatives, and to the solution of important financial optimization problems.

**Prerequisites:** (QM 215 [Min Grade: C] and CS 101 [Min Grade: C] and GPAO 2.00)

**QM 420. Applied Forecasting. 3 Hours.**

Practical use of various forecasting techniques on business and economic data. Topics include dynamic regression models, exponential smoothing, forecast criteria, moving averages, seasonality, and univariate Box Jenkins ARIMA modeling. Completion of all pre-business requirements required.

**Prerequisites:** (GPAT and GPAO 2.00 and AC 201 [Min Grade: C] and EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C]) or (GPAU 2.00 and GPAO 2.00 and AC 201 [Min Grade: C] and EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C])

**QM 490. Advanced Topics in Statistics/Management Science. 3 Hours.**

Statistics/management science application to problems in business and economics.

**Prerequisites:** (GPAT and GPAO 2.00) or (GPAU 2.00 and GPAO 2.00)

**QM 499. Directed Readings in Quantitative Methods. 1-3 Hour.**

Readings and independent study in selected areas.

**Prerequisites:** (GPAT and GPAO 2.00) or (GPAU 2.00 and GPAO 2.00) and EC 211 [Min Grade: C] and QM 215 [Min Grade: C] and EC 210 [Min Grade: C]

## Department of Marketing, Industrial Distribution, and Economics

Chair: Mike Wittmann, Ph.D.

The Department of Marketing, Industrial Distribution, and Economics supports the mission of the School of Business through the department's majors and course offerings. Majors within the department are designed around discipline-based theory and real-world applications.

The department is responsible for courses, concentrations, majors and minors in marketing, industrial distribution, economics, and legal studies. Below is an overview of each major. Detailed degree requirements are located on the Majors Tab above.

## Marketing Major

The objective of the major in marketing is to prepare students for a wide range of marketing positions in both business and not-for-profit organizations and to place our graduates in rewarding and productive careers. Graduates find career opportunities in marketing management, marketing research, supply chain management, professional sales, purchasing, promotion, and advertising. The major is an excellent foundation for graduate work in marketing, Law School or an M.B.A. degree. Students must select a concentration area to earn the degree. Concentrations are available in **Marketing Management, Retail Marketing Management, Digital Marketing and Marketing Analytics**.

## Economics Major

The major in economics is designed to provide students with a solid grounding in economic analysis and decision making. These skills allow students to follow many career paths in business and government. Also, this major provides excellent training for students planning to pursue graduate work in economics, law, or business. Economics majors select a concentration in **Economic Analysis and Policy, Mathematical Economics, or Philosophy, Politics and Economics** depending on their specific interests.

## Industrial Distribution Major

The Charles & Patsy Collat Industrial Distribution Program is one of a small number of such programs in the world that prepares graduates for technical sales, operations, logistics, marketing and purchasing positions specifically for industrial, technical and medical firms. This challenging and engaging program provides two highly focused tracks from which students choose between as an area of concentration: **Industrial Distribution or Medical Equipment and Supplies Distribution**. These concentrations allow students the opportunity to gain specialized knowledge unique to each of these industries.

## Major in Marketing

The objective of the major in marketing is to prepare students for a wide range of marketing positions in both business and not-for-profit organizations and to place our graduates in rewarding and productive careers. Graduates find career opportunities in marketing management, marketing research, supply chain management, professional sales, purchasing, promotion, and advertising. The major is an excellent foundation for graduate work in marketing, Law School or an M.B.A. degree. Students must concentrate in an area of marketing through elective courses offered by the MIDE and MISQ departments. Concentrations include Marketing Management, Retail Marketing Management, Digital Marketing and Marketing Analytics.

Students must earn at least a grade of **C** in all stated prerequisite courses for the marketing requirements. A 2.0 GPA for all courses applied to the

major is also required. At least 15 hours of the major courses must be taken at UAB.

## Concentration in Marketing Management

Requirements		Hours
<b>Core Curriculum</b>		<b>41</b>
<b>Lower Level Business Requirements</b>		
AC 200	Principles of Accounting I	3
AC 201	Principles of Accounting II	3
BUS 101	Introduction to Business	3
	or BUS 102 Business Foundations	
BUS 110	Essentials of Financial Literacy	3
LS 246	Legal Environment of Business	3
QM 214	Quantitative Analysis I	3
QM 215	Quantitative Analysis II	3
<b>Upper Level Business Requirements</b>		
BUS 305	Professional Development for Today's Workplace	1
BUS 350	Business Communications	3
FN 310	Fundamentals of Financial Management	3
IS 303	Information Systems	3
MG 302	Management Processes and Behavior	3
MG 403	Operations Management	3
MK 303	Basic Marketing	3
MK 450	Strategic Marketing <sup>2</sup>	3
	or BUS 495 Business Honors Seminar, I	
	International Business <sup>3</sup>	3
	Experiential Learning <sup>4</sup>	
<b>Marketing Major Courses</b>		
DB 320	Distribution Management	3
MK 330	Professional Selling	3
MK 405	Marketing Analytics	3
MK 410	Integrated Marketing Communication	3
<b>Marketing Management Concentration</b>		
MK 436	Digital Marketing Analytics	3
	or DB 400 Analytics in Distribution	
MK 401	Social Media in Marketing	3
	or MK 418 Digital Marketing	
	Two Marketing Electives <sup>5</sup>	6
<b>General Electives</b>		<b>9</b>
Total Hours		120

<sup>2</sup> Business Honors students take BUS 495.

<sup>3</sup> International Business courses include: EC 407, FN 412, MG 415, MK 416, AC 440, IB 320, IB 439 and IB 495.

<sup>4</sup> All business majors are required to participate in experiential education. This requirement may carry 0-3 credit hours. This requirement may be met by satisfactory completion of one of the following courses or other course/project approved by your Program: AC 464, AC 474, BUS 496, DB 495, EC 460, ENT 426, ENT 445, FN 460, IB 495, IS 464, MG 445, MK 425, MK 445. A description of options to satisfy this degree requirement may be accessed here: <http://www.uab.edu/business/home/degrees-certificates/undergraduate/experiential-learning-requirement>. Please see your advisor for specific requirements for your major.

<sup>5</sup> Marketing electives must be 300- or 400-level courses. ENT 421 may be counted as MK elective.

## Concentration in Retail Marketing Management

Requirements	Hours
<b>Core Curriculum</b>	<b>41</b>
<b>Lower Level Business Requirements</b>	
AC 200 Principles of Accounting I	3
AC 201 Principles of Accounting II	3
BUS 101 Introduction to Business	3
or BUS 102 Business Foundations	
BUS 110 Essentials of Financial Literacy	3
LS 246 Legal Environment of Business	3
QM 214 Quantitative Analysis I	3
QM 215 Quantitative Analysis II	3
<b>Upper Level Business Requirements</b>	
BUS 305 Professional Development for Today's Workplace	1
BUS 350 Business Communications	3
FN 310 Fundamentals of Financial Management	3
IS 303 Information Systems	3
MG 302 Management Processes and Behavior	3
MG 403 Operations Management	3
MK 303 Basic Marketing	3
MK 450 Strategic Marketing <sup>2</sup>	3
or BUS 495 Business Honors Seminar, I	
International Business <sup>3</sup>	3
Experiential Learning <sup>4</sup>	
<b>Marketing Major Courses</b>	
DB 320 Distribution Management	3
MK 330 Professional Selling	3
MK 405 Marketing Analytics	3
MK 410 Integrated Marketing Communication	3
<b>Retail Marketing Management Concentration</b>	
MK 312 Retail Marketing	3
MK 420 Sales Management	3
DB 430 Distribution Operations	3
One MK elective at the 300 level or above	3
<b>General Electives</b>	<b>9</b>
Total Hours	120

<sup>2</sup> Business Honors students take BUS 495.

<sup>3</sup> International Business courses include: EC 407, FN 412, MG 415, MK 416, AC 440, IB 320, IB 439 and IB 495.

<sup>4</sup> All business majors are required to participate in experiential education. This requirement may carry 0-3 credit hours. This requirement may be met by satisfactory completion of one of the following courses or other course/project approved by your program: AC 464, AC 474, BUS 496, DB 495, EC 460, ENT 426, ENT 445, FN 460, IB 495, MG 445, MK 425, MK 445. Please see your advisor for specific requirements for your major.

## Concentration in Marketing Analytics

Requirements	Hours
<b>Core Curriculum</b>	<b>41</b>
<b>Lower Level Business Requirements</b>	
AC 200 Principles of Accounting I	3
AC 201 Principles of Accounting II	3
BUS 101 Introduction to Business	3

or BUS 102 Business Foundations

BUS 110 Essentials of Financial Literacy	3
LS 246 Legal Environment of Business	3
QM 214 Quantitative Analysis I	3
QM 215 Quantitative Analysis II	3
<b>Upper Level Business Requirements</b>	
BUS 305 Professional Development for Today's Workplace	1
BUS 350 Business Communications	3
FN 310 Fundamentals of Financial Management	3
IS 303 Information Systems	3
MG 302 Management Processes and Behavior	3
MG 403 Operations Management	3
MK 303 Basic Marketing	3
MK 450 Strategic Marketing <sup>2</sup>	3
or BUS 495 Business Honors Seminar, I	
International Business <sup>3</sup>	3
Experiential Learning <sup>4</sup>	
<b>Marketing Major Courses</b>	
DB 320 Distribution Management	3
MK 330 Professional Selling	3
MK 405 Marketing Analytics	3
MK 410 Integrated Marketing Communication	3
<b>Marketing Analytics</b>	
MK 408 Marketing Research	3
MK 436 Digital Marketing Analytics	3
DB 400 Analytics in Distribution	3
Marketing Elective <sup>5</sup>	3
General Electives	9
Total Hours	120

<sup>2</sup> Business Honors students take BUS 495.

<sup>3</sup> International Business courses include: EC 407, FN 412, MG 415, MK 416, AC 440, IB 320, IB 439 and IB 495.

<sup>4</sup> All business majors are required to participate in experiential education. This requirement may carry 0-3 credit hours. This requirement may be met by satisfactory completion of one of the following courses or other course/project approved by your Program: AC 464, AC 474, BUS 496, DB 495, EC 460, ENT 426, ENT 445, FN 460, IB 495, IS 464, MG 445, MK 425, MK 445. A description of options to satisfy this degree requirement may be accessed here: <http://www.uab.edu/business/home/degrees-certificates/undergraduate/experiential-learning-requirement>. Please see your advisor for specific requirements for your major.

<sup>5</sup> Marketing electives must be 300- or 400-level courses. ENT 421 may be counted as MK elective.

## Concentration in Digital Marketing

Requirements	Hours
<b>Core Curriculum</b>	<b>41</b>
<b>Lower Level Business Requirements</b>	
AC 200 Principles of Accounting I	3
AC 201 Principles of Accounting II	3
BUS 101 Introduction to Business	3
or BUS 102 Business Foundations	
BUS 110 Essentials of Financial Literacy	3
LS 246 Legal Environment of Business	3
QM 214 Quantitative Analysis I	3

QM 215	Quantitative Analysis II	3
<b>Upper Level Business Requirements</b>		
BUS 305	Professional Development for Today's Workplace	1
BUS 350	Business Communications	3
FN 310	Fundamentals of Financial Management	3
MG 403	Operations Management	3
IS 303	Information Systems	3
MG 302	Management Processes and Behavior	3
MK 303	Basic Marketing	3
MK 450	Strategic Marketing	3
or BUS 495	Business Honors Seminar, I	
International Business	<sup>2</sup>	3
Experiential Learning	<sup>3</sup>	
<b>Major Courses</b>		
DB 320	Distribution Management	3
MK 330	Professional Selling	3
MK 405	Marketing Analytics	3
MK 410	Integrated Marketing Communication	3
<b>Concentration Courses</b>		
MK 401	Social Media in Marketing	3
MK 418	Digital Marketing	3
MK 436	Digital Marketing Analytics	3
MK or IS Elective (IS 416, IS 417, or IS 418)	<sup>4</sup>	3
<b>General Electives</b>		<b>9</b>
Total Hours		120

<sup>2</sup> International Business courses include: EC 407, FN 412, MG 415, MK 416, AC 440, IB 320, IB 439, and IB 495.

<sup>3</sup> All business majors are required to participate in experiential education. This requirement may carry 0-3 credit hours. This requirement may be met by satisfactory completion of one of the following courses or other course/project approved by your program: AC 464, AC 474, BUS 496, DB 495, EC 460, ENT 426, ENT 445, FN 460, IB 495, MG 445, MK 425, MK 445 Please see your advisor for specific requirements for your major.

<sup>4</sup> MK elective must be 300- or 400-level course. ENT 421 may be counted as MK elective.

## Bachelor of Science with a Major in Industrial Distribution

The Charles & Patsy Collat Industrial Distribution Program is one of a small number of such programs in the world that prepares graduates for technical sales, operations, logistics, marketing and purchasing positions specifically for industrial, technical and medical firms. This challenging and engaging program provides two highly focused tracks from which students choose between as an area of concentration: Industrial Distribution or Medical Equipment and Supplies Distribution. These concentrations allow students the opportunity to gain specialized knowledge unique to each of these industries.

## Major in Industrial Distribution

<b>Requirements</b>	<b>Hours</b>
<b>Grade and GPA Requirement</b>	
Students must maintain an overall 2.0 GPA, a 2.0 GPA in all attempted Business courses, and an overall 2.0 GPA in all major courses.	
<b>Core Curriculum</b>	<b>41</b>
<b>Lower Level Business Requirements</b>	

AC 200	Principles of Accounting I	3
AC 201	Principles of Accounting II	3
BUS 101	Introduction to Business	3
or BUS 102	Business Foundations	
BUS 110	Essentials of Financial Literacy	3
LS 246	Legal Environment of Business	3
QM 214	Quantitative Analysis I	3
QM 215	Quantitative Analysis II	3
<b>Upper Level Business Requirements</b>		
BUS 305	Professional Development for Today's Workplace	1
BUS 350	Business Communications	3
FN 310	Fundamentals of Financial Management	3
IS 303	Information Systems	3
MG 302	Management Processes and Behavior	3
MK 303	Basic Marketing	3
BUS 450	Strategic Management Capstone Experience	<sup>2</sup> 3
or BUS 495	Business Honors Seminar, I	
International Business	<sup>3</sup>	3
<b>ID Major Business Course Requirements</b>		
MK 330	Professional Selling	3
DB 320	Distribution Management	3
DB 400	Analytics in Distribution	3
DB 410	Creative Solutions in Distribution	3
DB 430	Distribution Operations	3
DB 435	Distribution Policies and Quality Issues	3
DB 495	Distribution Directed Studies Practicum	<sup>4</sup> 3
<b>ID Major Engineering Course Requirements</b>		
Choose Two From The Following:		6
ME 302	Overview of Mechanical Components	
EE 305	Fundamentals of Electrical Engineering	
MSE 350	Introduction to Materials	
<b>General Electives</b>		<b>9</b>
Total Hours		120

<sup>2</sup> Business Honors students take BUS 495.

<sup>3</sup> International Business courses include: EC 407, FN 412, MG 415, MK 416, AC 440, IB 320, IB 439, IB 495.

<sup>4</sup> Satisfies experiential education requirement.

The Industrial Distribution concentration provides students with a comprehensive understanding of issues and solutions facing suppliers, distributors, and customers as they move technical products and provide services through supply chain networks. Preparing students for careers with manufacturers or distributors in a technical industry, graduates are prepared to work in positions such as sales, operations, or purchasing for companies that manufacture technical equipment or for companies that distribute these products. While enrolled in the ID Program, students receive instruction and mentoring from faculty in the Collat School of Business as well as from faculty in the School of Engineering. An internship is a required component of the ID Program which enables students to receive direct training and exposure to the field in which they are preparing to work.

## Major in Industrial Distribution with Concentration in Medical Equipment and Supplies Distribution

The Medical Equipment & Supplies Program integrates specially tailored health care coursework with the Distribution curriculum to prepare

graduates for careers in the medical equipment and supplies industry. Emphasis is placed on the structure of the health care industry, medical terminology and medical and health care industry purchasing systems. A unique feature of the Program is the experiential learning opportunities that are designed to give students specific knowledge of the fast growing medical equipment and supplies industry. Medical Distribution students, for example, have opportunities to experience the operating room theater during surgery and witness first-hand the duties and responsibilities of the medical supplier in achieving successful patient outcomes. In combination, the program provides students with the skills necessary for success in a variety of positions in our country's medical supply chain. Graduates have been hired by the top medical manufacturers and distributors in positions such as operations, technical sales, purchasing, and inventory management, among others. In addition, many students have been accepted to medical school, physician's assistant school, and other clinical graduate programs upon graduation from this major.

Requirements		Hours
Grade and GPA Requirement: Students must maintain an overall 2.0 GPA, a 2.0 GPA in all attempted Business courses, and an overall 2.0 GPA in all major courses.		
<b>Core Curriculum</b>		<b>41</b>
<b>Lower Level Business Requirements</b>		
AC 200	Principles of Accounting I	3
AC 201	Principles of Accounting II	3
BUS 101	Introduction to Business	3
or BUS 102	Business Foundations	
BUS 110	Essentials of Financial Literacy	3
LS 246	Legal Environment of Business	3
QM 214	Quantitative Analysis I	3
QM 215	Quantitative Analysis II	3
<b>Upper Level Business Requirements</b>		
BUS 305	Professional Development for Today's Workplace	1
BUS 350	Business Communications	3
FN 310	Fundamentals of Financial Management	3
IS 303	Information Systems	3
MG 302	Management Processes and Behavior	3
MK 303	Basic Marketing	3
BUS 450	Strategic Management Capstone Experience <sup>2</sup>	3
or BUS 495	Business Honors Seminar, I	
International Business <sup>3</sup>		3
<b>ID Major Requirements</b>		
DB 320	Distribution Management	3
DB 400	Analytics in Distribution	3
DB 430	Distribution Operations	3
DB 435	Distribution Policies and Quality Issues	3
DB 495	Distribution Directed Studies Practicum	3
MK 330	Professional Selling	3
<b>Medical Equipment Supplies Distribution Concentration Courses</b>		<b>9</b>
Select Three From The Following: <sup>5</sup>		
BY 115	Human Anatomy	
& 115L	and Human Anatomy Laboratory (Cannot be used in Core Area III) <sup>4</sup>	
DB 410	Creative Solutions in Distribution	
HCM 350	Medical Terminology for Health Professionals	
EC 306	Health Care Economics	
ENT 424	Entrepreneurial New Product and Service Development	
ENT 426	Practicum in Commercialization	
HCM 330	Health Care Systems	

MK 471	Health Care Marketing	
<b>General Electives</b>		<b>9</b>
Total Hours		120
2	Business Honors students take BUS 495.	
3	International Business courses include: EC 407, FN 412, MG 415, MK 416, AC 440, IB 320, IB 439, IB 495.	
4	Additional course options are available upon the recommendation and approval of the ID Program Manager and Director.	
5	If BY 115 and the accompanying lab are chosen, fewer General Elective hours will be required.	

## Major in Economics

The major in economics is designed to provide students with a solid grounding in economic analysis and decision making. These skills allow students to follow many career paths in business and government. Also, this major provides excellent training for students planning to pursue graduate work in economics, law, or business. Economics majors should select a concentration in **Economic Analysis and Policy, Mathematical Economics, or Philosophy, Politics and Economics** as a major.

### Concentration in Economic Analysis & Policy

This concentration is suited for students who desire an understanding of the functions of the economy at the micro and macro levels. The analytical skills acquired provide excellent preparation for a variety of careers in industry and government, as well as graduate studies in law or public policy.

Students must earn a minimum grade of **C** in all stated prerequisite courses for any economics major concentration. A 2.0 GPA in all courses applied to the major is also required. At least 15 hours of these courses must be taken at UAB. The university's course forgiveness policy may be applied to either economics major concentration.

Requirements		Hours
<b>Core Curriculum</b>		<b>41</b>
<b>Lower Level Business Requirements</b>		
AC 200	Principles of Accounting I	3
AC 201	Principles of Accounting II	3
BUS 101	Introduction to Business	3
or BUS 102	Business Foundations	
BUS 110	Essentials of Financial Literacy	3
LS 246	Legal Environment of Business	3
QM 214	Quantitative Analysis I	3
QM 215	Quantitative Analysis II	3
<b>Upper Level Business Requirements</b>		
BUS 305	Professional Development for Today's Workplace	1
BUS 350	Business Communications	3
DB 320	Distribution Management	3
or MG 403	Operations Management	
FN 310	Fundamentals of Financial Management	3
IS 303	Information Systems	3
MG 302	Management Processes and Behavior	3
MK 303	Basic Marketing	3
BUS 450	Strategic Management Capstone Experience <sup>2</sup>	3
or BUS 495	Business Honors Seminar, I	
International Business <sup>3</sup>		3

Experiential Learning <sup>4</sup>**Economics Major Courses**

EC 304	Intermediate Microeconomics	3
EC 305	Intermediate Macroeconomics	3
EC 409	Econometrics	3

**Economics Major Electives****15**Select five 300-level or higher Economics (EC) courses or FN 412 <sup>5</sup>**General Electives****9**

Total Hours 120

Must earn a grade of C or better in stated prerequisites, have overall 2.0 GPA, and have overall 2.0 GPA in all major courses.

<sup>2</sup> Business Honors students take BUS 495.

<sup>3</sup> International Business courses include: EC 407, FN 412, MG 415, MK 416, AC 440, IB 320, IB 439, IB 495.

<sup>4</sup> All business majors are required to participate in experiential education. This requirement may be met by satisfactory completion of one of the following courses or other course/project approved by your academic advisor: AC 464, AC 474, BUS 496, DB 495, EC 460, FN 460, IB 495, IS 464, MG 445, MK 425, MK 445

<sup>5</sup> Each of the five courses applies only once to degree requirements.

## Mathematical Economics Concentration (and Math Minor)

Students who choose the mathematical economics concentration will earn both a major in economics and a minor in mathematics by taking the required course work. This track is well suited for those students who wish to pursue graduate studies in economics, finance, or any other quantitative discipline. It also provides the student with excellent preparation for quantitative and analytical careers, such as those in the actuarial science or those in economic consulting.

Students must earn a minimum grade of C in all stated prerequisite courses for any economics major concentration. A 2.0 GPA in all courses applied to the major is also required. At least 15 hours of these courses must be taken at UAB. The university's course forgiveness policy may be applied to either economics major concentration.

Requirements		Hours
<b>Core Curriculum</b>		<b>42</b>
<b>Lower Level Requirements</b>		
AC 200	Principles of Accounting I	3
AC 201	Principles of Accounting II	3
BUS 101	Introduction to Business	3
or BUS 102	Business Foundations	
MA 126	Calculus II (replaces BUS 110) <sup>2</sup>	4
LS 246	Legal Environment of Business	3
MA 485	Probability (replaces QM 214)	3
MA 486	Mathematical Statistics (replaces QM 215)	3
<b>Upper Level Business Requirements</b>		
BUS 305	Professional Development for Today's Workplace	1
BUS 350	Business Communications	3
DB 320	Distribution Management	3
or MG 403	Operations Management	
EC 407	International Economics	3
FN 310	Fundamentals of Financial Management	3
IS 303	Information Systems	3
MG 302	Management Processes and Behavior	3

MK 303	Basic Marketing	3
BUS 450	Strategic Management Capstone Experience <sup>2</sup>	3
or BUS 495	Business Honors Seminar, I	

Experiential Learning <sup>3</sup>**Economics Major Courses**

EC 304	Intermediate Microeconomics	3
EC 305	Intermediate Macroeconomics	3
EC 409	Econometrics	3
MA 227	Calculus III	4
MA 260	Introduction to Linear Algebra	3
or MA 434	Algebra I: Linear	

**Select 5 courses from:****15**

Any 300 or 400 level EC	
FN 412	International Financial Management
MA 252	Introduction to Differential Equations
MA 361	Mathematical Modeling
MA 492	Special Topics in Mathematics
MA 444	Vector Analysis

Total Hours 120

<sup>2</sup> Business Honors students take BUS 495.

<sup>3</sup> All business majors are required to participate in experiential education. This requirement may carry 0-3 credit hours. This requirement may be met by satisfactory completion of one of the following courses or other course/project approved by your Program: AC 464, AC 474, BUS 496, DB 495, EC 460, ENT 426, ENT 445, FN 460, IB 495, IS 464, MG 445, MK 425, MK 445. A description of options to satisfy this degree requirement may be accessed here: <http://www.uab.edu/business/home/degrees-certificates/undergraduate/experiential-learning-requirement>. Please see your advisor for specific requirements for your major.

## Concentration in Philosophy, Politics and Economics

The Philosophy, Politics and Economics Concentration focuses on topics in the intersection of philosophy, political science and economics. This concentration trains students to attack a wide range of problems using rigorous analytical techniques. It is an excellent basis for graduate study in philosophy, public policy, or political science, as well as for those planning to attend law school or for those anticipating careers in journalism, politics, management, intelligence, marketing, industrial organization and many other fields.

Students must earn at least a grade of C in all stated prerequisite courses for an economics major concentration. A 2.0 GPA in all courses used in the major is also required. At least 15 hours of these courses must be taken at UAB. The university's course forgiveness policy may be applied to either economics major concentration.

Requirements		Hours
<b>Core Curriculum</b>		<b>41</b>
<b>Lower Level Business Requirements</b>		
AC 200	Principles of Accounting I	3
AC 201	Principles of Accounting II	3
BUS 101	Introduction to Business	3
or BUS 102	Business Foundations	
BUS 110	Essentials of Financial Literacy	3
LS 246	Legal Environment of Business	3
QM 214	Quantitative Analysis I	3

QM 215	Quantitative Analysis II	3
<b>Upper Level Business Requirements</b>		
BUS 305	Professional Development for Today's Workplace	1
BUS 350	Business Communications	3
DB 320	Distribution Management	3
or MG 403	Operations Management	
FN 310	Fundamentals of Financial Management	3
IS 303	Information Systems	3
MG 302	Management Processes and Behavior	3
MK 303	Basic Marketing	3
EC 407	International Economics	3
BUS 450	Strategic Management Capstone Experience <sup>2</sup>	3
or BUS 495	Business Honors Seminar, I	
Experiential Learning <sup>3</sup>		
<b>Economics Major Courses</b>		
EC 304	Intermediate Microeconomics ((fall only))	3
EC 305	Intermediate Macroeconomics ((spring only))	3
<b>Philosophy, Politics and Economics Concentration Courses</b>		
EC 302	Law and Economics	3
EC 320	Behavioral Economics	3
EC 330	Game Theory	3
PHL 120	Practical Reasoning	3
PHL 230	Social and Political Philosophy	3
Choose one from the following:		3
PHL 135	The Rule of Law (or 300+ PHL elective)	
PHL 300+	elective	
Select three 300-level or higher Economics (EC) courses or FN 412. <sup>4</sup>		9
Total Hours		120

Must earn a grade of C or better in stated prerequisites, have overall 2.0 GPA, and have overall 2.0 GPA in all major courses.

<sup>2</sup> Business Honors students take BUS 495.

<sup>3</sup> All business majors are required to participate in experiential education. This requirement may be met by satisfactory completion of one of the following courses or other course/project approved by your academic advisor: AC 464, AC 474, BUS 496, DB 495, EC 460, FN 460, IB 495, IS 464, MG 445, MK 425, MK 445

<sup>4</sup> Each course counts only once in degree requirements.

## Proposed Program of Study for a Major in Marketing - Marketing Management Concentration

<b>Freshman</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
EH 101		3 BUS 110	3
BUS 101 or 102		3 CMST 101	3
MA 105		3 EH 102	3
Core Curriculum Area II: Fine Arts <sup>1</sup>		3 Core Curriculum Area II	3
Core Curriculum Area IV: Social and Behavioral Science		3 Core Curriculum Area III: Natural Science (with laboratory)	4
		15	16
<b>Sophomore</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
AC 200		3 AC 201	3

EC 210	3	BUS 350	3
Core Curriculum Area III: Natural Science (with laboratory)	4	EC 211	3
Core Curriculum Area IV: History	3	LS 246	3
Core Curriculum Area II: Literature	3	QM 214	3
		16	15
<b>Junior</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
MK 303 <sup>2</sup>		3 BUS 305	1
MG 302 <sup>3</sup>		3 DB 320 <sup>4</sup>	3
QM 215		3 MK 330	3
IS 303		3 MK 436 or DB 400	3
DB 320 or MG 403		3 MK 410	3
		General Electives	3
		15	16
<b>Senior</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
FN 310		3 MK 450	3
MK 405		3 International Business Elective <sup>6</sup>	3
MK 401 or 418		3 Marketing Elective	3
Experiential Requirement		3 General Electives	3
ENT 421 (or MK 300/400 level elective)		3	
		15	12
Total credit hours: 120			

## Proposed Program of Study for a Major in Marketing - Retail Marketing Management Concentration

<b>Freshman</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
EH 101		3 BUS 110	3
BUS 101 or 102		3 CMST 101	3
MA 105		3 EH 102	3
Core Curriculum Area II: Fine Arts <sup>1</sup>		3 Core Curriculum Area II	3
Core Curriculum Area IV: Social and Behavioral Science		3 Core Curriculum Area III: Natural Science (with laboratory)	4
		15	16
<b>Sophomore</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
Core Curriculum Area III: Natural Science (with laboratory)	4	AC 201	3
Core Curriculum Area II: Literature		3 BUS 350	3
Core Curriculum Area IV: History		3 EC 211	3
AC 200		3 LS 246	3
EC 210		3 QM 214	3
		16	15

**Junior**

First Term	Hours	Second Term	Hours
MK 303 <sup>2</sup>		3 BUS 305	1
QM 215		3 DB 320 <sup>4</sup>	3
MG 302 <sup>3</sup>		3 MK 312	3
IS 303		3 MK 330	3
DB 320 or MG 403		3 MK 410	3
		General Electives	3
	15		16

**Senior**

First Term	Hours	Second Term	Hours
FN 310		3 International Business Elective <sup>6</sup>	3
MK 420		3 MK 450	3
MK 405		3 DB 430	3
Marketing Elective (300/400 level)		3 General Electives	3
Experiential Requirement	3		
	15		12

Total credit hours: 120

## Proposed Program of Study for a Major in Marketing - Digital Marketing Concentration

**Freshman**

First Term	Hours	Second Term	Hours
EH 101		3 BUS 110	3
BUS 101		3 CMST 101	3
MA 105		3 EH 102	3
Core Curriculum Area II: Fine Arts <sup>1</sup>		3 Core Curriculum Area II	3
Core Curriculum Area IV: Social and Behavioral Science		3 Core Curriculum Area III: Natural Science (with laboratory)	4
	15		16

**Sophomore**

First Term	Hours	Second Term	Hours
Core Curriculum Area III: Natural Science (with laboratory)		4 AC 201	3
Core Curriculum Area II: Literature		3 BUS 350	3
Core Curriculum Area IV: History		3 EC 211	3
AC 200		3 LS 246	3
EC 210		3 QM 214	3
	16		15

**Junior**

First Term	Hours	Second Term	Hours
MK 303 <sup>2</sup>		3 BUS 305	1
QM 215		3 DB 320 <sup>4</sup>	3
MG 302 <sup>3</sup>		3 MK 401	3
IS 303		3 MK 330	3
DB 320 or MG 403		3 MK 410	3
		General Electives	3
	15		16

**Senior**

First Term	Hours	Second Term	Hours
FN 310		3 MK 418	3
MK 405		3 MK 450	3
MK 436		3 International Business Elective <sup>6</sup>	3
Experiential Requirement		3 General Electives	3
MK or IS Elective <sup>7</sup>	3		
	15		12

Total credit hours: 120

## Proposed Program of Study for a Major in Marketing - Marketing Analytics Concentration

**Freshman**

First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
MA 105		3 CMST 101	3
BUS 101		3 BUS 110	3
Core Curriculum Area II: Fine Art <sup>1</sup>		3 Core Curriculum Area III: Natural Science (with laboratory)	4
Core Curriculum Area IV: Social and Behavioral Science		3 Core Curriculum Area II	3
	15		16

**Sophomore**

First Term	Hours	Second Term	Hours
Core Curriculum Area III: Natural Science (with laboratory)		4 EC 211	3
Core Curriculum Area II: Literature		3 AC 201	3
Core Curriculum Area IV: History <sup>5</sup>		3 BUS 350	3
AC 200		3 LS 246	3
EC 210		3 General Elective	3
	16		15

**Junior**

First Term	Hours	Second Term	Hours
QM 214		3 QM 215	3
MK 303		3 BUS 305	1
MG 302		3 DB 320 <sup>4</sup>	3
IS 303		3 MK 330	3
DB 320 or MG 403		3 International Business <sup>6</sup>	3
		General Elective	3
	15		16

**Senior**

First Term	Hours	Second Term	Hours
FN 310		3 MK 408	3
MK 405		3 MK 450	3
MK 410		3 Experiential Learning Requirement	3
MK 436		3 General Elective	3
DB 400		3	
	15		12

Total credit hours: 120

- <sup>1</sup> Select one of the following: ARH 101, MU 120 or THR 100.
- <sup>2</sup> May be taken concurrently.
- <sup>3</sup> Junior Standing (60 semester hours credit)
- <sup>4</sup> If DB 320 was completed rather than MG 403, an alternate 300/400 level MK elective must be completed to fulfill major requirements.
- <sup>5</sup> Choose from HY 101, HY 102, HY 104, HY 105, HY 120, HY 121.
- <sup>6</sup> Select one from: MK 416, MG 415, EC 407, FN 412, AC 440, IB 320, IB 439 IB 495
- <sup>7</sup> For IS elective, choose from IS 416 or IS 417.

## Proposed Program of Study for a Major in Industrial Distribution : Engineering Concentration

### Freshman

First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
MA 105		3 BUS 110	3
BUS 101		3 Core Curriculum Area II: Fine Art <sup>2</sup>	3
Core Curriculum Area IV: History <sup>1</sup>		3 Core Curriculum Area III: Natural Science (with laboratory)	4
CMST 101		3 undefined	3
	15		16

### Sophomore

First Term	Hours	Second Term	Hours
QM 214		3 QM 215	3
AC 200		3 AC 201	3
EC 210		3 EC 211	3
Core Curriculum Area II: Literature		3 LS 246	3
Core Curriculum Area III: Natural Science (with laboratory)		4 Core Curriculum Area II	3
	16		15

### Junior

First Term	Hours	Second Term	Hours
BUS 350		3 EE 305	3
MK 303 <sup>3</sup>		3 ME 302 or MSE 350	3
MG 302 <sup>4</sup>		3 International Business <sup>5</sup>	3
IS 303		3 General Electives	3
DB 320 <sup>3</sup>		3 BUS 305	1
		DB 400	3
	15		16

### Senior

First Term	Hours	Second Term	Hours
FN 310		3 BUS 450	3
DB 430		3 DB 495	3
MK 330		3 DB 435	3
DB 410		3 Elective	3
General Electives		3	
	15		12

Total credit hours: 120

- <sup>1</sup> Select one from: HY 101, HY 102, HY 104, HY 105, HY 120 or HY 121

- <sup>2</sup> Select one from: ARH 101, MU 120 or THR 100.
- <sup>3</sup> May be taken concurrently.
- <sup>4</sup> Junior Standing (60 semester hours of credit).
- <sup>5</sup> Select one from: MK 416, MG 415, EC 407, FN 412, AC 440, IB 320, IB 439, IB 495.

## Proposed Program of Study for a major in Industrial Distribution with a Concentration in Medical Equipment and Supplies Distribution

### Freshman

First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
MA 105		3 BUS 110	3
BUS 101		3 Core Curriculum Area II: Fine Art <sup>2</sup>	3
Core Curriculum Area IV: History <sup>1</sup>		3 Core Curriculum Area III: Natural Science	4
CMST 101		3 Core Curriculum Area II: Social and Behavioral Science	3
	15		16

### Sophomore

First Term	Hours	Second Term	Hours
QM 214		3 QM 215	3
AC 200		3 AC 201	3
EC 210		3 EC 211	3
Core Curriculum Area II: Literature		3 LS 246	3
Core Curriculum Area III: Natural Science (with laboratory)		4 Core Curriculum Area II	3
	16		15

### Junior

First Term	Hours	Second Term	Hours
BUS 350		3 International Business <sup>5</sup>	3
MK 303 <sup>3</sup>		3 Concentration Option	3
DB 320 <sup>3</sup>		3 Concentration Option	3
MG 302 <sup>4</sup>		3 General Elective	3
IS 303		3 MK 330	3
BUS 305		1	
	16		15

### Senior

First Term	Hours	Second Term	Hours
FN 310 or 360		3 DB 435	3
DB 430		3 BUS 450	3
DB 400		3 Elective	3
Concentration Option		3 Elective	3
DB 495		3	
	15		12

Total credit hours: 120

- <sup>1</sup> Select one from: HY 101, HY 102, HY 120 or HY 121.
- <sup>2</sup> Select one from: ARH 101, MU 120 or THR 100.
- <sup>3</sup> May be taken concurrently
- <sup>4</sup> Junior Standing (60 semester hours of credit)

<sup>5</sup> Select one from: MK 416, MG 415, EC 407, FN 412, AC 440, IB 320  
IB 439, IB 495

## Proposed Program of Study for a Major in Economics with a Concentration in Analysis and Policy

### Freshman

First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
MA 105		3 EC 210	3
BUS 101		3 BUS 110	3
Core Curriculum Area II: Fine Arts <sup>1</sup>		3 Core Curriculum Area III: Natural Science (with laboratory)	4
Core Curriculum Area IV: Social and Behavioral Science		3 Core Curriculum Area II: Social and Behavioral Science	3
	15		16

### Sophomore

First Term	Hours	Second Term	Hours
QM 214		3 LS 246	3
AC 200		3 QM 215	3
Core Curriculum Area II: Literature		3 AC 201	3
Core Curriculum Area III: Natural Science (with laboratory)		4 EC 211	3
Core Curriculum Area IV: History <sup>2</sup>		3 CMST 101	3
	16		15

### Junior

First Term	Hours	Second Term	Hours
BUS 350		3 DB 320 or MG 403	3
MK 303		3 EC 409	3
MG 302		3 EC 305 (offered spring only)	3
FN 310		3 EC Major Electives <sup>3</sup>	6
BUS 305		1	
EC 304 (offered fall only)		3	
	16		15

### Senior

First Term	Hours	Second Term	Hours
EC 407		3 BUS 450	3
IS 303		3 EC Major Elective	3
Economics Major Electives <sup>3</sup>		6 General Electives	6
Experiential Requirement		3	
	15		12

Total credit hours: 120

<sup>1</sup> Select one from: ARH 101, MU 120, THR 100

<sup>2</sup> Select one from: HY 101, HY 102, HY 120 or HY 121

<sup>3</sup> Select six (6) 300-level or higher Economics (EC) courses (Maximum of two (2) 400-level QM courses.

## Proposed Program of Study for a Major in Economics with a Concentration in Philosophy, Politics, and Economics

### Freshman

First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
MA 105		3 EC 210	3
BUS 101		3 BUS 110	3
Core Curriculum Area II: Fine Arts <sup>1</sup>		3 PHL 120	3
Core Curriculum Area IV: Social and Behavioral Science		3 Core Curriculum Area III: Natural Science (with laboratory)	4
	15		16

### Sophomore

First Term	Hours	Second Term	Hours
QM 214		3 LS 246	3
AC 200		3 QM 215	3
Core Curriculum Area III: Natural Science (with laboratory)		4 AC 201	3
Core Curriculum Area IV: History <sup>2</sup>		3 EC 211	3
Core Curriculum Area II: Literature		3 CMST 101	3
	16		15

### Junior

First Term	Hours	Second Term	Hours
BUS 350		3 EC 330	3
EC 320		3 EC 305 (offered spring only)	3
MG 302 <sup>3</sup>		3 DB 320	3
FN 310		3 EC 302	3
BUS 305		1 PHL 230	3
EC 304 (offered fall only)		3	
	16		15

### Senior

First Term	Hours	Second Term	Hours
MK 303		3 BUS 450	3
EC 407		3 EC 450	3
IS 303		3 Economics Major Elective	3
Economics Major Elective		3 Economics Major Elective	3
Experiential Requirement		3 or FN 412 <sup>3</sup>	
	15		12

Total credit hours: 120

<sup>1</sup> Select one of the following: ARH 101, MU 120, THR 100

<sup>2</sup> Choose from HY 101, HY 102, HY 104, HY 105, HY 120, or HY 121

<sup>3</sup> Select three (3) 300-level or higher Economics (EC) courses (maximum of two (2) 400-level QM courses.

## Proposed Program of Study for a Major in Economics with a concentration in Mathematical Economics (and minor in Math)

### Freshman

First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
MA 125		4 MA 126	4
BUS 101		3 EC 210	3
Core Curriculum Area II: Fine Arts		3 Core Curriculum Area III: Natural Science (with lab)	4
Core Curriculum Area IV: Social and Behavioral Sciences	3		
	16		14

### Sophomore

First Term	Hours	Second Term	Hours
MA 227		4 MA 485	3
AC 200		3 LS 246	3
Core Curriculum Area III: Natural Science (with lab)		4 AC 201	3
EC 211		3 CMST 101	3
Core Curriculum Area IV: History		3 Core Curriculum Area II: Literature	3
	17		15

### Junior

First Term	Hours	Second Term	Hours
MA 486		3 MA 260 or 434	3
Core Curriculum Area II		3 EC 305	3
EC 304		3 BUS 350	3
MG 302		3 EC 407	3
EC 300/400 class or FN 412		3 DB 320 or MG 403	3
BUS 305	1		
	16		15

### Senior

First Term	Hours	Second Term	Hours
EC 409		3 BUS 450	3
MK 303		3 IS 303	3
FN 310		3 EC 300/400 or MA 361, 492, 444, or 252	3
EC 300/400 or FN 412		3 EC 300/400 or MA 361, 492, 444, or 252	3
EC 300/400 or MA 361, 492, 444, or 252	3		
	15		12

Total credit hours: 120

## DB - Distribution Courses

### DB 305. Entering the Profession. 3 Hours.

This course will prepare students to enter the industrial distribution profession. Professional development topics include: resume building, soft-skills and interview preparation, internships, expectations for entry-level positions and career paths, as well as expectations and ethical demands of the profession.

### DB 320. Distribution Management. 3 Hours.

Introduction to basic problems, concepts and management practices of distribution firms and manufacturing relationships. History of types of distributor organizations, functions and role of industrial distribution in the economy.

**Prerequisites:** MK 303 [Min Grade: C](Can be taken Concurrently)

### DB 400. Analytics in Distribution. 3 Hours.

This course provides tools and approaches to measure the effectiveness of distributor strategies and tactics and support data-driven decision-making. A central theme of the course is "what to measure" and "how to measure" with regard to customer-facing, supplier-facing, and internal activities. The course also focuses on constructing and interpreting performance "dashboards" that highlight the performance indicators most relevant to a distributor.

**Prerequisites:** DB 320 [Min Grade: C] and QM 215 [Min Grade: C]

### DB 410. Creative Solutions in Distribution. 3 Hours.

This course focuses on enhancing students' abilities to use design approaches and tools for identifying and implementing innovation and growth opportunities in the channel of distribution for business-to-business firms.

**Prerequisites:** DB 320 [Min Grade: C]

### DB 430. Distribution Operations. 3 Hours.

The course emphasizes distribution operations decision making. There are heavy emphases on profitability analysis, margin management, pricing and price negotiations, and managing inventory investments.

**Prerequisites:** DB 320 [Min Grade: C] and AC 200 [Min Grade: C] and AC 201 [Min Grade: C] and EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and QM 214 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C] and (BUS 101 [Min Grade: C] or BUS 102 [Min Grade: C]) and BUS 110 [Min Grade: C]

### DB 435. Distribution Policies and Quality Issues. 3 Hours.

The course examines issues involved in customer relationship strategy and management in industrial and medical business markets. Topics include channel strategy and management, B2B e-commerce strategy and applications, strategic account management processes and systems, customer profitability and lifetime value, multi-channel selling models, negotiations and other operational strategies and technologies used by distributors and manufacturers.

**Prerequisites:** DB 320 [Min Grade: C]

### DB 495. Distribution Directed Studies Practicum. 3 Hours.

Issues in managing distributors, both as suppliers for and customers of manufacturers and other businesses. Students work with host distributor/manufacturer on current and future distribution problem areas. Students develop an in-depth research analysis of the host distributor/manufacturer.

## EC-Economics Courses

### EC 110. Economics and Society. 3 Hours.

Economic principles and development of economic analysis. Combines key elements of EC 210 and EC 211. Primarily intended for majors in School of Education seeking to meet certification requirements; also open to students outside School of Business who wish to survey economics in one course. Not open to entering freshmen; not open to majors in School of Business or economics majors in the College of Arts and Sciences.

**EC 210. Principles of Microeconomics. 3 Hours.**

This course is an introduction to microeconomic analysis. Students will learn why markets often function well without any centralized control and reasons why they sometimes do not, and why basic microeconomic models often are able to explain, predict and improve the world around us. The emphasis is on how the intuitive notions of optimization and equilibrium provide a unifying framework for understanding human behavior, as well as simple ways in which economists use real-world data to answer specific questions.

**EC 211. Principles of Macroeconomics. 3 Hours.**

This course is an introduction to macroeconomic analysis, which pertains to the overall economy. We study economy-wide phenomena such as the growth rate of national economic output, rates of inflation and unemployment, and learn how macroeconomists design government policies that improve aggregate economic performance.

**EC 300. Economic History of the U.S.. 3 Hours.**

This course spans the economic history of the U.S. from colonial times to present. Topics covered include the U.S. Constitution, national economy, wars, ethnicity, race, gender, distribution of wealth and power, social conflict and reform, entrepreneurs, workers, workplace, popular culture, and foreign affairs.

**EC 301. Money and Banking. 3 Hours.**

Money supply, banking system, and other financial institutions; how money affects aggregate economic activity.

**Prerequisites:** EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and GPAO 2.00

**EC 302. Law and Economics. 3 Hours.**

This is an introduction to Law and Economics, that is, the application of economic analysis to legal questions. The course offers a survey of core issues (including property, contracts, and torts), an exposition of alternative approaches to those issues, and a discussion of important implications for economics, law, political science, philosophy, public administration, and sociology. The instructor encourages students to concurrently sign up for the course Cooperation and Competition (EC 330).

**Prerequisites:** (GPAT and GPAO 2.00) or (EC 210 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**EC 303. Labor Economics. 3 Hours.**

Economic analysis in dealing with major aspects of such problems as employment, wages, hours, unionism, labor-management relations, and social security. Influence of psychological and institutional factors.

**Prerequisites:** GPAT and GPAO 2.00 and EC 210 [Min Grade: C] and EC 211 [Min Grade: C] or GPAU 2.00 and GPAO 2.00 and EC 210 [Min Grade: C] and EC 211 [Min Grade: C]

**EC 304. Intermediate Microeconomics. 3 Hours.**

Advanced economic principles underlying value and production with additional training in application of these principles to problems of analysis.

**Prerequisites:** EC 210 [Min Grade: C] and GPAO 2.00

**EC 305. Intermediate Macroeconomics. 3 Hours.**

Forces determining income and employment in economic systems, with special reference to the United States and other Industrialized Countries. Causes of unemployment and inflation. Role of government in maintaining stable prices and sustained growth.

**Prerequisites:** GPAT and GPAO 2.00 and EC 211 [Min Grade: C] or GPAU 2.00 and GPAO 2.00 and EC 211 [Min Grade: C]

**EC 306. Health Care Economics. 3 Hours.**

This course seeks to apply economic analysis to issues in health care. Students will review the basic tools of economic analysis and discuss the evolving trends and institutional features in the health care industry. Students will then use an economic way of thinking to address contemporary health care issues from an economic perspective. This will include consideration of the supply and demand for health care, hospitals, insurance and managed care, health labor markets, chronic disease, prescription drugs, and government policy.

**Prerequisites:** EC 210 [Min Grade: C]

**EC 308. Economics of Environment. 3 Hours.**

Use of economic analysis to examine interaction between economic institutions and physical environment. Specific topics: social costs and benefits of economic growth, interactions between private business and public welfare, and socioeconomic systems and goals.

**Prerequisites:** (GPAO 2.00 and EC 210 [Min Grade: C])

**EC 310. Managerial Economics. 3 Hours.**

Economic theory and its application to managerial decision making process. Demand analysis, estimation, cost analysis, market analysis, pricing strategy.

**Prerequisites:** (EC 211 [Min Grade: C] and EC 210 [Min Grade: C] and GPAO 2.00)

**EC 314. Natural Resource Economics. 3 Hours.**

Natural resource economics applies the tools of economics to the problems facing the environment. This ranges from non-renewable resource extraction and pollution control, to non-market valuation and sustainable development. The focus is to encourage students, regardless of major, to apply foundational economic tools (taught and/or refreshed in the first few weeks) to an area where normative assessments are typically applied.

**EC 320. Behavioral Economics. 3 Hours.**

Incorporation of psychology into models of economic behavior. These models are applied to a variety of fields including industrial organization, marketing, and negotiation.

**Prerequisites:** (EC 210 [Min Grade: C] and GPAO 2.00)

**EC 330. Game Theory. 3 Hours.**

This course studies strategic interaction between economic agents. Topics include finding Nash equilibria in sequential- and simultaneous-move games, game-changing strategic moves & their credibility, manipulating information, cooperation & coordination, auctions, bargaining, voting and incentives. The emphasis is on developing strategic intuition and understanding how and why results in experimental and real-world play often differ from those predicted by the underlying theory.

**Prerequisites:** (EC 210 [Min Grade: C] and GPAO 2.00)

**EC 401. Mathematical Approach in Economics and Business. 3 Hours.**

Mathematical approach in economics and business.

**Prerequisites:** (EC 304 [Min Grade: C] or EC 310 [Min Grade: C] and GPAT and GPAO 2.00) or (EC 304 [Min Grade: C] or EC 310 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**EC 402. Law and Economics. 3 Hours.**

Let's say that you own a home on a nice half-acre lot. What does that ownership mean? Can you do anything you wish with your property? Can you add on 5 additional levels to your home, making it a 7-story monolith? Can you start a chicken farm on your land? If you can't, then is it really your property? Law and economics explains property rights and the appropriate rules for competing uses of property. What if you slip on a grape in the fruit section at the local grocery store and break your hip? Is the store responsible for your medical expenses or are you? Should the justice system require that the store make sure that nobody ever slips on a stray grape? How much responsibility does the shopper have to take the proper amount of care in walking through a produce section? Law and economics helps to analyze the effects of different rules regarding accidents and liability. What is the best way to punish a murderer? Is the same punishment appropriate for someone who has engaged in securities fraud? If not, what is the best way to punish the fraudulent broker? Is punishment supposed to be a deterrent or is it meant to be retribution? Does your answer to the previous question lead you to different punishment conclusions? Law and economics helps determine what are efficient and effective punishment rules.

**EC 403. Monetary Economics. 3 Hours.**

Current theories of monetary policy and management, historical development of theory and practice, contemporary policies employed by monetary authorities, institutions concerned, evaluation of policies and reform, and interrelations between monetary factors and economic processes.

**Prerequisites:** (EC 304 [Min Grade: C] and EC 301 [Min Grade: C] or EC 305 [Min Grade: C] and GPAT and GPAO 2.00) or (EC 304 [Min Grade: C] and EC 301 [Min Grade: C] or EC 305 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**EC 404. Topics in Public Policy. 3 Hours.**

Topics in Public Policy.

**Prerequisites:** (EC 304 [Min Grade: C] and GPAT and GPAO 2.00) or (EC 304 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**EC 405. Economic Development and Growth. 3 Hours.**

Problems of economic development; growth of less developed economies compared with those of advanced economies. Theories of economic development. Policy measures to promote development of growth, with emphasis on measures to accelerate development of countries.

**Prerequisites:** (EC 304 [Min Grade: C] and GPAT and GPAO 2.00) or (EC 304 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**EC 407. International Economics. 3 Hours.**

Analysis of theoretical principles underlying international trade and investment, and international monetary relations. Study includes the effects on domestic and foreign economies of commercial, monetary and fiscal policies. (Also IB 407).

**Prerequisites:** (EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and GPAO 2.00)

**EC 408. Topics in the History of Economic Theory. 3 Hours.**

The development of economic thought from antiquity to the end of the twentieth century, with emphasis on the synthesis of evolving ideas constituting current economic theory.

**Prerequisites:** (EC 211 [Min Grade: C] and EC 210 [Min Grade: C] and GPAT and GPAO 2.00) or (EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**EC 409. Econometrics. 3 Hours.**

This course is an introduction to micro-econometric empirical methods. Students will learn how to specify and estimate regression equations, various econometric models and the appropriate situations for using them, the implications of estimated parameters, and the conditions under which causal effects are identified. The focus is on application, i.e. conceptualization, interpretation and hands-on data analysis.

**Prerequisites:** EC 210 [Min Grade: C] and QM 214 [Min Grade: C]

**EC 411. Public Finance. 3 Hours.**

Principles of taxation, government expenditures, borrowing, and fiscal administration.

**Prerequisites:** (EC 304 [Min Grade: C] and GPAO 2.00)

**EC 413. Urban Economics. 3 Hours.**

Economic issues and structure of metropolitan areas. Economic growth and decay of urban regions. Specific topics: housing, education, employment, political economy, and public safety.

**Prerequisites:** EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and GPAT and GPAO 2.00 and EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and GPAU 2.00 and GPAO 2.00

**EC 414. Industrial Organization. 3 Hours.**

Structure and performance of monopolistic and oligopolistic industries, emphasizing efficiency, pricing policies, and investment decisions. Extent and nature of concentration in economy as whole.

**Prerequisites:** (EC 304 [Min Grade: C] and GPAO 2.00)

**EC 415. Sports Economics. 3 Hours.**

The study of the economics of sports allows the student to see how various tools and theories can actually be applied to solving problems the student may see presented frequently in the mainstream news. By studying the economics of sports it is hoped that the student can approach economics in the context of a subject the student already finds interesting. Furthermore, In the end this class is not only designed to be interesting, but also a rigorous introduction to the application of economic theory.

**Prerequisites:** EC 210 [Min Grade: C]

**EC 420. Applied Forecasting. 3 Hours.**

Practical use of various forecasting techniques on business and economic data. Topics include dynamic regression models, exponential smoothing, forecast criteria, moving averages, seasonality, and univariate Box Jenkins ARIMA modeling.

**Prerequisites:** (EC 210 [Min Grade: C] and GPAT and GPAO 2.00) or (EC 210 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**EC 425. Applied Regression Analysis. 3 Hours.**

Simple, multilinear, and polynomial regression analysis. Model selection, inferential procedures, and application with computer.

**Prerequisites:** (QM 215 [Min Grade: C] and GPAT and GPAO 2.00) or (QM 215 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**EC 440. Economics for Educators. 3 Hours.**

Students will gain an understanding of both basic economic principles and entrepreneurship and learn innovative methods of transferring economic knowledge to elementary and secondary students. Students will also become well-versed in the National and Alabama State standards of learning. Only open to education majors and certified teachers in K-12. This class is not open to economics or business majors.

**EC 450. Economics, Institutions & Law. 3 Hours.**

The course will study the microeconomic and macroeconomic consequences of different institutional environments and arrangements of designed incentives. This will include political, regulatory and legal structures and rules, both as pertain to actual institutions at the macro level (e.g., the Federal Reserve, the IMF, the World Bank) and regulated structures at the micro level (households and firms). The presumed conceptual frameworks will be based on intermediate microeconomics and introductory macroeconomics. Normative justification of institutional designs will be addressed. EC 320 is a recommended prerequisite.

**Prerequisites:** (EC 211 [Min Grade: C] and EC 304 [Min Grade: C] and GPAT and GPAO 2.00) or (EC 211 [Min Grade: C] and EC 304 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**EC 460. Economics Internship. 1-3 Hour.**

The economics internship program offers qualified students the opportunity to gain first-hand experience in local organizations for a term while receiving academic credit. Participating organizations are expecting to receive high-quality work from the students they sponsor. The active participation by students in actual business decisions of the sponsoring organization is the primary interest of the internship.

**Prerequisites:** (EC 304 [Min Grade: C] and EC 305 [Min Grade: C] and EC 210 [Min Grade: C] and EC 211 [Min Grade: C] and GPAO 2.00)

**EC 490. Advanced Topics in Economics. 3 Hours.**

Selected topics in economics.

**Prerequisites:** GPAO 2.00

**EC 499. Directed Readings in Economics. 1-3 Hour.**

Investigation of specific areas in economics.

**Prerequisites:** GPAO 2.00

## LS-Legal Studies Courses

**LS 246. Legal Environment of Business. 3 Hours.**

This course is required for all students in the Collat School of Business. Students acquire a general knowledge of the legal environment of business.

**LS 457. Business Law for Accountants. 3 Hours.**

Legal forms of business organization, including partnerships and corporations. Commercial paper, especially negotiable instruments; sales under Uniform Commercial Code; other CPA examination material. Junior standing required.

**Prerequisites:** (LS 246 [Min Grade: C] and GPAO 2.00)

**LS 471. Legal Elements of Fraud Investigation. 3 Hours.**

Key legal principles and courtroom procedures relevant to forensic accounting, and survey of related topics--criminology theories, evidence management, and litigation services.

**Prerequisites:** (LS 246 [Min Grade: C] and GPAO 2.00)

## MK-Marketing Courses

**MK 101. Introduction to Consumer Marketing. 3 Hours.**

Survey course designed to provide understanding of business marketing practices and consumer decision making processes. Open to all UAB students.

**MK 303. Basic Marketing. 3 Hours.**

Survey course of the modern business process for planning, distributing, promoting and pricing of products (goods and services) for domestic and international organizations.

**Prerequisites:** GPAO 2

**MK 310. Consumer Behavior. 3 Hours.**

This course focuses on models and concepts that help managers understand and act upon consumer behavior. The course is designed to enhance student understanding of consumer behavior, and provide opportunities for students to apply this knowledge. The course is presented from the perspective of a marketing manager.

**Prerequisites:** MK 303 [Min Grade: C]

**MK 312. Retail Marketing. 3 Hours.**

Business to consumer marketing with consideration for location, organization, buying, receiving stock inventory and control, policies, pricing, services, control and personnel management within retail establishments.

**Prerequisites:** (MK 303 [Min Grade: C] and GPAO 2.00)

**MK 330. Professional Selling. 3 Hours.**

The course focuses on the fundamentals of professional selling and the professionalization of the field. The course combines personal selling theory with actual practice. Students develop the analytical and communicative skills useful in their future business relationship-building activities. Analytical skills are developed through an assignment that requires students to research, design, and present their own comprehensive sales scenario. Students practice their communicative skills through in-class role playing.

**Prerequisites:** GPAO 2.0

**MK 333. Sports Marketing. 3 Hours.**

Strategic analysis, positioning and marketing of professional and amateur sports events and organizations. The goal is to provide students with a comprehensive view of all that is required to successfully market a sporting organization or event. Junior standing required.

**Prerequisites:** GPAO 2.00

**MK 401. Social Media in Marketing. 3 Hours.**

Survey course of the unique aspects of marketing through social media. The focus is on the application of new and emerging social media communications systems and practices that are becoming major elements in integrated marketing communication programs.

**Prerequisites:** MK 303 [Min Grade: C]

**MK 405. Marketing Analytics. 3 Hours.**

This course focuses on the analysis and use of data to make better strategic and tactical marketing decisions.

**Prerequisites:** MK 303 [Min Grade: C] and QM 215 [Min Grade: C]

**MK 408. Marketing Research. 3 Hours.**

Research techniques in marketing with application of research findings to decision making and formulation of marketing strategies.

**Prerequisites:** (MK 303 [Min Grade: C] and AC 201 [Min Grade: C] and EC 211 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C] and GPAO 2.00)

**MK 410. Integrated Marketing Communication. 3 Hours.**

Considers the organizations coordinated and strategic use of communication tools used in marketing including advertising, sales promotion, direct marketing, interactive media, publicity/public relations, sponsorship marketing, point-of-purchase communications and personal selling.

**Prerequisites:** (MK 303 [Min Grade: C] and AC 201 [Min Grade: C] and EC 211 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C] and GPAO 2.00)

**MK 416. International Marketing. 3 Hours.**

International marketing activities, including environmental issues, marketing strategy and tactical considerations in entering foreign markets.

**Prerequisites:** MK 303 [Min Grade: C] or BUS 311 [Min Grade: C]

**MK 418. Digital Marketing. 3 Hours.**

Overview of various digital marketing strategies, tools, and metrics used to deliver value to businesses and consumers.

**Prerequisites:** MK 303 [Min Grade: C]

**MK 419. Services Marketing. 3 Hours.**

Understanding service customers, customer satisfaction, motivating service employees, improving service quality and role of services in strategy planning.

**Prerequisites:** (MK 303 [Min Grade: C] and AC 201 [Min Grade: C] and EC 211 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C] and GPAT and GPAO 2.00) or (MK 303 [Min Grade: C] and AC 201 [Min Grade: C] and EC 211 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**MK 420. Sales Management. 3 Hours.**

The course focuses on the fundamentals of professional selling and the professionalization of the field. The course combines personal selling theory with actual practice. Students develop the analytical and communicative skills useful in their future business relationship-building activities. Analytical skills are developed through an assignment that requires students to research, design, and present their own comprehensive sales scenario. Students practice their communicative skills through in-class role playing.

**Prerequisites:** MK 330 [Min Grade: C] (Can be taken Concurrently)

**MK 423. Emerging Trends in Professional Selling. 3 Hours.**

Emerging Trends in Professional Selling is a module-based course that focuses on advanced selling topics in the business-to-business context that are both relevant and timely. The course will introduce students to these topics while focusing on the skills necessary for success as it relates to each topic. Topics may include, but are not limited to, inside selling, virtual selling, social selling, team-based selling, strategic account management, customer relationship management (CRM) software utilization, and sales negotiations. Topics focused upon will be reviewed on an annual basis to ensure relevance in relation to industry, and corresponding student, needs.

**Prerequisites:** MK 330 [Min Grade: C]

**MK 425. Advanced Professional Selling. 3 Hours.**

This course builds upon the basic selling skills learned in MK 330 and other communications courses. The students will focus on enhancing value-adding selling skills and developing long-term, mutually-beneficial customer relationships in a B2B context.

**Prerequisites:** MK 330 [Min Grade: C]

**MK 436. Digital Marketing Analytics. 3 Hours.**

Exploration of measuring and analyzing digital marketing strategies. Students will acquire industry certification in addition to creating an online marketing strategy with an emphasis on campaign optimization.

**Prerequisites:** MK 303 [Min Grade: C]

**MK 440. Small Business Consulting and Research. 3 Hours.**

Applied field work integrating functional business fields of management, finance, accounting, marketing, economics, production policy, and decision making related to small business enterprises.

**Prerequisites:** FN 310 [Min Grade: C] and MG 302 [Min Grade: C] and MK 303 [Min Grade: C]

**MK 445. Marketing Internship. 1-3 Hour.**

Offers qualified undergraduate students the chance to gain first-hand experience in a local business while receiving academic credit. Marketing major and junior standing required. Sponsoring business may require additional courses.

**Prerequisites:** (MK 303 [Min Grade: C] and GPAU 2.00 and AC 201 [Min Grade: C] and EC 211 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C] and GPAT and GPAO 2.00) or (MK 303 [Min Grade: B] and AC 201 [Min Grade: C] and EC 211 [Min Grade: C] and LS 246 [Min Grade: C] and QM 215 [Min Grade: C] and GPAU 2.00 and GPAO 2.00)

**MK 449. Integrated Marketing Communications Practicum. 3 Hours.**

Students will use their marketing knowledge to create social media marketing plans for local organizations, primarily focusing on the tactical aspects of integrated marketing communications. This practicum is a requirement for those seeking to obtain an undergraduate social media marketing certificate.

**Prerequisites:** MK 303 [Min Grade: C]

**MK 450. Strategic Marketing. 3 Hours.**

Course addresses problems of marketing management with emphasis on planning, implementing and controlling marketing activities with individual firms.

**Prerequisites:** (BUS 350 [Min Grade: C] and FN 310 [Min Grade: C] and MK 312 [Min Grade: C] and MK 320 [Min Grade: C] and MK 408 [Min Grade: C] and MK 410 [Min Grade: C] and GPAO 2.00)

**MK 471. Health Care Marketing. 3 Hours.**

This class is designed for upper level students with an interest in and/or who seek employment in the healthcare industry. It is also appropriate for seniors in Medical Equipment Sales and Distribution. The primary objective of this course is to provide students with a comprehensive overview of the marketing fundamentals in the health care environment. The course examines health care organizations as customers in a Business to Business environment as well as the special challenges in implementing marketing strategies.

**MK 490. Special Topics in Marketing. 3 Hours.**

Selected marketing topics not covered in other marketing courses.

**Prerequisites:** (MK 303 [Min Grade: C] and GPAO 2.00)

**MK 499. Directed Readings in Marketing. 1-3 Hour.**

Specific areas in marketing.

**Prerequisites:** GPAO 2.00

## College of Arts & Sciences

**Dean:** Kecia M. Thomas

**Senior Associate Dean for Academic Affairs:** Catherine Daniélou

**Associate Dean for Faculty Affairs:** John K. Moore

**Associate Dean for Research and Innovation:** Yogesh K. Vohra

The College of Arts and Sciences includes departments in the arts, humanities, mathematics, social, behavioral, natural and physical sciences.

The College offers 33 degree programs leading to a Bachelor's degree, 50 minors, and 23 programs leading to a masters or doctoral degree. Situated at the center of an internationally renowned research university and academic medical center, students and faculty in the College of Arts and Sciences have unparalleled opportunity to be part of the innovative and ground-breaking research and creative work that is the signature of UAB.

We offer a student-centered, experiential curriculum designed to prepare students not only for the careers and challenges of the 21st century but also to be the leaders in the global marketplace of ideas. Every undergraduate program in the arts and sciences is designed to insure that students cultivate strong oral and written communication skills, proficiency in mathematical and analytical reasoning, and sophisticated appreciation of ethics and civic engagement. Graduates with an arts and sciences major develop the ability to understand diverse perspectives making them better prepared to work creatively and productively with others to solve the most important problems of our times.

Honors programs and honors level study are offered in almost every department, along with mentored research and study abroad for interested students. Our metropolitan location provides an endless number of internship placements coordinated with an academic program of study. Each year many of our students pursue at least one of these opportunities.

Interdisciplinary programs of study are increasingly interesting as we realize the benefits of multiple perspectives and methods to advance understanding and improve solutions. We work with the UAB Heersink School of Medicine to offer undergraduate degree paths in Bioinformatics, Cancer Biology, Genetics and Genomic Sciences, Immunology, Neuroscience. Students in the College of Arts and Sciences can pursue formal interdisciplinary programs such as African-American Studies or International Studies. The Bachelor of General Studies (BGS) degree is another interdisciplinary option that prepares students for careers in various professional fields where fundamental critical thinking and inquiry skills as well as rigorous writing and communication skills are of key importance. We also welcome very motivated students to work with their academic adviser and faculty to design an individualized, interdisciplinary major in a focused area. Among the fields that some of our students have chosen to focus on are: *Asian Studies, Children Studies, Chinese Studies, Community Development and Social Change, Health Studies, Human Rights, International Development, International Health, Legal Studies, Motor Development and Health, New Media, Quantitative Economics, Sports and Health in Society, Translational Research.*

The UAB Core Curriculum requirements and the specific major and minor requirements for graduation are listed below for each Bachelor's degree option.

## The UAB Core Curriculum

[Refer to Core Curriculum](#)

## Additional Requirements

Departments within the College have policies on the grade level of acceptable work that may be applied towards the major or minor. All College of Arts and Sciences majors must take general electives to reach the 120 semester hour requirement. At least 9 semester hours of the major must be at the 400 level or above. All students must have a capstone experience. In addition to the number of hours there is a requirement of at least a C average in courses counted toward the major and also in courses counted toward the minor for all students majoring in Biology, Chemistry, Computer and Information Sciences, Mathematics, Physics. At least one-third of the hours in both the major and minor must be completed at UAB, and at least a C average must be maintained in these courses.

Requirements for students majoring or minoring in [Communication Studies](#), [Political Science](#), [International Studies](#), [Psychology](#), [Social Work](#), [Sociology](#): courses counted toward one major or minor may not be applied to meet the requirements of another major or minor; credit will be allowed for job-training instructional programs that have been evaluated and approved by an agency of the American Council on Education, or comparable evaluating agency, and when the work in question is germane to the student's program.

Requirements for students majoring in [African American Studies](#), [Anthropology](#), [Art/Art History](#), [Criminal Justice](#), [English](#), [Film \(minor\)](#), [Foreign Languages](#), [History](#), [Music](#), [Philosophy](#), [Theatre](#): relevant courses counted toward one major or minor in one of these seven fields may be applied to meet the requirements of a major or minor in another of these specific fields. After doing so, if a student has not achieved the minimum required credit hours for graduation, the remaining hours may be fulfilled through courses of the student's choosing, consistent with all other degree requirements.

## Teacher Certification

UAB offers baccalaureate level (Class B) secondary (grades 6-12) teacher certification in Chemistry, Biology, General Science, History, General Social Science, English Language Arts, Mathematics, Music-Instrumental, Music-Choral, and middle school (grades 4-8) teacher certification (Class B) in Mathematics. To obtain certification in fields outside science and mathematics, students must major in their teaching field and education. Requirements for the major in the College of Arts and Sciences may be found in the appropriate department listing. To obtain certification in Chemistry, Biology, Physics, General Science, and Mathematics, students major in their teaching field and participate in the UABTeach program (Heritage Hall Building 210), which leads to a minor in STEM Education and Class B teacher certification. Requirements for the major in the College of Arts and Sciences may be found in the appropriate department listing. Because of specific Alabama Teacher Certification requirements, students seeking certification should consult with the School of Education Student Success Center (Room 100, Education Building) early in their academic careers, or consult directly with UABTeach if in science or mathematics. UAB also offers non-traditional fifth year masters' level (Class A) certification in the above disciplines. Students majoring in one of the above fields should contact the School of Education Student Success Center for more information about program admission requirements.

## Interdisciplinary Programs

Interdisciplinary programs of study are increasingly interesting as we realize the benefits of multiple perspectives and methods to advance understanding and improve solutions. We work with the UAB School of Medicine to offer undergraduate degree paths and majors in Bioinformatics, Genetics and Genomic Sciences, Immunology, Neuroscience. Students in the College of Arts and Sciences can pursue formal interdisciplinary majors such as African-American Studies, Digital Forensics, or International Studies. The Bachelor of General Studies (BGS) degree is also an interdisciplinary degree that prepares students for careers in various professional fields where fundamental critical thinking and inquiry skills, rigorous writing and communication skills, as well as team work skills are of key importance. Other possibilities for interdisciplinary study include for example Human Rights, Media Studies, Urban Affairs, or Film at the minor level. The Interdisciplinary Minors list below indicates our choices in the College of Arts and Sciences.

We also encourage motivated students to work with their academic advisor and faculty to design an individualized, interdisciplinary major in a focused area. The Individually Designed Major option is available to all undergraduate students in good standing who are self-motivated and interested in working independently. The Individually Designed Major option can only be made possible using courses available at UAB. Among the many different fields that some of our students have chosen to focus on are *American Studies*, *Asian Studies*, *Children Studies*, *Chinese Studies*, *Health Studies*, *Human Rights*, *Integrative Media*, *International Development*, *International Health*, *Japanese Studies*, *Legal Studies*, *Media Production*, *Sports and Health in Society*, *Sports Economics*. Students who may be interested in designing their own major go through a rigorous approval process and should contact their academic advisor in the College of Arts and Sciences or email Dr. Catherine Danielou at [danielou@uab.edu](mailto:danielou@uab.edu). ([danielou@uab.edu](mailto:danielou@uab.edu))

## Majors

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[Bioinformatics](#) (p. 187)  
[Cancer Biology](#) (p. 190)  
[Digital Forensics](#) (p. 192)  
[General Studies](#) (p. 194)  
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## Minors

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[Women's and Gender Studies](#) (p. 219)

## African American Studies

**Director:** Kathryn Morgan

The African American Studies Program is an interdisciplinary program that integrates the humanities, social and behavioral sciences and health related fields. A major in African American Studies leads to a Bachelor of Arts Degree. The Program also offers a minor. Since the Program requires only 40 hours for completion, students are encouraged to consider a "double major" with African American Studies.

The curriculum offered by the African American Studies Program advances knowledge about continental and diasporic African and African-American cultures and the history, literature, art, music, politics, economics, and religion associated with these cultures.

Our mission is to encourage critical thinking, develop analytical and writing skills, promote understanding and appreciation of contributions made by African Americans, and illuminate the complexity of race and the African American experience.

In addition to taking the required core classes for the major, students will be required to complete fifteen hours in one of three areas of emphasis:

Global and Minority Health and Social Justice; Historical Investigation and Cultural Awareness; and History and Culture of Afro-Caribbean and Latino People.

The plan of study prepares students with critical knowledge, research skills, and communication skills to further their education in graduate and professional study in a variety of disciplines including African American Studies, Public Health, Criminal Justice, Public Administration, and Education; obtain employment in public health, social sciences, business and related fields; communicate effectively; and demonstrate the application of knowledge through community engagement.

The revised curriculum provides students more course options for completing the requirements of the degree. The revised curriculum also provides Areas of Emphasis that lead to a variety of career and graduate school opportunities. The three areas include: Global and Minority Health and Social Justice; Historical Investigation and Cultural Awareness; and the History and Culture of Afro-Caribbean and Latino People. As an African American Studies major, students select an area of study and complete enough hours to pursue a Master's or secure employment in that area. Students are able to develop goals early in their academic careers and strategies for achieving their goals.

In addition to the major in African American Studies, the Program also offers a minor. Students are required to complete 18 hours of coursework to fulfill the requirements for the minor. Students may also complete the minor online. Online courses will allow students to fulfill the minor requirements.

## Bachelor of Arts with a Major in African American Studies

Requirements	Hours
<b>Total Required Core Course Hours</b>	
AAS 100 African American Studies Seminar	1
AAS 200 Introduction to African-American Studies	3
or AAS 201 Honors Introduction to African American Studies	
AAS 223 African-Amer Hist to Civil War	3
or AAS 224 African American History Since 1865	
AAS 325 Black Psychology	3
AAS 350 Research Methods in African American Studies	3
AAS 331 African Diasporic Traditions	3
AAS 420 Public Health and Medical Issues in African Communities	3
AAS 490 African American Studies Internship	3
AAS 493 Capstone Seminar	3
or AAS 495 Individual Studies	
<b>Students should select an Area of Emphasis and take 15 hours from the approved courses</b>	<b>15</b>
<b>MINORITY &amp; GLOBAL PUBLIC HEALTH/SOCIAL JUSTICE</b>	
AAS 220 History of Sport: The African American Experience	
AAS 273 The Black Power Movement	
AAS 310 Black Image: Screen and Television	
AAS 320 African Identity/Personality	
AAS 346 Race, Rhetoric, and Resistance	
AAS 442 Race, Crime, Gender and Social Policy	
or CJ 442 Race, Crime, Gender and Social Policy	
SOC 250 Sociology of Race and Ethnicity	
SOC 280 Introduction to Medical Sociology	
SOC 282 Minority Health	

PUH 201	Introduction to Public Health
PSC 319	Civil Liberties and Civil Rights
PSC 350	African Politics
CJ 100	Introduction to the Criminal Justice System
CJ 230	The Judicial Process in America: An Overview
ANTH 104	Introduction to Peace Studies
ANTH 235	Immigration Transnationalism and Diasporas
ANTH 292	Anthropology of Slavery
ANTH 371	Service Learning in Anthropology
PHL 135	The Rule of Law
<b>HISTORICAL INVESTIGATION &amp; CULTURAL AWARENESS</b>	
AAS 165	Jazz Styles: History and Appreciation
AAS 220	History of Sport: The African American Experience
AAS 235	Introduction to African History and Culture
AAS 260	History of Afro-Latin America
or HY 260	History of Afro-Latin America
AAS 273	The Black Power Movement
AAS 300	African American Music
AAS 301	History and Tradition of Gospel Music
AAS 310	Black Image: Screen and Television
AAS 311	Race and Representation in Media
AAS 335	The Psychology of Hip Hop
AAS 346	Race, Rhetoric, and Resistance
AAS 385	The History of Haiti
EH 324	African-American Special Topics
EH 365	African American Literature, 1746-1954
EH 366	African American Literature, 1954-Present
EH 424	African-American Special Topics
EH 422	African Literature
EH 423	African Women's Literature
EH 446	African American Autobiography
EH 447	African American Dramatic Tradition
EH 448	African American Poetry Tradition
EH 466	The Slave Narrative and Its Literary Expressions
EH 467	Black Women Writers
EH 468	The Harlem Renaissance
ARH 205	Survey of African Art
ARH 480	Art Criticism and Theory
HY 223	African-American History to 1865
HY 224	African-American History Since 1865
HY 289	Topics in African American History
HY 304	U.S. Civil Rights Movement
HY 310	Film in the 1960s
HY 312	Rock n Roll and Race Relations
HY 326	Mansions, Mines, and Jim Crow
HY 389	Topics in African American History
<b>HISTORY &amp; CULTURE OF AFRO-CARIBBEAN AND LATINO PEOPLE</b>	
AAS 385	The History of Haiti
ANTH 248	Peoples of the World: Latin America
HY 260	History of Afro-Latin America
HY 245	Introduction to Latin American History
HY 247	Indians, Spaniards & Creoles
HY 341	The U.S. and Latin America
HY 342	Sex & Latin American Society
SPA 101	Introductory Spanish I
SPA 310	Cultures of the Spanish-Speaking World

SPA 414	Afro-Latin American Literature and Culture	
Total Required Hours		40

## Minor in African American Studies

Requirements		Hours
<b>Select 6 courses from the following courses:</b>		<b>18</b>
AAS 100	African American Studies Seminar	
AAS 165	Jazz Styles: History and Appreciation	
AAS 200	Introduction to African-American Studies	
AAS 220	History of Sport: The African American Experience	
AAS 223	African-Amer Hist to Civil War	
AAS 224	African American History Since 1865	
AAS 235	Introduction to African History and Culture	
AAS 250	Special Topics in African-American Studies	
AAS 260	History of Afro-Latin America	
AAS 273	The Black Power Movement	
AAS 300	African American Music	
AAS 301	History and Tradition of Gospel Music	
AAS 310	Black Image: Screen and Television	
AAS 311	Race and Representation in Media	
AAS 320	African Identity/Personality	
AAS 325	Black Psychology	
AAS 330	African Aesthetics and Traditional Religion	
AAS 331	African Diasporic Traditions	
AAS 335	The Psychology of Hip Hop	
AAS 345	Pulpits in Protest: Social Change Speeches from the Black Church and Beyond	
AAS 346	Race, Rhetoric, and Resistance	
AAS 350	Research Methods in African American Studies	
AAS 385	The History of Haiti	
AAS 400	Seminar in African American Studies	
AAS 420	Public Health and Medical Issues in African Communities	
AAS/CJ 442	Race, Crime, Gender and Social Policy (AAS 442)	
AAS 490	African American Studies Internship	
Total Hours		18

A grade of C or better is required for courses applying to this minor.

## Proposed Program of Study for a Major in African-American Studies

Freshman			
First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
AAS 100		1 Core Curriculum Area IV: History <sup>1</sup>	3
AAS 200 or 201		3 Core Curriculum Area II: Humanities	3
MA 110		3 Core Curriculum Area IV: Social and Behavioral Sciences	3
Core Curriculum Area IV: History <sup>1</sup>		3 AAS Elective <sup>4</sup> or AAS Elective	3
Core Curriculum Area II: Fine Arts <sup>2</sup>	3		
undefined			
		16	15

## Sophomore

First Term	Hours	Second Term	Hours
AAS 325		3 Core Curriculum Area II: Humanities	3
AAS 223 (AAS 223 )		3 AAS 331 (AAS Area of Emphasis )	3
Core Curriculum Area II: Literature <sup>3</sup>		3 Area of Emphasis <sup>4</sup>	3
Select Course from Area of Emphasis <sup>4</sup>	3		
Core Curriculum Area III: Natural Science with Lab	4		
		16	9

## Junior

First Term	Hours	Second Term	Hours
EH 365		3 EH 366	3
Core Curriculum III: Natural Science with Lab		4 AAS 350	3
AAS 335		3 Area of Emphasis <sup>4</sup>	3
AAS Area of Emphasis <sup>5</sup>		3 Electives	6
Elective	3		
		16	15

## Senior

First Term	Hours	Second Term	Hours
AAS 420		3 AAS 493 or 495	3
Area of Emphasis <sup>4</sup>		3 AAS 490 <sup>6</sup>	3
Electives		6 Area of Emphasis <sup>4</sup>	3
AAS 301		3 Elective	3
		15	12

Total credit hours: 114

- 1 Select One: HY 101, HY 102, HY 105, HY 120 or HY 121.
- 2 Select One: ARH 101, ARH 203, ARH 206, MU 120, THR 100, THR 105, or THR 200.
- 3 Select One: EH 216, EH 217, EH 218, EH 221, EH 222, EH 223 or EH 224.
- 4 Take 15 hours of coursework from the selected area of emphasis
- 5 Must be 300 Level or above
- 6 Must meet with the Program Director in the semester prior to completing the Internship.

## African American Studies Honors Program

### PURPOSE

The purposes of the Honors Program in African American Studies are to promote academic excellence; provide opportunity for majors to do extensive study and research in the discipline; and prepare academically talented majors to pursue graduate school or professional careers.

### ELIGIBILITY

- completion of required AAS courses:
  - AAS 200 Introduction to African American Studies
  - AAS 350 Research Methods in African American Studies
  - AAS 331 African Diasporic Traditions
- undergraduate cumulative GPA of 3.00
- GPA of 3.25 in AAS courses

- junior-senior level standing

## REQUIREMENTS

- completion of required courses for the AAS major
- approval by the Program Director
- completion of AAS 497 Honors Seminar (Fall Semester)
- completion of AAS 498 Honors Thesis/Project (Spring Semester)
- formal presentation of the final project

## BENEFITS

Participation in the African American Studies Honors program provides opportunities for academically talented students to have unique access to faculty and to interact with other honors students in an environment that encourages creative and innovative thinking. Seminar participation and research experience will be useful for graduate study or a career in the field. Completion of the Honors program is an advantage when applying to graduate programs. Finally, students who complete the program will be recognized at the African American Studies outstanding student ceremony and will graduate "With Honors in African American Studies."

## CONTACT

For additional information and/or admission to the African American Honors Program, please contact:

Dr. Kay Morgan, Program Director  
African American Studies Program  
322 Heritage Hall  
Birmingham, AL 35294-1152  
Phone: 205-975-9651 or 975-9652  
E-mail: [kmorgan@uab.edu](mailto:kmorgan@uab.edu)

## Courses

### AAS 100. African American Studies Seminar. 1 Hour.

AAS 100 is an initial course that introduces new majors and minors to the field and the African American Studies Program. Emphases will be placed on exploring the history and development of the AAS Program, major and minor requirements, internship and service learning opportunities and career options. Required of all new majors & minors.

### AAS 150. Let's BMEN. 1 Hour.

Given the historical and current retention rate at colleges/universities in the U.S.; this class is designed to assist young scholars in navigating an academic environment. This course will explore issues such as masculinity, cultural identity, leadership and education relative to African American males. It seeks to provide students with tools and strategies that can be employed as they matriculate through their college experience.

### AAS 165. Jazz Styles: History and Appreciation. 3 Hours.

American jazz with emphasis on instrumental and vocal performers, jazz bands, and combos. Development of big band, swing, and popular music.

### AAS 200. Introduction to African-American Studies. 3 Hours.

Examination of seven core areas of African American Studies: History, Religion, Social Organization, Politics, Economics, Creative Production, and Psychology. Emphasizes major thematic theoretical and critical discourses of Black Studies, and its emergence as a political/social movement and discipline. Relates the latter to the complexity and diversity of contemporary movements such as Civil Rights, Free Speech, Black Power, and Afro-centricism. Majors and minors in African American Studies should complete this course before enrolling in any higher level AAS course. Ethics and Civic Responsibility are significant components of this course. This course meets the Core Curriculum requirements for Area II: Humanities.

### AAS 201. Honors Introduction to African American Studies. 3 Hours.

An advanced study of African American Studies as a discipline. Examines the seven core areas of the field with an emphasis on the major theories, critical discourses, and the emergence of Black Studies as a field of inquiry.

### AAS 220. History of Sport: The African American Experience. 3 Hours.

This course provides a socio-cultural and historical overview of the African American athletes (male and female) that contributed to sports as we know them today. Focus will begin on the historical figures that helped shape sports culture and will continue into discussions about the role African-Americans play in collegiate and professional sports today.

### AAS 223. African-Amer Hist to Civil War. 3 Hours.

Survey of the African American experience from Pre-Colonial Africa to the End of the Civil War.

### AAS 224. African American History Since 1865. 3 Hours.

Survey of late 19th century to present African American history.

### AAS 235. Introduction to African History and Culture. 3 Hours.

Media representations of an uncivilized Africa marked by political instability, hunger and wars is pervasive. This introductory course on African culture and History takes the student on a journey of Africa from "inception" to date. The course will explore early empires of Africa and Africa's rich political and cultural traditions, diversity, conflicts and religion. This course will analyze historical events like the Transatlantic slave trade, the scramble for, and partition of Africa, colonialism and neo-colonialism on the African Continent, the struggle for independence and the role of America in emergent African Nations; and current events like the role of the African Union, ECOWAS and other regional organizations and the influence of Africa in world politics. It will also introduce Students to African Diaspora – causes, patterns and peculiar conflicts of diasporic existence and assimilation into American culture and society. The course serves as a launching pad to understanding Black and African-American studies.

### AAS 250. Special Topics in African-American Studies. 3 Hours.

Specific topic in African American Studies.

### AAS 260. History of Afro-Latin America. 3 Hours.

This course surveys the history of those countries of Latin America, e.g. Cuba, Brazil and Colombia, that comprise the heart of the New World's African diaspora, having received most of the roughly 10 million Africans brought to Latin American shores during the centuries-long transatlantic slave trade. It explores the dramatic experiences of Afro-Latin Americans including their roles in the destruction of slave systems, creation of nations based on democratic principles, and rise of vibrant multicultural societies.

**AAS 273. The Black Power Movement. 3 Hours.**

The Black Power Movement remains one of the most compelling—and misunderstood—elements of African American History. Since the 1960s, critics have—at best—accused Black Power of distracting attention from more productive endeavors, betraying the promise of civil rights, and dividing an interracial coalition of sympathetic liberals. At worst, opponents have attacked Black Power as a foolish, racist, and violent threat to white America, the state, and the Black Freedom Struggle itself. Participants and scholars, however, tell a different story. Rather than divisive and destructive, the Black Power Movement was unifying and creative. Rather than betraying a winning civil rights coalition, Black Power exposed and challenged the limitations of white allies and liberal reform. Rather than a radical break with the past, Black Power represented a new articulation of old traditions of race pride and self-determination. Accordingly, this course favors a deep historical context. We begin with the Nineteenth-century roots of Black Nationalism and black radicalism and move chronologically through the 1970s. Seeking to restore the distorted legacy of the Black Power movement, however, we also explore its shortcomings, lest its lessons for the Freedom Struggle in the present day go unexamined. Finally, this course also adopts a subtitle—"In Their Own Words"—to foreground and elevate the voices of historical actors, allowing the ideas and debates at the heart of Black Power to breathe in the 21st century. Each session will combine collective discussion of the readings and group analysis of primary sources with an abbreviated lecture.

**AAS 290. Writing in African American Studies. 3 Hours.**

Course offers students continued practice in reading, research, and writing central to academic investigation and to interdisciplinary approaches. Develops skills in writing across disciplines and critical thinking. Emphasizes readings on diverse, contemporary, and multicultural issues in African American Studies. Writing, Ethics and Civic Responsibility are significant components of this course.

**AAS 300. African American Music. 3 Hours.**

Survey, history and appreciation of African derived music and its presence in the United States from its earliest forms in spirituals, blues and jazz to contemporary forms of be-bop, hip-hop, reggae, and rap.

**AAS 301. History and Tradition of Gospel Music. 3 Hours.**

The purpose of this course is to broaden the knowledge of American Gospel Music history and to identify the valuable contributions of this genre by studying its eras and major contributors.

**AAS 310. Black Image: Screen and Television. 3 Hours.**

History and definition of the image of the African-ancestored people in the United States through cinema and television.

**AAS 311. Race and Representation in Media. 3 Hours.**

The course critically assesses the depiction of race in various visual media presentations. It explores how race is projected in media and how these media structures can create, support stereotypes of race and perpetuate social inequalities.

**AAS 320. African Identity/Personality. 3 Hours.**

This course is a study of the African identity, personality, and the concept of "blackness" with particular emphasis on what it means to be black in America. An adequate discourse on the complexities of African American Studies requires a multi-disciplinary approach that considers the expansive nature of the African Experience in North America. Accordingly, any substantive intellectual and scholarly foundation for critically understanding the salient areas of this course require the application of cross-discipline areas of study involving race, culture, socioeconomics, history, African American political behavior, and psychosocial theories of development. Quantitative Literacy is a significant component of this course.

**AAS 325. Black Psychology. 3 Hours.**

This course examines and explores theory, research, and practice related to the study of psycho-social experiences from the worldview of Africans in America.

**AAS 330. African Aesthetics and Traditional Religion. 3 Hours.**

African aesthetics, African cosmology, and qualities of African spirituality.

**AAS 331. African Diasporic Traditions. 3 Hours.**

This course interrogates oral, written and performance discourse pertaining to the life-worlds of people of African descent on the continent and the diaspora. The purpose of this course is to analyze the customs and traditions of African descended people around the globe. It investigates aspects of African cultures that have endured despite its dispersal throughout the New World. The course examines the cultural footprints and impact that African culture has made on Western civilization by exploring African diasporic music, religions, literature, political thought, and social movements.

**AAS 335. The Psychology of Hip Hop. 3 Hours.**

Psychology of Hip Hop uses hip hop music and culture as conceptual lenses for analyzing and interpreting the life experiences of people of African descent throughout the African diaspora. Drawing mainly on psychology as well as other social sciences, this course is intended to provide students with an understanding of the psycho-historical and psycho-social development of African Americans relative to hip hop culture. This course explores and examines the thesis that African American music is an expression of African American life. Thus hip hop music and culture serve as soundtracks that allow the opportunity to listen to and learn from this particular manifestation of what W. E. B. Du Bois called the souls/psychology of Black folk.

**AAS 345. Pulpits in Protest: Social Change Speeches from the Black Church and Beyond. 3 Hours.**

This course is largely constructed around the study and the discussion of four major social movements involving African Americans and the protest speeches, sermons, and songs given by women and men from the Black Church and beyond. The course demonstrates the power of oration and rhetoric and how this medium was leveraged to expose oppression and bring about social change of the oppressed. The course is organized chronologically with an emphasis on the ideas of black social thought within the black church, political protest, and the speeches, sermons, and songs given in a particular movement with efforts to initiate social change.

**AAS 346. Race, Rhetoric, and Resistance. 3 Hours.**

This course is a study and discussion of race, protest movements, and the rhetoric, speeches, sermons, and music during four (4) major social movements involving African Americans. The course is organized chronologically with an emphasis on the ideas of black social thought in America.

**AAS 350. Research Methods in African American Studies. 3 Hours.**

Research Methods in African American Studies will introduce students to a general conceptual framework for ordering the social theories and methods that people of African descent have used to interpret and understand African American life experiences.

**Prerequisites:** AAS 200 [Min Grade: C]

**AAS 366. African American Literature II. 3 Hours.**

Cultural values from James Baldwin in 1950s, through black nationalist, civil rights, and black feminist movements, to contemporary writers such as Ishmael Reed, Charles Johnson, and Toni Morrison.

**Prerequisites:** EH 101 [Min Grade: C] and (EH 102 [Min Grade: C] or EH 107 [Min Grade: C]) and AAS 200 [Min Grade: C]

**AAS 385. The History of Haiti. 3 Hours.**

The course is an examination of the history of Haiti from slavery through the twentieth century to gain a broader understanding of the country and to develop the tools to critically challenge these dominant narratives and stereotypes about the country.

**AAS 400. Seminar in African American Studies. 3 Hours.**

Specific topic in African American Studies.

**AAS 420. Public Health and Medical Issues in African Communities. 3 Hours.**

This course introduces students to important health issues that face the African American community. The goals are to increase awareness and stimulate discussion about health problems facing African Americans, factors believed to cause, contribute or worsen these problems, and steps now taken to alleviate or eliminate these problems.

**Prerequisites:** AAS 200 [Min Grade: C]

**AAS 442. Race, Crime, Gender and Social Policy. 3 Hours.**

This class is an examination of crime and the policies of crime control within the context of race and gender. This class attempts to study crime and the policies of crime control within the context of race, class, and gender. We will address the following topics: (1) The role of inequality in participation of crime. Are persons in subordinate positions of power (racial & ethnic minorities, females & lower class) more likely to become involved in criminal behavior & why? (2) The manner in which race and gender independently affect interaction with the criminal justice system. How do persons in these groups interact with the criminal justice system as offenders, victims & professionals? (3) The manner in which crime policies have influenced interaction of these groups with the criminal justice system and alternatives to the present strategies.

**AAS 448. African American Poetry Tradition. 3 Hours.**

Development of African American poetry from its early works to the present, including Wheatley, Dunbar, Hughes, Brooks, and Angelou.

**Prerequisites:** EH 101 [Min Grade: C] and (EH 102 [Min Grade: C] or EH 107 [Min Grade: C])

**AAS 490. African American Studies Internship. 3 Hours.**

On campus and off campus training positions in field utilizing cross disciplinary skills, with some positions offering external funding. Students should contact the Program Director for listings of available positions and application procedures. May be counted as elective only. Preq: Junior or senior standing as African American Studies major and approval of application. May be repeated once for credit. Permission of the Program Director is needed.

**AAS 493. Capstone Seminar. 3 Hours.**

Specific topics vary...The course will provide an opportunity for students to reflect upon and to use the knowledge, skills and dispositions developed in previous African American Studies coursework. This course or AAS 495 required of all AAS majors. AAS 493 is ideally taken in the final undergraduate semester. Preq: 9 hours AAS coursework at the 400 level and permission of the Program Director. 3 hours.

**AAS 495. Individual Studies. 3 Hours.**

Specific topics vary. An individually designed course for semi-independent research or guided readings in areas and subjects that synthesize the African American Studies core areas. The course will provide an opportunity for students to reflect upon and use the knowledge, skills, and disposition developed in previous African American Studies coursework. This course or AAS 493 required of all AAS majors. AAS 495 is ideally taken in the final undergraduate semester. Consult Program Director for procedure to apply for this course.

**AAS 497. Honors Seminar. 3 Hours.**

The African American Studies Departmental Honors Program requires completion of a two course sequence. This first course in the sequence provides students with an overview of the research process. Students are taught the basics of research, statistical analysis and techniques of making a formal presentation of research. Under the guidance of the Program Director and faculty mentor, students are required to develop an honors research project.

**Prerequisites:** AAS 200 [Min Grade: B] and AAS 325 [Min Grade: B] and AAS 350 [Min Grade: B]

**AAS 498. Honors Project. 3 Hours.**

Under the guidance of the faculty mentor, students complete the project and make a formal presentation of the research.

**Prerequisites:** AAS 497 [Min Grade: B]

## American Studies

### Interdisciplinary Minor

**Directors:** Catherine Danielou (Dean's Office, College of Arts and Sciences) and Deborah Littleton (College of Arts and Sciences)

The American Studies Program offers, through the College of Arts and Sciences, an interdisciplinary minor that examines various aspects of United States society and culture. Students are introduced to a wide range of different "texts" from American art, literature, music, history, science and technology, political science and sociology, justice sciences, and popular culture. These "texts" may include movies, media, music and audio recordings, material artifacts, folkways, and food ways, as well as traditional written material. Students learn how to interpret and interrelate these texts in order to acquire a more complete and multifaceted understanding of American life and history. The minor in American studies thus provides a broad background in liberal arts and social sciences while developing skills of interdisciplinary thinking useful in a variety of careers. An American studies minor complements and counterbalances more narrowly focused majors; at the same time, it enhances majors that are either national or international in scope.

A grade of C or better is required in all courses applied to the American Studies minor. Students interested in the minor may contact Dr. Catherine Danielou (Dean's Office, College of Arts & Sciences), Ms. Deborah Littleton (Director of CAS Advising) or their academic advisor.

## Minor in American Studies

### Requirements

#### Music, the Arts, Literature, and Philosophy

Select three of the following: 9

AAS 165	Jazz Styles: History and Appreciation
AAS 235	Introduction to African History and Culture
AAS 300	African American Music
AAS 301	History and Tradition of Gospel Music
AAS 330	African Aesthetics and Traditional Religion
AAS 366	African American Literature II
AAS 448	African American Poetry Tradition
ARH 101	The Art Experience
ARH 485	Special Topics: Museum Studies
MU 165	Jazz Styles: History and Appreciation
MU 205	African-American Music 1619-Present
MU 364	American Music
MU 365	The Evolution of Jazz
ECE 332	Literature for the Young Child
EEC 405	Children's Literature in Early Childhood and Elementary Education
EH 223	American Literature I: Before 1865
EH 224	American Literature II: 1865-Present
EH 324	African-American Special Topics
EH 365	African American Literature, 1746-1954
EH/AAS 366	African American Literature, 1954-Present
EH 367	Southern Literature
EH 369	The American Dream
EH 416	Modern American Poetry
EH 424	African-American Special Topics
EH 446	African American Autobiography
EH 447	African American Dramatic Tradition
EH 448	African American Poetry Tradition
EH 460	American Women Writers Before 1900
EH 461	American Literature, 1620 - 1820
EH 462	American Literature, 1820 - 1870
EH 463	American Literature, 1870 - 1914
EH 464	American Literature, 1914 - 1945
EH 465	American Literature, 1945-Present
EH 466	The Slave Narrative and Its Literary Expressions
EH 468	The Harlem Renaissance
PHL 348	American Philosophy

#### Social and Behavioral Sciences

Select two of the following: 6

AAS 200	Introduction to African-American Studies
AAS 220	History of Sport: The African American Experience
AAS 273	The Black Power Movement
AAS 310	Black Image: Screen and Television
AAS 311	Race and Representation in Media
AAS 325	Black Psychology
AAS 250	Special Topics in African-American Studies
AAS 335	The Psychology of Hip Hop
AAS 346	Race, Rhetoric, and Resistance
AAS 420	Public Health and Medical Issues in African Communities
AAS 442	Race, Crime, Gender and Social Policy
ANTH 222	Prehistory of North America

ANTH 355	Archaeology of Alabama
ANTH 426	NAGPRA, Repatriation, and Indigenous Rights
EC 413	Urban Economics
CJ 100	Introduction to the Criminal Justice System
CJ 220	Police in America: An Overview
CJ 230	The Judicial Process in America: An Overview
CJ 240	Corrections in America: An Overview
CJ 320	Police Organization and Administration
CJ 380	Media, Crime & Justice
CJ 390	The Death Penalty in America
CJ 442	Race, Crime, Gender and Social Policy
CJ 463	Urban Structures
PSC 101	Foundations of American Government
CJ 464	Crime and Place
PSC 221	American State and Local Government
PSC 319	Civil Liberties and Civil Rights
PSC 330	The American Judicial Process
PSC 331	The U.S. Congress
PSC 332	The American Presidency
PSC 380	The Politics of Constitutional Law
PSC 381	The Bill of Rights
PSC 401	Seminar in American Government
PSC 418	Politics and Race in America
PSC 431	American Constitutional Law
PY 240	Psychology of Social Inequality
PY 301	Psychology of Trap Music
PY 424	Psychology of Race and Ethnic Relations
SOC 275	Urban Sociology
SOC 316	Popular Culture
SOC 319	Sociology of The South
SOC 336	Sport and Society
SOC 350	Sociology of Hip Hop
SOC 470	Population Dynamics
SW 100	Introduction to Social Work
SW 302	Social Welfare Policy Analysis
SW 432	Juvenile Law and Process
SW 452	Birmingham Neighborhood Studies

#### History

Select two of the following: 6

HY 120	The United States To 1877
HY 121	The United States Since 1877
HY 207	The American Film
HY 210	History of American Medicine
HY/AAS 223	African-American History to 1865
HY/AAS 224	African-American History Since 1865
HY 225	History of Alabama
HY 226	History and Development of Birmingham
HY 228	Southern Industrial History
HY 273	The Black Power Movement
HY 274	LGBT History
HY 289	Topics in African American History
HY 303	Women in American History
HY 304	U.S. Civil Rights Movement
HY 305	Popular Culture in American History
HY 307	The American Film
HY 308	History of Popular Music in the United States
HY 309	American Independent Film

HY 312	Rock n Roll and Race Relations
HY 322	The Great Depression in Film
HY 325	Southern Politics in the 20th Century
HY 326	Mansions, Mines, and Jim Crow
HY 340	Popular Culture in the 1960s
HY 384	Health & Illness in Modern America
HY 388	History of American Medicine
HY 403	Colonial American History to 1765
HY 405	War and Society in Early America
HY 409	U.S. Constitutional History to 1877
HY 410	U. S. Constitutional History Since 1877
HY 413	Reconstruction in America
HY 416	The Fifties in America
HY 417	The Making of Modern America 1877-1920
HY 418	America in the 1920s and 1930s
HY 420	Recent America 1945 to the Present
HY 411	The Antebellum South
HY 412	The American Civil War
HY 414	The New South, 1877 to 1945
HY 423	Southern Women: Image and Reality
HY 424	Emergence of Modern American 1877-1945
HY 427	History of American Technology
HY 428	Technology and American Life
HY 429	Workers in American Society
HY 430	U. S. Labor History
HY 431	American Film and Violent Society
HY 435	American Urban History
HY 437	Resistance and Revolution in British America
HY 439	American Environmental History

Total Hours

21

A grade of 'C' or better is required for all classes counting toward the American Studies minor.

## Courses

### AS 201. Studies in American Culture. 3 Hours.

Team-taught, interdisciplinary study of American society and culture through selected readings from American literature and history, as well as other "texts" from art, music, industrial and technological developments, folk and popular culture. Specific topics vary with instructors; materials for study include cultural experiences and expressions of diverse groups within American society, including native Americans, African American, immigrants and women.

### AS 202. Studies in American Culture. 3 Hours.

Team-taught, interdisciplinary study of American society and culture through selected readings from American literature and history, as well as other texts from art, music, industrial and technological developments, and folk and popular culture. Specific topics vary with instructors; materials for study include cultural experiences and expressions of diverse groups within American society, including Native Americans, African Americans, immigrants, and women.

### AS 301. Studies in American Culture. 3 Hours.

Team-taught, interdisciplinary study of American society and culture through selected readings from American literature and history, as well as other texts from art, music, industrial and technological developments, and folk and popular culture. Specific topics vary with instructors; materials for study include cultural experiences and expressions of diverse groups within American society including Native Americans, African Americans, immigrants, and women.

### AS 401. Senior Seminar in American Studies. 3 Hours.

Topics of national and regional interest from any discipline but sufficiently broad to allow focus on specific intellectual problems using analytical skills and interdisciplinary methods learned in Core Curriculum courses, required elective courses, and chosen major. Should be taken during senior year.

**Prerequisites:** AS 201 [Min Grade: D] and AS 202 [Min Grade: D]

## Bioinformatics

The UAB Undergraduate Program in Bioinformatics (BIOI) is an interdisciplinary major between the Institute of Informatics and Department of Genetics in the Heersink School of Medicine and the Department of Computer Science in the College of Arts and Sciences. Our society's accelerated scientific growth is generating an unprecedented quantity of information, while computer science is learning how to handle this information through developments in data science. In particular, data from the sequencing of the human genome is helping us better understand living systems and is guiding treatment of human disease through precision medicine. That information must be stored, managed, and analyzed to reveal its biological meaning to help shape the future of research and healthcare.

Bioinformatics is the discipline that connects the biological sciences, genetics, chemistry, computer science, data science, IT, engineering, applied mathematics, biostatistics, computing, and biomedical engineering. This new major is designed to build on these disciplines and provide students with a marketable degree — with an extensive background in an array of subjects — that will provide cutting-edge employment opportunities, as well as a platform for success in graduate school, medical school, and other clinical-professional schools.

As the first B.S. in Bioinformatics in the state of Alabama, this program will train students in basic concepts and skills to perform computational analysis of biological data — including the human genome. This will also create a well-trained workforce who can take on future healthcare challenges in the state of Alabama.

As members of an interdisciplinary program at UAB, Bioinformatics students will be able to participate in research with faculty from departments across the university, including:

- Heersink School of Medicine Basic Science Departments
- Heersink School of Medicine Clinical Science Departments
- Computer Science
- Biology
- Biostatistics

## Admissions

High school students with an ACT score of 28 or higher and a GPA of 3.5 or higher (the UAB Honors College admissions criteria) are eligible for immediate acceptance into the Bioinformatics major. Current UAB students, or transfer students, with a 3.0 GPA are eligible for

Bioinformatics. Incoming freshman or transfer and current UAB students may be admitted into Pre-Bioinformatics with a 2.8 GPA. Remaining in Pre-Bioinformatics requires the maintenance of a 2.8 overall UAB GPA.

Advising and Information

John Johnstone

Bioinformatics Co-Director  
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Elliot Lefkowitz

Bioinformatics Co-Director  
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(205) 934-1946

Evan Reddick

CAS Academic Advisor  
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Major in Bioinformatics

Requirements		Hours
<b>Core Curriculum Requirements <sup>1</sup></b>		<b>41</b>
CAS 112	Success in College	1
PSDO 200	Introduction to Research	1
<b>Mathematics Courses <sup>2</sup></b>		
MA 125	Calculus I	4
or MA 225	Calculus I - Honors	
MA 126	Calculus II	4
or MA 226	Calculus II - Honors	
<b>Biology Courses <sup>2</sup></b>		
BY 123	Introductory Biology I	4
BY 124	Introductory Biology II	4
BY 210	Genetics	3
<b>Chemistry Courses <sup>2</sup></b>		
CH 115	General Chemistry I	4
& CH 116	and General Chemistry I Laboratory	
CH 117	General Chemistry II	4
& CH 118	and General Chemistry II Laboratory	
CH 235	Organic Chemistry I	4
& CH 236	and Organic Chemistry I Laboratory	
<b>Computer Science Courses</b>		
CS 103	Introduction to Computer Science in Python	4
CS 203	Object-Oriented Programming	4
CS 250	Discrete Structures	3
CS 303	Algorithms and Data Structures	3
<b>Informatics Courses</b>		
INFO 101	Introductory Bioinformatics Seminar <sup>3</sup>	1
PUH 250	Biostatistics	3
GGSC 310	Genome Structure and Organization	3
INFO 302	Bioinformatics-I	3
INFO 403	Bioinformatics-II	3
INFO 404	Biological Data Management	3
INFO 499	Bioinformatics Capstone	3

Major Electives		15
CH 237	Organic Chemistry II	
CH 460	Fundamentals of Biochemistry	
BY 245	Biological Data Interpretation and Analysis	
BY 311	Molecular Genetics	
BY 330	Cell Biology	
BY 433	Advanced Molecular Genetics	
BY 434	Functional Genomics and Systems Biology	
GGSC 410	Genetic Basis of Human Disease	
INFO 497	Research in Bioinformatics	
or INFO 498	Honors Bioinformatics Research	
CS 332	Systems Programming	
CS 350	Automata and Formal Languages	
CS 355	Probability and Statistics in Computer Science	
CS 416	Big Data Programming	
CS 436	Computer Security	
CS 473	Computer Vision and Convolutional Neural Networks	
CS 475	Data Visualization	
CS 467	Machine Learning	
MA 260	Introduction to Linear Algebra	
MA 434	Algebra I: Linear	
PH 221	General Physics I	
PH 222	General Physics II	
PH 475	Introduction to Biophysics I	
BME 210	Engineering in Biology	
BME 313	Bioinstrumentation	
BME 443	Medical Image Processing	
PH 231	General Physics I Laboratory	
PH 232	General Physics II Laboratory	
Total Hours		122

Please note the hours to degree may vary due to prerequisite requirements. For undergraduate programs, at minimum of 120 hours of undergraduate credit is required for degree. General electives may be taken to meet the hour requirement if necessary.

<sup>1</sup> [Core Curriculum](#) requirements  
<sup>2</sup> Courses listed may also fulfill Core Curriculum Area III: Natural Science & Mathematics  
<sup>3</sup> INFO 101 should be taken twice.

Honors in Bioinformatics

Purpose

The Bioinformatics Honors Program offers outstanding, highly motivated students the opportunity to develop research skills in preparation for graduate work or a professional career.

Eligibility

In order to be accepted into the Bioinformatics Honors program, you must:

- Have completed at least 45 credit hours.
- Have a 3.5 GPA in Bioinformatics (INFO) and Biology courses.
- Have a 3.2 GPA overall.
- Have already completed [CS 203](#) Object-Oriented Programming and [GGSC 310](#) Genome Structure and Organization.

- Have arranged with a faculty sponsor to do a research project, approved by a Bioinformatics program director.
- Honors Research in Bioinformatics may also be taken as part of the University Honors Programs. BIOI majors generally enter their research labs in the fall semester of their junior year; however, they may begin research in the spring semester of their sophomore year, or earlier, with permission of the Program Directors.

## Requirements

To successfully complete the Bioinformatics Honors Program you will need to:

- Complete 6 semester hours of **INFO 498** Honors Bioinformatics Research. Students may substitute 3 of the 6 required **INFO 498** credit hours with an equivalent research course (with prior approval of a program director).
- Submit a formal research report by the end of each semester of Honors Research. The proposal should include a summary of the student's research findings incorporating an introduction, methods, and relevant literature review.
- Complete a formal written report in the form of a scientific paper.
- Submit an oral or poster presentation at UAB Expo during their junior or senior year. Under special circumstances, the poster may be presented at other times of the year pending approval of the Program Directors.

### First Year

First Term	Hours	Second Term	Hours
BY 123 & 123L	4	BY 124 & 124L	4
CAS 112	1	CH 115 & CH 116	4
CS 103	4	INFO 101	1
EH 101	3	MA 125 or 225	4
PHL 116	3	EH 102	3
	15		16

### Second Year

First Term	Hours	Second Term	Hours
BY 210	3	CS 250	3
CH 117 & CH 118	4	GGSC 310	3
CS 203	4	INFO 101	1
MA 126 or 226	4	PUH 250	3
		Core Area II or IV	3
		PSDO 200	1
	15		14

### Third Year

First Term	Hours	Second Term	Hours
CH 235 & CH 236	4	INFO 403	3
CS 303	3	Major Elective Course	3
INFO 302	3	Major Elective Course	3
Core Area II or IV	3	Major Elective Course	3
Core Area II or IV	3	Core Area II or IV	3
	16		15

### Fourth Year

First Term	Hours	Second Term	Hours
INFO 404	3	INFO 499	3
Major Elective Course	3	Major Elective Course	3

Major Elective Course	3	Major Elective Course	3
Core Area II or IV	3	Major Elective Course	3
Core Area II or IV	3	Core Area II or IV	3
	15		15

Total credit hours: 121

## Courses

### INFO 101. Introductory Bioinformatics Seminar. 1 Hour.

Faculty-led seminar course that exposes students to cutting edge research topics and career opportunities in the field of bioinformatics. Students will read assigned articles and be prepared for discussion. Subject matter varies by term and students will take this course during multiple semesters for a maximum of two credits.

### INFO 302. Bioinformatics-I. 3 Hours.

Introduction to bioinformatics and methodologies, with emphasis on concepts and application of informatics tools to molecular biology. Focus on experimental models to collect data from genomics, transcriptomics and proteomics, applied statistics when it relates to experimental design, construction of bioinformatics tools into pipelines, representing biological data, biological sequence analysis, gene annotation, basic programming, basic web/data analysis programming, sharing of biological information, social/legal aspects of open science.

**Prerequisites:** BY 210 [Min Grade: C] and CS 103 [Min Grade: C] and PUH 250 [Min Grade: C] and INFO 101 [Min Grade: C]

### INFO 403. Bioinformatics-II. 3 Hours.

Development of computational algorithms to solve biological questions with a significant problem-solving component. This includes computational techniques such as dynamic programming, optimization, hidden Markov models, graph algorithms, and other mathematical and statistical approaches. In addition, data mining and machine learning methods in computational biology will be covered.

**Prerequisites:** INFO 302 [Min Grade: C] and CS 303 [Min Grade: C]

### INFO 404. Biological Data Management. 3 Hours.

Introduction of biological data management concepts, theories, and applications. Basic concepts such as data representation, database modeling, ontology representation, and relational database queries will be introduced. Various database systems, particularly relational databases and emerging big data techniques, will be introduced. Application of biological data management in biology will be covered using case studies of high-impact widely used biological databases.

**Prerequisites:** INFO 302 [Min Grade: C]

### INFO 412. Visual Analytics for Bioinformatics. 3 Hours.

In this course, we will explore the use of visualization techniques as a concise and effective way to help analyze, understand, interpret and communicate complex biological data. Principles of design, visual rhetoric/communication, and appropriate usage will be introduced. We will cover representation of different data types, concentrating on those generated by data-rich platforms such as next-generation sequencing applications, flow/mass cytometry, and proteomics, and will discuss the use of visualization techniques applied to assessing data quality and troubleshooting. Various topics including dimension reduction, hierarchical visualizations, unsupervised learning, graph theory, networks/layouts and interactivity will be discussed. We will review the algorithmic underpinnings of various methods that lead to their appropriate and effective use. Finally, we will review a variety of genomics/bioinformatics-related visualization tools that are available. We will use Matlab throughout the course to create beautiful and effective visualizations.

**INFO 497. Research in Bioinformatics. 0-4 Hours.**

Research in Bioinformatics for non-honors students under the supervision of a faculty sponsor.

**Prerequisites:** PSDO 200 [Min Grade: C]

**INFO 498. Honors Bioinformatics Research. 0-4 Hours.**

Honors Research is an innovative course that will provide undergraduate students with an opportunity to engage in rigorous scholarly practice of the core bioinformatics skills necessary for performing independent research. Program faculty will closely work with students to identify a project that explores an area of interest for the student based on the integration of prior learning. Students will be performing bioinformatics analyses on laboratory data or publicly available large-scale data, incorporate quality control and develop software pipelines.

**Prerequisites:** PSDO 200 [Min Grade: C] and CS 103 [Min Grade: C]

**INFO 499. Bioinformatics Capstone. 3 Hours.**

Students will be allowed to rotate to different program faculty or continue with their mentor from BY/CS 498 Bioinformatics Capstone Research I. With close mentoring and guidance from program faculty, the student will identify a capstone project or continue their existing bioinformatics project. The capstone project is expected to culminate in a formal scholarly work reflecting integration of the scientific knowledge gained through the project. The scholarly work may take the form of a written manuscript or semester report.

**Prerequisites:** INFO 403 [Min Grade: C] and INFO 404 [Min Grade: C] and PSDO 200 [Min Grade: C]

## Cancer Biology

The Undergraduate Program in Cancer Biology was established in 2020 as a joint program between the Department of Chemistry in the College of Arts and Sciences and the Department of Cell, Developmental and Integrative Biology (CDIB) in the Heersink School of Medicine. This program is the only one of its kind in the US to specifically train students in cancer biology.

The central mission of the new Cancer Biology undergraduate major is to provide students with a strong educational and research background that maximizes their chances to achieve career goals in cancer biology in particular and life sciences in general. This program is unique in that students will gain a broad background in the biomedical sciences by exposure to courses that support the current requirements of the biomedical enterprise and are applicable to academic, private and government settings. Furthermore, by requiring a research component, all students within this major will have early exposure to a cutting-edge research environment through participation in current investigator-led programs in multiple research-intensive departments at UAB and in collaboration with the O'Neal Comprehensive Cancer Center.

UAB's mission includes the promotion of discovery, knowledge dissemination and education. The Cancer Biology major helps to fulfill these goals by training students to take up positions in research and clinical laboratories, by providing a solid foundation for future graduate study, and by providing informed individuals appropriate for employment in multiple health-related settings. Disciplines covered will include not only cell biology and chemistry, but also microbiology, immunology, genetics, pathology, pharmacology and medicine. This interdisciplinary curriculum reflects the diverse nature of the disease itself.

Because of these features, students will be exposed to a robust and flexible educational experience. Undergraduates will have the opportunity to undertake high quality research in laboratory settings across campus. They will receive research training from world-class investigators at

an earlier stage than their peers and have exposure to state-of-the-art technologies, which will increase the desirability of these students for both professional careers or post-graduate programs with an exceptional background in cancer biology and laboratory research.

## Admissions

The Undergraduate Cancer Biology Program is designed for graduating high school seniors and college freshmen and sophomores with an outstanding academic record and the desire to pursue a career in biomedical research, medicine or the health professions. Successful applicants to the program should meet the admissions criteria below.

First-time freshmen applicants must have a high school cumulative GPA of 3.5 or higher (on a 4.0 scale) and an ACT composite score of 28 or higher (or the SAT combined V+Q score at 1300 or higher). High school students who do not meet these requirements may be accepted into the program as pre-Cancer Biology majors. Any student who is admitted as a pre-Cancer Biology major must have an overall GPA #3.0 after 24 credits of work at UAB, a GPA #3.25 in their Biology, Chemistry, Physics and Mathematics (MA 105 and higher) coursework, and have taken a freshman year curriculum that is compatible with the Program. Current UAB students and transfer students from other institutions who are freshmen or sophomores (non-direct admits) may select Cancer Biology for their major, but must have an overall GPA #3.0 and must have demonstrated excellent academic performance in science/mathematics courses and have a GPA #3.25 in those courses.

Students must maintain an overall GPA #3.0 in order to remain in good academic standing in the Cancer Biology Program. If a student's overall GPA falls below 3.0, they will have one semester to bring their overall grade to 3.0 or better.

Those who wish to apply to the Program should contact the Program Directors for additional information. The Co-Directors of the Program, Dr. Braden McFarland and Dr. Sadanandan Velu, are available to meet with high school students and their parents, or with current UAB students to discuss the program.

## Advising and Information

### Program Leadership:

Dr. Braden McFarland  
Co-Director, Undergraduate Cancer Biology Program  
Assistant Professor of Cell, Developmental and Integrative Biology (CDIB)  
(205) 934-3599  
[bdcox@uab.edu](mailto:bdcox@uab.edu)

Dr. Sadanandan Velu  
Co-Director, Undergraduate Cancer Biology Program  
Professor of Chemistry  
(205) 975-2478  
[svelu@uab.edu](mailto:svelu@uab.edu)

### Academic Advising:

Jamie Grimes  
Chemistry Building 212  
[cnbyadvise@uab.edu](mailto:cnbyadvise@uab.edu) ([chemadvise@uab.edu](mailto:chemadvise@uab.edu))

# Bachelor of Science in Cancer Biology

Requirements	Hours
<b>Core Curriculum Requirements</b>	
Area I: Written Composition	6
Area II: Humanities and Fine Arts	9
Area III: Natural Science and Mathematics <sup>1</sup>	0
Area IV: History, Social and Behavioral Sciences	12
<b>Biology Courses</b>	<b>14</b>
BY 123 Introductory Biology I & 123L and Introductory Biology I Laboratory	
BY 124 Introductory Biology II & 124L and Introductory Biology II Laboratory	
BY 210 Genetics	
BY 330 Cell Biology	
<b>Chemistry Courses</b>	<b>19</b>
CH 115 General Chemistry I & CH 116 and General Chemistry I Laboratory	
CH 117 General Chemistry II & CH 118 and General Chemistry II Laboratory	
CH 235 Organic Chemistry I & CH 236 and Organic Chemistry I Laboratory	
CH 237 Organic Chemistry II & CH 238 and Organic Chemistry II Laboratory	
CH 460 Fundamentals of Biochemistry	
<b>Cancer Biology Courses</b>	<b>22</b>
CNBY 210 Colloquium in Cancer Biology <sup>2</sup>	
CNBY 320 Introduction to Cancer Biology	
CNBY 410 Proliferation and Carcinogenesis	
CNBY 420 Genetic Basis of Cancer	
CNBY 480 Journal Club in Cancer Biology <sup>2</sup>	
CNBY 495 Undergraduate Research in Cancer Biology <sup>3</sup>	
CNBY 499 Senior Undergraduate Research Capstone Course <sup>3</sup>	
<b>Other Required Courses</b>	<b>20</b>
PHL 116 Bioethics	
CAS 112 Success in College	
PSDO 200 Introduction to Research	
MA 125 Calculus I	
MA 180 Introduction to Statistics or PUH 25 Biostatistics	
PH 201 College Physics I or PH 221 General Physics I	
PH 202 College Physics II <sup>4</sup> or PH 222 General Physics II	
<b>Major Electives (must take 2)</b>	<b>6</b>
CH 461 Advanced Biochemistry	
CH 463 Biochemistry Laboratory or CH 464 Physical Biochemistry Laboratory	
CH 471 Medicinal Chemistry and Drug Discovery	
CH 472 Chemistry of Natural Products	
CNBY 430 Tumor Survival and the Microenvironment	
CNBY 440 Cell Signaling and Cancer	
CNBY 460 Tumor Pathobiology and Immunology	
CNBY 470 Cancer Treatment	
<b>General Electives <sup>5</sup></b>	<b>12</b>
<b>Total Hours</b>	<b>120</b>

<sup>1</sup> Area III credit requirements are included with major courses.

<sup>2</sup> 1 credit hour per term, must be taken twice.

<sup>3</sup> Undergraduate Research: Cancer Biology Majors are required to complete a minimum of 9 semester credit hours [CNBY 495 (6h) + CNBY 499 (3h)] of research under the direction of a faculty member beginning no later than their junior year. However, qualified students may identify a mentor and begin conducting research as early as their sophomore year if prerequisites are met (PSDO 200; pass) and approval by the faculty mentor and the program co-directors.

<sup>4</sup> PH 222 requires Calculus II (MA 126). MA 126 is not required for CNBY majors; only Calculus I (MA 125) is required for CNBY majors.

<sup>5</sup> Recommended but not required courses include:

BY 115/BY 115L, BY 116/BY 116L, BY 245, BY 311, BY 327/BY 327L, BY 409/BY 409L, and MIC 275.

## Freshman

First Term	Hours	Second Term	Hours
CAS 112		1 CH 117 & CH 118	4
CH 115 & CH 116	4	BY 123 & 123L	4
EH 101	3	EH 102	3
MA 125	4	PHL 116	3
Core II or IV	3	PSDO 200	1
	15		15

## Sophomore

First Term	Hours	Second Term	Hours
BY 124 & 124L	4	CH 237 & CH 238	4
CH 235 & CH 236	4	BY 330	3
BY 210	3	CNBY 320	3
CNBY 210 <sup>1</sup>	1	CNBY 210 <sup>1</sup>	1
Core II or IV	3	Core II or IV	3
	15		14

## Junior

First Term	Hours	Second Term	Hours
PH 201 or 221	4	PH 202 or 222 <sup>2</sup>	4
CH 460	3	CNBY 410	3
MA 180 or PUH 250	3	CNBY 495	3
CNBY 420	3	Core II or IV	3
Core II or IV	3	General Elective <sup>3</sup>	3
	16		16

## Senior

First Term	Hours	Second Term	Hours
CNBY 480 <sup>4</sup>	1	CNBY 480 <sup>4</sup>	1
CNBY 495	3	CNBY 499	3
Elective CH or CNBY 400 level course <sup>5</sup>	3	Elective CH or CNBY 400 level class <sup>5</sup>	3
General Elective <sup>3</sup>	3	General Elective <sup>3</sup>	3
General Elective <sup>3</sup>	3	Core II or IV	3
Core II or IV	3		
	16		13

Total credit hours: 120

<sup>1</sup> CNBY 210 must be taken twice.

<sup>2</sup> PH 222 requires Calculus II (MA 126). MA 126 is not required for CNBY majors; only Calculus I (MA 125) is required for CNBY majors.

**CNBY 210. Colloquium in Cancer Biology. 1 Hour.**

**CNBY 320. Introduction to Cancer Biology. 3 Hours.**  
This course will introduce students to cancer biology. Topics will include the history of cancer, hallmarks of cancer biology on a cellular level, common cancers in the body, cancer treatment, and prevention and risk factors. This course will serve as a foundation and prerequisite to the more advanced upper level CNBY courses.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C]

**Prerequisites:** CNBY 320 [Min Grade: C]

**Prerequisites:** CNBY 320 [Min Grade: C]

**Prerequisites:** CNBY 320 [Min Grade: C]

**Prerequisites:** CNBY 320 [Min Grade: C]

**Prerequisites:** CNBY 320 [Min Grade: C]

**Prerequisites:** CNBY 320 [Min Grade: C]

**Prerequisites:** PSDO 200 [Min Grade: P]

**Prerequisites:** CNBY 495 [Min Grade: P]

The bachelor of science in digital forensics (BSDF) is an interdisciplinary degree that prepares graduates for a professional career in the field of digital forensics and cyber security. The focus of the program is an understanding of the procedures and processes necessary to discover, recover, analyze, and present in court information that has been stored on digital devices, including mainframe and personal computers, cellular telephones, tablets, gaming and other devices used during illegal activities. Students graduating with the BSDF degree will be prepared to fill entry- and advanced-level positions with federal, state, and local law enforcement agencies; with public and private sector non-profit companies; and with private sector for-profit companies. Students completing the program will also be prepared to pursue graduate studies (master's and doctoral-level) in computer science, criminal justice, information systems, and information technology or pursue law school.

The courses in the BSDF are a mixture of criminal justice and computer science. The goal is to provide graduates with the tools they need in computer programming and operations to work effectively within a computer environment, and also the skills needed to understand the behavior of those who may be a threat to computer systems and/or engage in cybercrime. Additionally, graduates will have an understanding of the legal systems and processes necessary to gather digital evidence and support a computer investigation in court if necessary.

## Bachelor of Science with a Major in Digital Forensics

The BSDF requires 39 hours in the major beyond the University of College core requirements. The courses required in the program are listed below.

Requirements	Hours
<b>Criminal Justice Courses</b>	
CJ 210 Introduction to Digital Forensics	3
CJ 402 Computer Forensics	3
CJ 410 Criminal Justice Ethics	3
CJ 419 Investigating Online Crimes	3
CJ 437 Digital Media Forensics & 437L and Digital Media Forensics Lab	3
CJ 454 Financial Crimes and Investigations	3
<b>Computer Science Courses</b>	
CS 103 Introduction to Computer Science in Python & 103L and Introduction to Computer Science in Python Lab	4
CS 203 Object-Oriented Programming & 203L and Object-Oriented Programming Lab	4
CS 250 Discrete Structures	3
CS 330 Computer Organization and Assembly Language Programming	3
CS 332 Systems Programming	3
CS 332L Systems Programming Laboratory	0
CS 334 Networking	3
<b>Capstone</b>	
CJ 494 Digital Forensics Capstone	1
<b>Elective</b>	
CJ 438 Investigations of Malicious Attacks	
CJ 495 Digital Forensics Internship and Capstone	
Total Hours	39

A grade of C or better is required in all courses. Students must have a 2.3 cumulative GPA prior to applying for their Internship. Students must take general electives to reach the 120 semester hour requirement.

## Environmental Science

### Interdisciplinary Minor

The minor in environmental science enables students to receive a broad background both in the sciences and in the application of scientific principles to environmental problems.

### Minor in Environmental Science

Requirements	Hours
<b>Required Courses</b> <sup>1</sup>	
BY 108 Human Population and the Earth's Environment & BY 109 and Laboratory in Environmental Science	4

BY 123	Introductory Biology I	4
BY 124	Introductory Biology II	4
CH 115 & CH 116	General Chemistry I and General Chemistry I Laboratory	4
ES 101 & ES 102	Physical Geology and Physical Geology Laboratory	4
<b>Biology Electives</b>		
Select three courses from the following groups:		9
<b>Biology</b>		
BY 201	Climate Change and the Environment	
BY 260	Botany	
BY 397	Advanced Directed Readings	
BY 267	Tropical Ecology	
BY 435	Natural History of Vertebrates	
BY 470	Ecology	
<b>Civil Engineering</b>		
CE 433	Solid and Hazardous Wastes Management	
CE 434	Air Quality Modeling and Monitoring	
<b>Chemistry</b>		
CH 297	Undergraduate Research Experiences	
CH 355	Quantitative Analysis	
<b>Marine Environmental Science</b>		
MESC 302	Coastal Zone Management	
MESC 411	Costal Wetlands Ecology	
MESC 412	Marine Ecology	
Total Hours		29

<sup>1</sup> Note: All of these courses may also satisfy the Core Curriculum Area III: Natural Sciences requirement; check the Core Curriculum for your particular major.

### Grade Requirement

All courses applied to this minor must be completed with a grade of C or better.

## Film

### Interdisciplinary Minor

**Director:** Michele Forman (Media Studies/History)

**Committee:** Danielou (College of Arts and Sciences), Pellathy (Art/Art History), Millard (History), Phillips (Music), Shackleford (Theatre), Siegel (English),

The College of Arts and Sciences Interdisciplinary Film Minor is a 21-hour program. Coursework must be chosen from a minimum of 3 disciplines. Students may petition to substitute courses for up to 6 credit hours. Please contact the director of the minor for information regarding course substitutions and let your academic advisor know as well. Substitutions must be approved 6 months before graduation.

### Minor in Film

Requirements	Hours
Select seven (7) courses from three different disciplines from this list: <sup>1</sup>	21
AAS 310 Black Image: Screen and Television	
ARS 104 Four-Dimensional Design Foundations	
ARS 110 Visual Literacy & Application Foundations	
ARS 260 Beginning New Media	

ARS 280	Creativity and Imagination
ARS 360	New Media - Special Topics 1
ARS 361	New Media- Special Topics 2
ARS 362	New Media- Special Topics 3
ARS 460	Advanced New Media
CMST 283	Visual Media Production I
CMST 383	Visual Media Production II
CMST 483	Live Studio Production
DCS 101	Media and Society
DCS 150/ HY 206	Introduction to Film and History
DCS 201	History of Documentary Film
DCS/HY 208/WS 280	Women in Film
DCS 390	Life, Liberty, and the Pursuit of Happiness: Representing American Identity on Film
DCS 401	Ethnographic Filmmaking/SL
DCS 450	Media and Public Service
DCS 460	Independent Media Studies
DCS 470	Internship in Media Studies
DCS 490	Special Topics in Media
DCS 499	Special Topics in Media Studies
EH 210	Interpreting Film
EH 305	Beginning Poetry Writing Workshop
EH 307	Beginning Creative Nonfiction Writing Workshop
EH 309	Beginning Fiction Writing Workshop
EH 431	Special Topics in Film
FLL 303	History of World Movies I: The Origins to 1960
FLL 304	History of World Movies II
FR 305	French-Speaking Cinema
HY 305	Popular Culture in American History
HY 307	The American Film
HY 309	American Independent Film
HY 310	Film in the 1960s
HY 431	American Film and Violent Society
MU 115	Computer Music I
MU 245	Recording Technology I
MU 441	Multimedia Productions
SOC 316	Popular Culture, Mass Media, and Society
THR 102	Introduction to Cinema
THR 126	Film Technology: Cinematography, Audio and Editing
THR 200	Plays on Film
THR 216	Screenwriting I
THR 279	Cinematography
THR 316	Screenwriting II
THR 374	Video Editing
THR 375	Beginning Narrative Filmmaking
THR 376	Intermediate Narrative Filmmaking
THR 377	Acting for the Camera
THR 378	Film Directing
THR 475	Advanced Narrative Filmmaking
THR 476	Audio for Film: Recording and Mixing
THR 478	Music Video Production
THR 480	Individual Project in Film
THR 489	Individual Studies in Film

THR 492	Film Internship/Capstone
Total Hours	21

<sup>1</sup> A grade of C or better is required for any course applying to this minor.

## General Studies

### Bachelor of General Studies

**Director:** Catherine Daniélou

**College of Arts and Sciences Dean's Office**

The Bachelor of General Studies (BGS) degree is a flexible interdisciplinary degree that allows students to choose a general curriculum that meets their individual goals and provides room for exploration and inquiry. Our students have found special meaning in the modular and interdisciplinary intent of our program. The BGS prepares students for careers in various professional fields, including government, health care, real estate, general social services and the service-producing sector, law, retail, as well as the private industry where fundamental critical thinking and inquiry skills as well as rigorous writing and communication skills are of key importance. BGS graduates with high GPAs have also been successful in meeting their professional school goals, including graduate school.

The Bachelor of General Studies is a broad-based option supported by all undergraduate programs offering a minor at UAB. UAB offers a choice of over 80 minors. The BGS program integrates all our undergraduate campus in the choice of options. The program goals are to 1) equip students with a broad-based higher education allowing them to perform efficiently in the workplace; 2) prepare students to understand an increasingly complex and multifaceted world; and 3) help students to demonstrate a multidisciplinary base of knowledge.

Undergraduate students graduating with a degree in General Studies work with the assigned BGS advisor and select two minors of their choice offered at UAB, along with 9 hours of 400-level course work and a Capstone experience. Graduating students are expected to: (1) write, communicate, and present effectively; (2) evaluate and interpret information as well as societal issues critically and analytically; (3) apply knowledge and modes of inquiry from several disciplines; (4) demonstrate integrative learning.

The Bachelor of General Studies provides broad well-rounded rigorous educational opportunities to traditional and non-traditional students contemplating careers or graduate school opportunities for which a Bachelor's degree and university-level reading, writing, communication and critical thinking skills are required.

**Program Director:**

Catherine Danielou, PhD, Dean's Office, College of Arts and Sciences

934-4653, [danielou@uab.edu](mailto:danielou@uab.edu)

**Program Advisor:**

Kip Hubbard, MA, College of Arts and Sciences, Advising Office

Heritage Hall Building 402, 934-6135, [kiph@uab.edu](mailto:kiph@uab.edu)

## Bachelor of General Studies

### Degree requirements:

Successful completion of any 2 UAB minors\* of student's choice

### Capstone Requirement:

Select one of the following:

CAS 400 – General Studies Capstone (1 credit) (must be taken during the Senior year, not earlier)

Or another UAB approved Capstone course

Total Hours: Estimated 36 – 51 hours (minors being a minimum of 18 hours)\*\*

\*Students majoring in General Studies must achieve a grade of C or higher in all courses applied toward the major requirements.

\*Students majoring in General Studies must meet residency requirements and complete 9 hours at the 400 level or above taken at UAB.

\*\*A single course may not count toward more than one minor requirement.

## Courses

### CAS 101. Success in Biology and Natural Sciences. 2 Hours.

The objective of this course is to introduce incoming freshmen to an education in the biology in context of the university. It is meant to help prepare students for a successful collegiate career in the study of biology and natural sciences.

### CAS 102. Success in Chemistry and Natural Sciences. 2 Hours.

The objective of this course is to introduce incoming freshmen to an education in the Chemistry in context of the university. It is meant to help prepare students for a successful collegiate career in the study of chemistry and natural sciences.

### CAS 103. Success in the Sciences. 2 Hours.

The objective of this course is to introduce incoming freshmen to an education in the sciences in context of the university. It is meant to help prepare students for a successful collegiate career in the study of science.

### CAS 104. Success in Soc/ Behavioral Sci. 2 Hours.

The objective of this course is to introduce incoming freshmen to an education in the social and behavioral sciences in context of the university. It is meant to help prepare students for a successful collegiate career in the study of social and behavioral sciences.

### CAS 105. Success in Psychology and Social Sciences. 2 Hours.

The objective of this course is to introduce freshmen to an education in psychology and the social sciences in context of the university. It is meant to help prepare students for a successful collegiate career in the study of psychology and social sciences.

### CAS 106. Success in the Humanities. 2 Hours.

The objective of this course is to introduce incoming freshmen to an education in the humanities in context of the university. It is meant to help prepare students for a successful collegiate career in the study of the humanities.

### CAS 107. Success in Music. 2 Hours.

The objective of this course is to introduce incoming freshmen to an education in music in context of the university. It is meant to help prepare students for a successful collegiate career in the study of music.

### CAS 108. Success in Communication. 2 Hours.

The objective of this course is to introduce incoming freshmen to an education in communication in context of the university. It is meant to help prepare students for a successful collegiate career in the study of communication.

### CAS 109. Success in World Cultures and Foreign Languages. 2 Hours.

The objective of this course is to introduce incoming freshmen to an education in foreign languages and world cultures in context of the university. It is meant to help prepare students for a successful collegiate career in the study of world cultures and foreign languages.

### CAS 110. Success in Art. 2 Hours.

The objective of this course is to introduce incoming freshmen to an education in art in context of the university. It is meant to help prepare students for a successful collegiate career in the study of art.

### CAS 111. Success in Theatre. 2 Hours.

The objective of this course is to introduce incoming freshmen to an education in theatre in context of the university. It is meant to help prepare students for a successful collegiate career in the study of theatre.

### CAS 112. Success in College. 1 Hour.

The objective of this course is to introduce incoming freshmen to a successful path in college. It is meant to help prepare students for a successful collegiate career in any field of study.

### CAS 399. Perceptions:Poverty in Amer/SL. 3 Hours.

This service-learning course engages students in critical analysis of perceptions and policies about poverty in the United States while providing essential tax preparation and services to members of our local community. Academic coursework will focus on perceptions and misperceptions of those in poverty, race and poverty, socioeconomic issues faced by low-income families, federal and state policies toward working families, predatory lending practices that erode wealth, and strategies to address poverty in the United States.

### CAS 400. General Studies Career Readiness Capstone Project. 1 Hour.

This capstone experience course is designed for students who opted for an interdisciplinary major to develop a portfolio and reflect on their academic accomplishments, interdisciplinary intellectual interests, and the skills they have acquired in light of their specific career goals. Available to Seniors only.

### CAS 401. General Studies Independent Studies. 2 Hours.

Course designed for students who opted for an interdisciplinary major. Students will explore an approved interdisciplinary topic and develop an integrative research portfolio.

### CAS 402. General Studies Interdisciplinary Independent Readings. 3-6 Hours.

This individualized course of directed readings focuses on a rigorous in-depth exploration of an interdisciplinary research topic along with the development of a comprehensive research project. Permission of program director and instructor are required.

**CAS 405. General Studies Professional Internship. 1-3 Hour.**

Experiential learning course designed for students who opted for an interdisciplinary major, allowing them to gain valuable professional experience and develop a reflective professional activity portfolio related to an interdisciplinary academic trajectory. The experience will be relevant to the student's academic and career plans.

## Genetics & Genomic Sciences

The UAB Undergraduate Program in Genetics and Genomic Sciences (GGS) is an interdisciplinary major between the Department of Genetics in the Heersink School of Medicine and the Department of Biology in the College of Arts and Sciences. Genetics refers to study of genes and their roles in inheritance, while genomics describes investigations of large sets of genes or gene products, up to and including the entire genome. Genetics is one of the most important fields in biological sciences, and affects all aspects of our lives. There have been major breakthroughs in the fields of genetics and genomics during the last decade, and this has created a significant need for individuals with training in these cutting-edge disciplines.

The central goals of the GGS undergraduate major is to provide students with a strong educational and research background and prepare them to become accomplished research scientists, clinicians, and health-care professionals who will be equipped with the knowledge to contribute to future discoveries in genetics and genomics. Our faculty, through their strong academic and research experience and expertise in the fields of genetics and genomic sciences, will help students accomplish these goals through the following mechanisms:

- *Academic coursework* - students are provided with a strong academic and intellectual foundation through coursework in biology, chemistry, mathematics, physics, genetics, and genomics.
- *Authentic research experience* – Qualified students are offered opportunities to perform laboratory research under the direction of faculty mentors to learn cutting-edge experimental approaches and innovative methods in genetics and genomics research.
- *Mentoring and career guidance* - students are provided with academic and career counseling to identify graduate and professional programs, or jobs most suited to their interests.

## Admissions

The GGS program is designed for graduating high school seniors and college freshmen or sophomores with a strong academic record and the motivation to pursue a career in the biomedical sciences.

### Advising and Information

Dr. Micky Edmonds  
Co-Director, Genetics and Genomic Sciences  
Assistant Professor, Department of Genetics  
(205) 975-7879  
[MickEdmonds@uab.edu](mailto:MickEdmonds@uab.edu) ([mickedmonds@uab.edu](mailto:mickedmonds@uab.edu))

Dr. Shahid K Mukhtar  
Co-Director, Genetics and Genomic Sciences  
Assistant Professor, Department of Biology  
(205) 934-8335  
[smukhtar@uab.edu](mailto:smukhtar@uab.edu)

## Bachelor of Science in Genetics and Genomic Sciences

For a BS degree in Genetics and Genomic Sciences, you must satisfactorily complete a minimum of 120 semester hours including the following:

Requirements	Hours
BY 123 & 123L	Introductory Biology I and Introductory Biology I Laboratory 4
BY 124 & 124L	Introductory Biology II and Introductory Biology II Laboratory 4
CH 115 & CH 116	General Chemistry I and General Chemistry I Laboratory 4
CH 117 & CH 118	General Chemistry II and General Chemistry II Laboratory 4
PHL 116	Bioethics 3
BY 210	Genetics 3
BY 330	Cell Biology 3
CH 235 & CH 236	Organic Chemistry I and Organic Chemistry I Laboratory 4
MA 125 or MA 225	Calculus I or Calculus I - Honors 4
CH 237 & CH 238	Organic Chemistry II and Organic Chemistry II Laboratory 4
MA 180 or PUH 250	Introduction to Statistics or Biostatistics 3
CH 460	Fundamentals of Biochemistry 3
PSDO 200	Introduction to Research 1
PH 201 & 201L	College Physics I and College Physics Laboratory I 4
PH 202 & 202L	College Physics II and College Physics Laboratory II 4
GRD 300	Introduction to the Health Professions 1
<b>Genetics and Genomic Sciences courses <sup>1</sup></b>	<b>13</b>
GGSC 310	Genome Structure and Organization
GGSC 320	Colloquium in Genetics and Genomics Science <sup>2</sup>
GGSC 410	Genetic Basis of Human Disease
GGSC 420	Applications of Bioinformatics
GGSC 499	GGSC Program Final (Taken last term)
<b>GGS/BY Electives (select at least 2 from the list below)</b>	<b>6</b>
GGSC 415	Aquatic Animal Models of Human Disease
GGSC 435	Zebrafish as a Model for Biomedical Research
GGSC 465	Research Techniques for Aquatic Animals of Human Diseases
GGSC 470	Principles of Pharmacogenetics
GGSC 490	Model Systems for Genetics Disorders
GGSC 491	Personalized Genomic Medicine
BY 431	Principles of DNA Technology
<b>Capstone Requirement (Choose one of the following)</b>	<b>3</b>
GGSC 490	Model Systems for Genetics Disorders
GGSC 491	Personalized Genomic Medicine
GGSC 492	Undergraduate Research Seminar in Genetics and Genomic Sciences <sup>3</sup>
GGSC 493	Honors Research Seminar in Genetics and Genomic Sciences <sup>3</sup>

Total Hours

75

- <sup>1</sup> A minimum GPA of 2.0 is required
- <sup>2</sup> GGS majors must take the Colloquium in Genetics and Genomics course (GGSC 320; 1 credit hour per semester) at least 2 times.
- <sup>3</sup> Please contact the program director to discuss the Capstone requirements.

## Required for Genetics and Genomic Sciences Honors Students

To successfully complete the GGS Honors Program you will need to:

- Take 6 semester hours of GGSC 390 Honors Research in Genetics and Genomic Sciences. Each semester hour per term requires a minimum of 3 hours of laboratory work per week. Students may substitute 3 of the 6 required GGSC 390 credit hours with an equivalent research course (with prior approval of the program director).
- Complete the required Environmental Health and Safety (EH&S) training courses. Save the certificates.
- Take the Honors Research Seminar in Genetics and Genomic Sciences (GGSC 493) course during the junior or senior year. This course should be taken during the first semester after completion of the research project, or alternatively can be taken concurrently with GGS Honors Research in Genetics and Genomic Sciences (GGSC 390) during the student's final semester of supervised research. Can also be taken to fulfill the Capstone requirement.
- Form your Honors Thesis Committee consisting of your faculty mentor and another faculty member at least one semester in advance of your final defense.
- Submit your research report to your thesis committee in the form of a thesis in the final semester. The thesis should include a summary of the student's research findings incorporating an introduction, methods, and relevant literature review. Append the EH&S certificates at the end of your thesis. Discuss with the Program Directors about the detailed guidelines, if necessary.
- Defend the thesis in the final semester in front of your thesis committee.
- Submit an oral or poster presentation at Biology Research Day or the UAB Expo during their junior or senior year. Under special circumstances, the poster may be presented at other times of the year pending approval of the Program Directors.

## Honors Eligibility

To be accepted into the Genetics and Genomic Sciences Honors Program, you must:

- Have completed at least 45 credit hours
- Have a 3.5 GPA in GGSC and Biology courses
- Have a 3.2 GPA overall
- Have already completed BY 123 and 123L, BY 124 and 124L, BY 210, CH 115/116, and CH 117/118
- Honors Research in Genetics and Genomic Sciences can also be taken as part of the University Honors Programs. GGS majors generally enter their research labs in the fall semester of their junior year; however, they may begin their research work in the spring semester of their sophomore year or earlier with permission of the Program Directors.
- Qualified non-Honors students will be encouraged, but not required to participate in research as part of their GGS BS degree. Non-Honors

students must receive permission from the Program Directors before entering a research lab. In addition, they must complete the course requirements listed above. However, these students will register for the GGSC 380 Undergraduate Research in Genetics and Genomic Sciences and GGSC 492 Undergraduate Research Seminar in Genetics and Genomic Sciences courses.

### Freshman

First Term	Hours	Second Term	Hours
CAS 112		1 BY 124 & 124L	4
BY 123 & 123L		4 CH 117 & CH 118	4
CH 115 & CH 116		4 EH 102	3
EH 101		3 PHL 116	3
Core Curriculum Area II or IV		3 GRD 300	1
	15		15

### Sophomore

First Term	Hours	Second Term	Hours
BY 210		3 GGSC 310	3
GGSC 320 <sup>1</sup>		1 GGSC 320 <sup>1</sup>	1
CH 235 & CH 236		4 BY 330	3
MA 125		4 CH 237 & CH 238	4
Core Curriculum Area II or IV		3 Core Curriculum Area II or IV	3
		PSDO 200	1
	15		15

### Junior

First Term	Hours	Second Term	Hours
GGSC 420		3 GGSC 410	3
GGSC 380 or 390 (or a General Elective Course)		3 GGSC 380 or 390 (or General Elective Course)	3
MA 180 or PUH 250		3 CH 460	3
General Elective Course		3 General Elective Course	3
Core Curriculum Area II or IV		3 Core Curriculum Area II or IV	3
	15		15

### Senior

First Term	Hours	Second Term	Hours
Approved GGSC/BY 400 Level Course <sup>2</sup>		3 Approved GGSC/BY 400 Level Course <sup>2</sup>	3
GGSC 492 or 493 (or a General Elective Course)		3 PH 202 or 222	4
PH 201 or 221		4 Core Curriculum Area II or IV	3
Core Curriculum Area II or IV		3 General Elective Course	4
General Elective Course		3	
	16		14

Total credit hours: 120

<sup>1</sup> GGSC majors must take GGSC 320 the Colloquium in Genetics & Genomics at least 2 times.

<sup>2</sup> Approved GGSC/BY 400-level courses: BY 431, GGSC 415, GGSC 435, GGSC 465, GGSC 470, GGSC 490, and GGSC 491. One of the following courses must be taken to fulfill the Capstone Requirement: GGSC 490, GGSC 491, GGSC 492, or GGSC 493. These courses may also be used to fulfill the Approved GGSC/BY 400 Level Course or General Elective Course requirements.

## Courses

### **GGSC 101. Your Genome. 3 Hours.**

Advances in genetics and genomics, and especially the sequencing of the human genome, are making it possible to customize medical care to the specific needs of an individual. This course will introduce students to basic concepts in genetics and genomic sciences, as well as familiarize them with the various tools available that enable personalization of healthcare. Students from a wide range of disciplines with minimum scientific background can participate, and there is no required textbook. This course is intended for non-Genetics and Genomic Sciences majors.

### **GGSC 201. Research Experience in Molecular Genetics. 3 Hours.**

A course-based authentic research experience with genomic technologies such as CRISPR-Cas9 (programmable nucleases) to make genetic modifications in a model organism.

### **GGSC 250. Special Topics in Genetics and Genomics Sciences. 1-3 Hour.**

Covers different topics including fundamentals and applications in the fields of genetics and genomics.

### **GGSC 310. Genome Structure and Organization. 3 Hours.**

This course will cover the general concepts of genomics including gene structure and function, genomic technologies and their applications, and comparative genomics.

**Prerequisites:** BY 210 [Min Grade: C] and CH 117 [Min Grade: C] and CH 118 [Min Grade: C]

### **GGSC 320. Colloquium in Genetics and Genomics Science. 1 Hour.**

Faculty-led seminar course that exposes students to cutting edge research topics and career opportunities in the fields of genetics and genomics. Students will read assigned articles and be prepared for discussion.

### **GGSC 330. Principles and Practice of Precision Medicine. 3 Hours.**

Students in this CURE course (Course-Based Undergraduate Research Experiences), will participate in the work-up of real (but de-identified), active PMI cases. Starting from a genetics report, students will research possible molecular mechanisms underlying an individual's disease, write summary reports of the scientific and medical literature, and present their findings to the PMI team and potentially to the physicians responsible for making treatment decisions. Cases incorporated into the class are current active cases, and therefore will be new for every class.

**Prerequisites:** BY 210 [Min Grade: C]

### **GGSC 350. Special Topics in Genetics and Genomics Sciences. 1-3 Hour.**

Covers different topics including fundamentals and applications in the fields of genetics and genomics.

### **GGSC 355. Independent Study in Genetics and Genomics Sciences. 1-3 Hour.**

In-depth study of fundamentals and applications in the fields of genetics and genomics under the direct supervision of a faculty member. Permission of Instructor Only.

### **GGSC 380. Undergraduate Research in Genetics and Genomics Sciences. 1-3 Hour.**

Research project for non-GGS Honors students under the supervision of a faculty sponsor. May be repeated for a total of 9 semester credit hours in a 2 or 3 semester period.

### **GGSC 390. Honors Research in Genetics and Genomics Sciences. 1-3 Hour.**

Research project for GGS Honors students under the supervision of a faculty sponsor. May be repeated for a total of 9 semester credit hours in a 2 or 3 semester period.

### **GGSC 410. Genetic Basis of Human Disease. 3 Hours.**

This course will focus on the medical applications of genetics and genomic technologies. Topics covered include, but are not limited to major forms of chromosomal abnormalities, mutations and genetic disorders, genetic risk assessment and population genetics, and genomic approaches to diagnosis.

**Prerequisites:** BY 210 [Min Grade: C] and CH 117 [Min Grade: C] and CH 118 [Min Grade: C] and (GGSC 310 [Min Grade: C] or BY 311 [Min Grade: C])

### **GGSC 415. Aquatic Animal Models of Human Disease. 3 Hours.**

This course will cover the basic anatomy, biology, life history, husbandry, and research applications for a variety of aquatic organisms used as animal models of human disease in biomedical research. Species discussed will include zebrafish, Medaka, Xiphorous, Onchorynchus, Xenopus, and Axolotls.

**Prerequisites:** CH 117 [Min Grade: C] and CH 118 [Min Grade: C] and BY 210 [Min Grade: C] and GGSC 310 [Min Grade: C]

### **GGSC 420. Applications of Bioinformatics. 3 Hours.**

Introduction to computational tools and bioinformatics databases used in the fields of genetics and genomic sciences. This course will cover a wide variety of different bioinformatics applications, which will be taught through use of available on-line bioinformatics resources. Topics covered include large-scale genomic databases, sequence analysis systems, protein sequence analysis, structural bioinformatics, protein folding, and homology modeling.

**Prerequisites:** BY 210 [Min Grade: C] and CH 117 [Min Grade: C] and CH 118 [Min Grade: C] and (GGSC 310 [Min Grade: C] or BY 311 [Min Grade: C])

### **GGSC 435. Zebrafish as a Model for Biomedical Research. 3 Hours.**

This course will focus on the biology, husbandry, and management of zebrafish used as an animal model of human disease in biomedical research. Topics will include anatomy, physiology, systems design, water quality management, behavior and enrichment, spawning and larviculture, nutrition and live feeds, diseases, quarantine, biosecurity, and regulatory compliance.

**Prerequisites:** CH 117 [Min Grade: C] and CH 118 [Min Grade: C] and BY 210 [Min Grade: C] and GGSC 310 [Min Grade: C]

### **GGSC 465. Research Techniques for Aquatic Animals of Human Diseases. 4 Hours.**

This course will focus on the techniques and procedures used for research with aquatic animal models of human disease. Lecture and lab approaches are used.

**Prerequisites:** GGSC 415 [Min Grade: C] or GGSC 435 [Min Grade: C]

**GGSC 470. Principles of Pharmacogenetics. 3 Hours.**

Most of the drugs that we use today were developed with the assumption that the same drug will work equally well in all the patients that have the same disease. However, there is considerable variability between individual patients - both in the therapeutic response and the adverse effects of the same drug - that is largely determined by the differences in their genotypes. Pharmacogenetics and pharmacogenomics study the genetic determinants of drug response, with the goal to identify genetic variants that can be used to predict the efficacy of a particular drug in a particular patient and to avoid adverse drug reactions. This will ultimately enable implementation of personalized treatment options, by selecting the drugs that will have the best efficacy and the least toxicity for each individual patient. This course will introduce students to the basic principles of pharmacogenetics, demonstrate examples of drug/genotype interactions, highlight the available pharmacogenetic resources, and discuss the potential benefits, as well as limitations and challenges of pharmacogenetics and personalized medicine.

**Prerequisites:** CH 117 [Min Grade: C] and CH 118 [Min Grade: C] and BY 210 [Min Grade: C] and GGSC 310 [Min Grade: C]

**GGSC 490. Model Systems for Genetics Disorders. 3 Hours.**

Invertebrate and non-human vertebrate species are commonly used in scientific research work to provide significant insights into human genetic processes and disease. This course focuses on the different methods and strategies by which researchers use these systems for genetic and genomic analyses of human biology and relevant disorders. Model organisms covered include, but are not limited to nematodes (*C. elegans*), fruit flies (*Drosophila* sp.), zebrafish (*Danio rerio*), and mice (*Mus musculus*). Capstone course (GGSC majors). Students that enroll in this class as their capstone experience are expected to do writing or presentation assignments to fulfill their capstone requirement.

**Prerequisites:** BY 210 [Min Grade: C] and CH 117 [Min Grade: C] and CH 118 [Min Grade: C] and (GGSC 310 [Min Grade: C] or BY 311 [Min Grade: C])

**GGSC 491. Personalized Genomic Medicine. 3 Hours.**

Significant developments in the fields of genetics and genomics are making it possible to tailor medical care to the specific needs of patients. New diagnostic tests, up to and including whole genome sequencing, provide increasingly powerful tools for the identification of the genetic basis of both rare and common disorders. Better understanding of the causes of disease are permitting drugs to be developed that precisely target disease mechanisms, increasing the efficacy and avoiding side effects. These and other new advances are leading to major changes in healthcare delivery and provide the consumer with new opportunities and complex choices. This course will focus on exploring state-of-the-art genetic, genomic, and informatic tools now available to enable personalization of healthcare. Capstone course (GGSC majors). Students that enroll in this class as their capstone experience are expected to do writing or presentation assignments to fulfill their capstone requirement.

**Prerequisites:** BY 210 [Min Grade: C] and CH 117 [Min Grade: C] and CH 118 [Min Grade: C] and (GGSC 310 [Min Grade: C] or BY 311 [Min Grade: C])

**GGSC 492. Undergraduate Research Seminar in Genetics and Genomic Sciences. 3 Hours.**

Elective course for non-GGS Honors students who perform at least two semesters of GGSC 380. Over the course of the semester, students will learn how to develop and complete a paper or thesis on their research work while working closely with a supervising faculty member. In addition, the course will prepare them to present their research findings in a seminar format. Through these activities, students will develop effective skills in both written and oral scientific communication. Students will present a formal seminar on their research at the end of the course. This course can be taken the first semester following the completion of the research project, or alternatively can be taken concurrently with Undergraduate Research in Genetics and Genomic Sciences (GGSC 380) during the student's final semester of supervised research. Designated a Capstone course (GGSC majors).

**GGSC 493. Honors Research Seminar in Genetics and Genomic Sciences. 3 Hours.**

All GGS Honors students are required to take this weekly course. Over the course of the semester, students will learn how to develop and complete a paper or thesis on their research work while working closely with a supervising faculty member. In addition, the course will prepare them to present their research findings in a seminar format. Through these activities, students will develop effective skills in both written and oral scientific communication. Students will present a formal seminar on their research at the end of the course. This course can be taken the first semester following the completion of the research project, or alternatively can be taken concurrently with Honors Research in Genetics and Genomic Sciences (GGSC 390) during the student's final semester of supervised research. Can be taken as a Capstone course (GGSC majors).

**GGSC 499. GGSC Program Final. 0 Hours.**

This 0-credit hour course includes two self-paced components: One career counseling recorded video and data collection from students via CV submission and an automated exit interview for documenting learning essentials of GGSC students towards GGSC program evaluation. Students will register for GGSC 499 during their last semester as a requirement for graduation with GGSC major. The GGSC program director(s) will be the faculty instructor(s) with assistance from the GGSC program manager and student advisor.

## Gerontology

### Interdisciplinary Minor

**Director:** Christy S. Carter

**Committee on Undergraduate and Graduate Education in**

**Gerontology Director:** Christy S. Carter

**Associate Directors:** Steve Austad (Biology), Karlene Ball (Psychology), Bryan Breland (Health Services Administration), Michael Crowe (Psychology), Patricia Drentea (Sociology), Vithal K Ghanta (Biology)

Gerontology is the study of the processes of aging in all their diversity—the complex interaction of individual, social, and organizational phenomena producing change over the entire life span. Gerontological education necessarily encompasses many traditional disciplines in the biological, behavioral, medical, and social sciences, as well as numerous professional specialties. The philosophy of the Gerontology Education Program is that research and instruction of the highest quality are achieved when faculty and students are trained within their parent discipline or field and apply their insights to questions of aging through

interdisciplinary education. In this sense, students bring a firm disciplinary background with a specialized body of knowledge into their future endeavors.

UAB's Gerontology Education Program offers interdisciplinary courses in gerontology, leading to an undergraduate minor. The study of gerontology at this level provides students educated in various disciplines with the background needed to work in programs related to aging and the aged. The program's main goals are to provide students with a thorough background in existing theory and research in gerontology and to supplement their existing backgrounds and professional disciplines.

The academic program is administered by the director of the Gerontology Education Program. The director is also responsive to the guidance of the Committee on Undergraduate and Graduate Education in Gerontology and serves as chair of the committee. The committee is made up of representatives from academic departments throughout UAB who are active in the study of aging and the aged. The director reports to the dean of the College of Arts and Sciences and to the director of the Center for Aging.

The multidisciplinary gerontology program is offered to all UAB students in good standing. The program has the sponsorship and support of the College of Arts and Sciences and the Center for Aging. Students may obtain the program's Operating Policies: Standards and Procedures Manual through the program director.

## Minor in Gerontology

Requirements	Hours
<b>Required Gerontology Courses</b>	
<u>GER 280</u> Biology of Aging	3
<u>GER 425</u> Psychology of Aging	3
<u>GER 469</u> Sociology of Aging	3
<b>Practicum or Independent Reading/Research Project</b>	
Complete a practicum or independent reading or research project for three credit hours. See your advisor for details.	3
<b>Gerontology Electives</b>	
Select six hours from Gerontology (GER) courses	6
<b>Total Hours</b>	<b>18</b>

## Grade Requirement

A grade of C or better is required in all courses applied to the minor. Additionally, students must have a GPA of at least 2.5 in all courses applied to the minor.

## Courses

### GER 280. Aging: From Cells to Society. 3 Hours.

Americans born in the 21st century can expect to live 100 years or more. That is what some prominent aging researchers believe. Already, we are living longer than at any time in human history. Does that mean that society can expect to be overwhelmed by Alzheimer's disease and other diseases of later life as the century progresses? Why do we age anyway? What goes wrong inside our body as we grow older? Why does it happen 5 times as fast in a dog? 30 times as fast in a mouse? What are the prospects for an aging "breakthrough" that might allow us to live much, much longer? What would be the societal impact of such a breakthrough? This course will address these and other questions, providing a solid background in the biology of aging, and the social implications of this biology in a rapidly changing world.

### GER 285. Introduction to Aging. 3 Hours.

Aging experience in modern world. Theories of aging, dimensions of aging, everyday concerns associated with aging, and future prospects of aging. Guest lectures by professionals in the field and other faculty in gerontology.

### GER 309. Community Resources for Special Populations. 3 Hours.

Analysis of community-based programs for specific populations: older citizens, persons with HIV/AIDS, and the chronically mentally ill.

### GER 397. Advanced Directed Readings in the Biology of Aging. 1-3 Hour.

Reading and independent study in selected areas under supervision of faculty sponsor. Gerontology topic required.

### GER 398. Research Practicum in Psychology. 1-3 Hour.

Independent project, study, or reading supervised by member of faculty.

### GER 403. Politics of Aging. 3 Hours.

Role of aging in political process. Political demands made by elderly, role of aging in political decision-making, and policy outputs relevant to older population.

### GER 407. Pathology of Memory. 3 Hours.

Memory disorders from stand point of experimental psychology and neuropsychology. Amnesic syndrome, dementia, transient memory disorders, Alzheimer's disease, epidemiology and public health issues.

### GER 411. Bio-Psycho-Social Aspects of Aging for the Health. 3 Hours.

Overview of current gerontological-geriatric information. Special needs of the elderly in receiving healthcare services.

### GER 420. Anthropology of Old Age. 3 Hours.

Anthropology of Old Age: Cross-cultural perspective of status alternatives for elderly. Examination of differing roles, especially kinship, of elderly in Africa, Europe, Oceania, Middle East, and various ethnic groups in U.S.

### GER 425. Psychology of Aging. 3 Hours.

Age changes in human cognition and behavior. Sensory processes, memory, intelligence, physiology and health, psychopathology, and life-span development and adjustment.

### GER 438. Gerontology and Geriatrics Multidisciplinary Core. 3 Hours.

### GER 455. Minority Aging. 3 Hours.

Cross-racial/ethnic exploration on national level of special problems of minority aged groups such as Latinos, Blacks, Chinese, Japanese, Koreans, Pacific-Asians, and American Indians. Family, church, health care, housing, adult education, retirement, income, and recreation.

**Prerequisites:** SOC 100 [Min Grade: D]

### GER 456. Death and Dying. 3 Hours.

Death and dying from sociological and social psychological perspectives. Social significance of death as human existential phenomenon. Recent trends in definition, distribution, and handling of death and dying (e.g., interaction with dying persons, hospice movement, and funeral practices).

**Prerequisites:** SOC 100 [Min Grade: D]

### GER 457. The Aging Family. 3 Hours.

Exploration of changes in family structure; status of aging in family in various societies; intra-and inter-generational relations; family-related role transitions.

**Prerequisites:** SOC 100 [Min Grade: D]

**GER 462. Environment and Aging. 3 Hours.**

Analysis of special consequences of residential environment for older people. Patterns of residence among elderly; fit between lifestyles and types of residence; consequences of living in segregated versus age-integrated neighborhoods, retirement homes, and nursing homes; examination of policy options.

**GER 480. Women and Aging. 1 Hour.**

Subjects of special interest, such as women and religion, women in civil rights movement, and theories of women's studies. Varies in content depending upon topic. Students may enroll under these numbers multiple times but topic may not be repeated.

**GER 485. Age Stratification. 3 Hours.**

Description of normal aging process; survey of individual troubles and group social problems associated with aged. Specific topics include health, economic status, work/retirement, family relations, housing/living environments, and transportation problems.

**GER 488. Sociological Practice. 3 Hours.**

Students will be involved in community research projects related to intergenerational relations, aging, medicine, and/or health. Placement in community organizations, e.g. schools, senior centers, to focus on research methods related to social policy.

**Prerequisites:** SOC 100 [Min Grade: D]

**GER 490. Independent Study and Special Courses in Sociology. 1-3 Hour.**

Individually designed programs for students wishing to conduct semi-independent research or guided reading in gerontology.

**GER 491. Independent Study and Special Courses in Sociology. 1-3 Hour.**

Individually designed programs for students wishing to conduct semi-independent research or guided reading in gerontology.

**GER 498. Independent Study I. 1-3 Hour.**

Community service projects under direction of faculty.

**GER 499. Independent Study II. 1-3 Hour.**

Community service projects under direction of faculty.

## Human Rights

**Director: Tina K. Reuter (UAB Institute for Human Rights, College of Arts and Sciences)**

The Human Rights minor is interdisciplinary in nature and draws from a number of social science and humanities fields, including African-American studies, anthropology, criminal justice, foreign languages, international studies, history, political science, psychology, sociology, public health, and social work. It allows students to grow in their understanding of human rights, and market their expertise in that field.

With the establishment of the Institute for Human Rights in the College of Arts and Sciences at UAB and other human rights related initiatives such as the MA in the Anthropology of Peace and Human Rights, a minor in human rights serves as a unique curricular focal point for students.

Birmingham is the cradle of the civil rights movement and an international destination for scholars and practitioners interested in human rights and civil rights. An increasing number of topics of societal concern are viewed through a human rights lens. In this context, foundational knowledge of human rights is a key expertise to possess in today's globalized and progressively complex world.

Through this minor program, critical thinking and interdisciplinary approaches to this discipline link theoretical approaches to human rights, the rule of law, and social justice with students' learning environment. Service learning and community-based approaches enhance students' academic experience by enabling them to practice skills and test classroom knowledge. A human rights minor makes students more competitive for fellowships, internships, human rights careers, and non-profit work.

Upon completing the requirements of the Minor in Human Rights, students will be able to:

1. Analyze the evolution and implementation of human rights from different disciplinary perspectives, including political science, international studies, law, history, psychology, anthropology, criminal justice, social work, sociology, and public health;
2. Discuss innovative answers to questions of human rights. This includes, for example, making connections between human rights implementation and the political, social, economic, and cultural environment of societies;
3. Synthesize approaches to human rights that are presented in different disciplines. Students are encouraged to develop personal approaches to dealing with human rights through academic learning, scholarly investigations, education abroad, discussions with peers and faculty, and practical experiences (service learning and internships);
4. Participate actively in campus and community platforms related to human rights.

The Minor in Human Rights supports the majors in political science, international studies, anthropology, sociology, criminal justice, social work, and public health by giving students the opportunity to engage in-depth with a topic that is related to the overall focus of their major. It could also be of interest to majors in foreign languages who aim to work at an international NGO.

Students interested in the minor may contact Dr. Tina Reuter through the UAB Institute for Human Rights, or their academic advisor.

## Minor in Human Rights

Requirements		Hours
PSC 316	Human Rights	3
HRT 485	Human Rights Professional Internship	3
or HRT 482	Directed Research in Human Rights	
<b>Electives <sup>1, 2</sup></b>		<b>12</b>
<b>At least 9 hours at the 300-400 level</b>		
AAS 200	Introduction to African-American Studies	
ANTH 351	Anthropology of Human Rights	
ANTH 404	Human Rights, Peace, and Justice	
ANTH 421	Technological Monitoring of Cultural Resources, Human Rights and Conflict	
ANTH 424	Transitional Justice and Human Rights	
ANTH 443	Propaganda, Fake News, and Hate Speech	
HY 239	The Holocaust in History and Literature	
or HY 339	The Holocaust in History and Literature	
HY 304	U.S. Civil Rights Movement	
HY 422	Ethnic Cleansing & Genocide 1912-2012	
CJ 390	The Death Penalty in America	
CJ 442	Race, Crime, Gender and Social Policy	
CJ 403	Restorative Justice	

EDF 362	Foundations of Education I: Social, Historical, Philosophical	
GCLH 150	Burning Issues	
PHL 318	Ethics of War	
PSC 266	The United Nations	
or PSC 366	The United Nations	
PSC 319	Civil Liberties and Civil Rights	
PSC 335	Memory Politics: Monuments, Museums and Human Rights	
PSC 359	Genocide and Crimes Against Humanity	
PSC 444	Human Rights and Technology	
PSC 458	Human Trafficking	
PSC 459	Politics of Transitional Justice	
PSC 465	International Law	
PUH 202	Introduction to Global Health	
PUH 322	Environmental Justice and Ethics	
PUH 441	Public Health Law and Policy	
SOC 245	What's the Problem? Social Conditions that Disrupt	
SOC 220	Sociology of Sex and Gender	
SOC 250	Race, Ethnicity, and Inequality	
SOC 278	Our Interconnected World	
SW 207	Racism, Sexism and Other Isms	
SW 478	Special Topics in Social Work	
Total Hours		18

<sup>1</sup> Courses from at least two different disciplines must be represented in the minor.

<sup>2</sup> Courses offered at two levels may only be used once.

## Courses

### HRT 481. Human Rights Independent Studies. 3 Hours.

Individualized course to explore a Human Rights topic and develop an integrative research portfolio or project. Requires instructor approval.

**Prerequisites:** PSC 316 [Min Grade: C]

### HRT 482. Directed Research in Human Rights. 1-6 Hour.

Directed research on Human Rights. Open to Human Rights minors only. Requires instructor approval.

**Prerequisites:** PSC 316 [Min Grade: C]

### HRT 483. Honors Directed Research in Human Rights. 1-6 Hour.

Directed research on Human Rights, for students enrolled in the Honors College. Open to Human Rights minors and Honors College students only. Requires instructor approval.

**Prerequisites:** PSC 316 [Min Grade: C]

### HRT 485. Human Rights Professional Internship. 3 Hours.

Experiential learning in the field of human rights, allowing students to gain valuable professional experience and develop a reflective professional activity portfolio related to human rights work and advocacy. Instructor permission required.

**Prerequisites:** PSC 316 [Min Grade: C] or ANTH 404 [Min Grade: C]

# Immunology

## Overview

EH 101

The UAB Undergraduate Immunology Program was established in 2016 as a joint program between the Department of Microbiology in the Heersink School of Medicine and the Department of Biology in the

College of Arts and Sciences. The goal of the Immunology Major is to insure that undergraduates acquire knowledge in the fundamental aspects of Immunology, including the cells, organs, and tissues that comprise the immune system and how the system functions as a whole to protect humans against infectious diseases. The science of Immunology is multidisciplinary and encompasses the study of both normal processes that confer protection and pathophysiological processes that cause disease. Normal processes include the response to microbial pathogens, vaccines, and cancer, which confer "immunity". Abnormal functions of the immune system contribute to significant disease processes and include asthma/allergy, autoimmunity, inflammatory syndromes (cancer, diabetes, heart disease, chronic neurological diseases), immunodeficiencies (both congenital and acquired), and transplant rejection.

The Undergraduate Immunology Program will provide students with a solid foundation in the core sciences, including chemistry, physics, and biology. Students will be required to take inorganic, organic, and biochemistry, as well as introductory biology, genetics, and the biology of microorganisms. Because the Undergraduate Immunology Program has a strong focus on these core sciences, majors will have the necessary foundation upon which to learn the principles of the immune system with respect to its normal and pathophysiological function. Moreover, because the Undergraduate Immunology Program requires students to take the core sciences as part of their curriculum, they will meet the prerequisites for entry into graduate and professional schools.

The Undergraduate Immunology Program and its faculty will accomplish the goals of the program through four interrelated mechanisms. First, students will be provided an outstanding academic and intellectual foundation through their coursework in biology, chemistry, physics, mathematics, and immunology. Second, students will be immersed in a laboratory research setting where they will learn state-of-the-art research techniques and methodologies that will enable them to address important questions in Immunology through one-on-one interactions with faculty mentors and research laboratory personnel. Third, students will be able to gain skills and knowledge related to the scientific method, critical thinking, problem solving, data analysis and scientific communication (both oral and written) that will allow them to become an integral member of a research team and to present their work at poster sessions at local, regional and national meetings. Fourth, students will be able to access academic and career counseling and determine the career path that is ideally suited to their interests, as well as to identify professional or graduate programs and how best to prepare to be highly competitive for entrance into such programs.

The Undergraduate Immunology Program is designed to prepare graduates to pursue careers in research or health-related professions. Successful graduates will be competitive for acceptance into highly competitive graduate or professional degree programs that will enable them to become accomplished scientists, clinicians and health-care professionals who will contribute to efforts to elucidate the function of the immune system as it relates to health and disease. Graduates will be at the forefront of efforts to fight emerging infectious diseases, to address global health problems, to develop new vaccines, or to find treatments for chronic diseases, including cancer, autoimmunity or asthma.

## Admissions

The Undergraduate Immunology Program is designed for graduating high school seniors and college freshmen and sophomores with an outstanding academic record and the desire to pursue a career in

biomedical research, medicine or the health professions. Successful applicants to the Program should meet the admissions criteria below.

High school students with a GPA of 3.5 or better and an ACT score of 28 or better will be considered for immediate acceptance into the Immunology Program. High school students who do not meet these requirements may be accepted into the program as pre-immunology majors. Any student who is admitted as a pre-immunology major must have an overall GPA #3.0 after 24 credits of work at UAB, a GPA #3.25 in their Biology, Chemistry, Physics and Mathematics (MA 105 and higher) coursework, and have taken a freshman year curriculum that is compatible with the Program.

Current UAB students and transfer students from other institutions who are freshmen or sophomores (non-direct admits) may select Immunology for their major, but must have an overall GPA #3.0 and must have demonstrated excellent academic performance in science/mathematics courses and have a GPA #3.25 in those courses.

Students must maintain an overall GPA #3.0 in order to remain in good academic standing in the Program. If a student's overall GPA falls below 3.0, they will have one semester to bring their overall grade to 3.0 or better.

Those who wish to apply to the Program should contact the Program Directors ([uip@uab.edu](mailto:uip@uab.edu)) for additional information. The Director, Dr. Justement and the Co-Directors of the Program, Dr. Heather Bruns and Dr. Vithal Ghanta, are available to meet with high school students and their parents, or with current UAB students to discuss the program.

### Advising and Information

#### Dr. Louis B. Justement

Program Director, Undergraduate Immunology

Professor of Microbiology

(205) 934-1429

[lbjust@uab.edu](mailto:lbjust@uab.edu)

#### Dr. Heather A. Bruns

Program Co-Director, Undergraduate Immunology

Associate Professor of Microbiology

(205) 996-4067

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#### Dr. Vithal K. Ghanta

Program Co-Director, Undergraduate Immunology

Professor of Biology

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#### Mr. Evan Reddick

Academic Advisor, Undergraduate Immunology

[ereddick@uab.edu](mailto:ereddick@uab.edu)

## Major in Immunology

Requirements		Hours
<b>Required courses:</b> <sup>1, 4, 5</sup>		
<b>Biology</b>		
BY 123	Introductory Biology I	4
BY 124	Introductory Biology II	4
BY 210	Genetics	3
BY 271	Biology of Microorganisms	4
<b>Chemistry</b>		
CH 115 & CH 116	General Chemistry I and General Chemistry I Laboratory	4
CH 117 & CH 118	General Chemistry II and General Chemistry II Laboratory	4
CH 235 & CH 236	Organic Chemistry I and Organic Chemistry I Laboratory	4
CH 237 & CH 238	Organic Chemistry II and Organic Chemistry II Laboratory	4
CH 460	Fundamentals of Biochemistry	3
<b>Physics</b> <sup>2</sup>		<b>8</b>
PH 201 & PH 202	College Physics I and College Physics II	
PH 221 & PH 222	General Physics I and General Physics II	
<b>Mathematics</b>		
MA 125 or MA 225	Calculus I Calculus I - Honors	4
MA 180 or PUH 250	Introduction to Statistics Biostatistics	3
<b>Immunology</b>		
MIC 150	Current Topics In Immunology	1
MIC 250	Seminars in Immunology	1
MIC 275 or BY 440	Introduction to the Immune System Immunology	3
MIC 401	Foundations in Immunology: The Innate Immune System	3
MIC 402	Foundations in Immunology: The Adaptive Immune System	3
MIC 403	Foundations in Immunology: Microbial Pathogen-Immune System Interaction	3
MIC 404	Foundations in Immunology: Immunologically-Mediated Diseases	3
MIC 490	Immunology Thesis	0
<b>Undergraduate Research</b> <sup>3</sup>		<b>6</b>
MIC 398	Undergraduate Research in Immunology & Host Defense	
or MIC 490	Honors Research in Immunology and Host Defense	
MIC 492	Undergraduate Research Seminar in Immunology and Host Defense	
or MIC 49	Honors Research Seminar in Immunology and Host Defense	
Total Hours		72

<sup>1</sup> Students must also satisfactorily complete Area I (6 hrs), Area II (12 hrs), and Area IV (12 hrs) of the UAB Core Curriculum as well as a Freshman Year Experience (1 hr, normally CAS 112) with no grades lower than a C.

<sup>2</sup> Complete either trig-based or calculus-based physics series.

- <sup>3</sup> Undergraduate Research: Immunology Majors are required to complete a minimum of 6 semester credit hours of research under the direction of a faculty member beginning no later than the first semester of their junior year. However, qualified students may identify a mentor and begin conducting research as early as their freshman year. Course credit will be provided via MIC 398, MIC 492, MIC 498, or MIC 499. Students in the major are required to take 3 credit hours of either MIC 492 or MIC 499 to fulfill their undergraduate research requirement. As part of MIC 492 or MIC 499 students must complete a thesis and give one scientific presentation at UAB EXPO or equivalent. The completion of a thesis for other programs will fulfill this requirement.
- <sup>4</sup> Students must complete 17 hours of General Electives. The following are recommended but not required: BY 245, BY 330, BY 409, BY 433, BY 434, BY 437, BY 490, BY 491, MIC 400, GGSC 310, and GGSC 410
- <sup>5</sup> Seniors must take MIC 490 the semester in which they plan to graduate and complete all course assignments.

**Academic Performance:** Immunology majors must maintain an overall GPA of 3.0 or better to remain in the program. Majors will be allowed one semester to raise their GPA.

**Capstone Requirement:** Students may fulfill their Capstone requirement by taking either MIC 492 or MIC 499.

## Honors Program in Immunology

### Purpose

The Immunology Honors Program offers motivated students the opportunity to develop research, communication and responsible conduct of research skills in preparation for a professional career in research or the health professions.

### Eligibility

To be accepted into the Immunology Honors Program, you must:

- Have completed at least 45 credit hours.
- Have a GPA 3.5 in BY, CH and MIC courses.
- Have a GPA 3.25 overall.
- Have already completed BY 123 and BY 123L, BY 124 and BY 124L, BY 210, CH 115/CH 116, and CH 117/CH 118.
- Have arranged with a faculty sponsor to do a research project and received approval from the Program Director.
- Honors Research in Immunology and Host Defense can also be taken as part of the University Honors Programs. Immunology majors generally enter their research labs in the fall semester of their junior year; however, they may begin their research work in the spring semester of their sophomore year or earlier with permission of the Program Directors.

### Requirements.

To successfully complete the Immunology Honors Program, students will need to:

- Complete the required Occupational Health and Safety training courses.
- Take a minimum of 6 semester credit hours of MIC 498 Honors Research in Immunology and Host Defense. Each semester credit

hour per term requires a minimum of 3 hours of laboratory work per week.

- Submit a formal research proposal by the end of the first semester of Honors Research. The proposal should include a synopsis of the proposed research incorporating an introduction, proposed methods, and relevant literature review.
- Take the Honors Research Seminar in Immunology and Host Defense (MIC 499) course during the junior or senior year. This course can be taken to fulfill the Capstone requirement.
- Complete a formal written report in the form of a scientific paper.
- Submit an oral or poster presentation at Biology Research Day or the UAB Expo during their junior or senior year. Under special circumstances, the poster may be presented at other times of the year pending approval of the Program Directors.

## Immunology 4-Year Plan

*This schedule does not account for University or Science and Technology Honors Programs.*

### Freshman

First Term	Hours	Second Term	Hours
EH 101 <sup>1</sup>		3 BY 123	4
CH 115 & CH 116		4 CH 117 & CH 118	4
CAS 112		1 EH 102 <sup>1</sup>	3
MA 125 or 225		4 MIC 150	1
Core Curriculum Area II or IV		3 Core Curriculum Area II or IV	3
	15		15

### Sophomore

First Term	Hours	Second Term	Hours
BY 124 <sup>2</sup>		4 BY 210	3
CH 235 & CH 236		4 CH 237 & CH 238	4
MIC 250		1 MIC 275 or BY 440 <sup>3</sup>	3
Core Curriculum Area II or IV		3 Core Curriculum Area II or IV	3
Core Curriculum Area II or IV		3 General Elective Course	3
	15		16

### Junior

First Term	Hours	Second Term	Hours
BY 271		4 MIC 398 or 498	3
MIC 401		3 MIC 402	3
PH 201 or 221		4 PH 202 or 222	4
Core Curriculum Area II or IV		3 Core Curriculum Area II or IV	3
General Elective Course		2 General Elective Course	3
	16		16

### Senior

First Term	Hours	Second Term	Hours
MA 180 or PUH 250		3 CH 460	3
MIC 403		3 MIC 404	3
Core Curriculum Area II or IV		3 MIC 490 <sup>5</sup>	0
General Elective Course		3 MIC 492 or 499	3
General Elective Course		3 General Elective Course	3
	15		12

Total credit hours: 120

<sup>1</sup> Students with AP credit for EH 101 may take EH 102 instead.

<sup>2</sup> Sometimes taken summer after freshman year

- <sup>3</sup> BY 440 requires permission of the program director.
- <sup>4</sup> Students must take a minimum of 6 credit hours of Undergraduate Research (3 credit hours of MIC 398 or MIC 498, and 3 credit hours of MIC 492 or MIC 499). Additional hours of MIC 398 MIC 498 may be taken to fulfill the General Elective requirement. 0-6 credit hours may be taken in any given semester.
- <sup>5</sup> Students should register for MIC 490 in the semester in which they plan to graduate.

## Courses

### **MIC 150. Current Topics In Immunology. 1 Hour.**

The goal of this seminar course is to present basic concepts in immunology as they relate to important current issues. The importance of the immune system in health and disease will be highlighted.

### **MIC 210. Special Topics in Immunology. 1-3 Hour.**

This course covers introductory topics that are related to immunology and host defense.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C]

### **MIC 250. Seminars in Immunology. 1 Hour.**

This seminar will feature a 30-minute introduction of a new basic concept in immunology followed by a 15-minute presentation from an individual faculty member who does research on that basic concept and a 15-minute discussion session.

### **MIC 275. Introduction to the Immune System. 3 Hours.**

This course will provide a general overview of the immune system in protecting against microbial pathogens. The components of the immune system will be introduced, including the cells and tissues important for mediating immunity.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C]

### **MIC 310. Special Topics in Immunology. 1-3 Hour.**

This course covers topics related to immunology and host defense.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C] and MIC 275 [Min Grade: C]

### **MIC 398. Undergraduate Research in Immunology & Host Defense. 0-6 Hours.**

Research project under the supervision of a faculty sponsor. May be repeated for a total of 9 semester hours of credit. Students must have completed 12 semester hours of BY or MIC with a GPA of 3.0 and must receive permission of the instructor.

**Prerequisites:** PSDO 200 [Min Grade: C]

### **MIC 400. The Microbiome in Health and Immunity. 3 Hours.**

This course will introduce the basic concepts of the immune system, including an understanding of the innate and adaptive arms of the immune response and the cells and organs involved. The course will also introduce the role of the microbiome and nutrition in health and disease. This course is designed to facilitate learning through the reading of primary literature sources, use of appropriate educational and medical databases, writing assignments, and discussion-based activities.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C]

### **MIC 401. Foundations in Immunology: The Innate Immune System. 3 Hours.**

This course will introduce the cells, receptors, signaling pathways and soluble mediators associated with the innate immune response. The basic components of the innate immune system will then be discussed in the context of their role in the physical, physiological, phagocytic and inflammatory barriers that comprise the innate immune system. Importantly, emphasis will be placed on the molecular and cellular mechanisms that are used by the innate immune system to detect and respond to microbial pathogens to provide the first line of defense.

**Prerequisites:** (BY 210 [Min Grade: C] and MIC 275 [Min Grade: C]) or BY 440 [Min Grade: C] and BY 271 [Min Grade: C](Can be taken Concurrently)

### **MIC 402. Foundations in Immunology: The Adaptive Immune System. 3 Hours.**

This course will provide an in-depth analysis of the cells (T, B and antigen presenting cells), tissues (primary and secondary) and soluble factors (cytokines and chemokines) that comprise the adaptive humoral immune response. The course will examine how cells of the adaptive immune system discriminate self from non-self, including the nature of antigen receptors, the types of antigens recognized and the signals involved in the generation of effector cells that mediate the response.

**Prerequisites:** BY 210 [Min Grade: C] and (MIC 275 [Min Grade: C] or BY 440 [Min Grade: C]) and BY 271 [Min Grade: C](Can be taken Concurrently)

### **MIC 403. Foundations in Immunology: Microbial Pathogen-Immune System Interaction. 3 Hours.**

This course will provide an overview of major concepts related to virulence mechanisms utilized by microbial pathogens and their effect on the host immune response. Emphasis will be placed on important virulence factors/mechanisms associated with bacterial, viral and fungal pathogens and how these alter various components of the innate and adaptive immune responses to allow escape of the pathogen and its survival. This course will introduce the concept of emerging infectious diseases and how their spread is related to their ability to escape detection by the immune system.

**Prerequisites:** MIC 401 [Min Grade: C] and MIC 402 [Min Grade: C]

### **MIC 404. Foundations in Immunology: Immunologically-Mediated Diseases. 3 Hours.**

This course will focus on the role of the immune system, including the molecular and cellular processes, that contribute to morbidity and mortality associated with immunodeficiency (congenital and acquired), asthma/allergy, autoimmunity (systemic and organ-specific), transplantation and inflammatory syndromes associated with heart disease, cancer, chronic neurological disease and diabetes.

**Prerequisites:** MIC 401 [Min Grade: C] and MIC 402 [Min Grade: C]

### **MIC 410. Special Topics in Immunology. 1-3 Hour.**

This course covers advanced topics related to immunology and host defense.

**Prerequisites:** MIC 401 [Min Grade: C] and MIC 402 [Min Grade: C]

### **MIC 450. Current Topics in Immunology. 1 Hour.**

The goal of this seminar course is to present advanced concepts in immunology as they relate to important current issues. The importance of the immune system in health and disease will be highlighted.

**Prerequisites:** MIC 401 [Min Grade: C] and MIC 402 [Min Grade: C]

**MIC 451. Seminar in Immunology Research. 1 Hour.**

This seminar will feature a 30 minute introduction of a new advanced concept/technology in immunology followed by a 15 minute presentation from an individual faculty member who does research on that advanced concept/technology and a 15 minute discussion.

**Prerequisites:** MIC 401 [Min Grade: C] and MIC 402 [Min Grade: C]

**MIC 490. Immunology Thesis. 0 Hours.**

Students in the Undergraduate Immunology Program will submit documents and complete assessments required for graduation.

**MIC 492. Undergraduate Research Seminar in Immunology and Host Defense. 3 Hours.**

Elective course for non-Immunology Honors students who have completed at least one semester (3 credit hours) of MIC 398. Over the course of the semester, students will conduct research and learn how to develop and complete a paper or thesis on their research work while working closely with a supervising faculty member. In addition, the course will prepare them to present their research findings in a seminar format. Through these activities, students will develop effective skills in both written and oral scientific communication. Students will present a formal seminar on their research at the end of the course. Can be taken as a Capstone course (Immunology majors).

**MIC 498. Honors Research in Immunology and Host Defense. 0-6 Hours.**

Independent research under the supervision of a faculty mentor for students participating in the Immunology Honors Program. May be repeated for a total of 9 semester hour credits. Students must have completed 12 semester hours of BY or MIC with a GPA of 3.0 and must receive permission of the instructor.

**Prerequisites:** PSDO 200 [Min Grade: C]

**MIC 499. Honors Research Seminar in Immunology and Host Defense. 3 Hours.**

All Immunology Honors students are required to take this weekly course. Over the course of the semester, students will conduct research and learn how to develop and complete a paper or thesis on their research work while working closely with a supervising faculty member. In addition, the course will prepare them to present their research findings in a seminar format. Through these activities, students will develop effective skills in both written and oral scientific communication. Students will present a formal seminar on their research at the end of the course. This course can be taken the first semester following the completion of Honors Research in Immunology and Host Defense (MIC 498, minimum of 3 credit hours). Can be taken as a Capstone course (Immunology majors).

**International Studies**

**Interdisciplinary Major and Minor**

**Director:** Renato Corbetta

**Faculty:** Corbetta, Sharlach (Political Science and Public Administration); Kyle (Anthropology), Liber, Murray, Van Sant, Ward (History); Biga (Sociology); Cummings (Art and Art History); Danielou (Foreign Languages and Literatures)

The International Studies Program promotes a holistic appreciation of the different values and structures that characterize the world's diverse societies, as well as an understanding of the institutions that produce economic, social, cultural, and political interdependence among nations.

A major or minor in international studies provides students with the background necessary to pursue a variety of public and private-sector

careers. Employment opportunities are as numerous and varied as the interests and abilities of individual students. Majors may find employment in diplomatic or foreign service; international business, law, or labor relations; international development, social service, the travel industry, or health agencies and cultural organizations. Many of our students pursue graduate work in the fields of international relations, international development, peace studies, conflict resolution studies, public health, or law. We encourage all International Studies majors to study abroad, minor in a foreign language, and hope that they will pursue internship opportunities as well. The minor complements any major area by providing students with an international focus in their field.

The program is administered by the College of Arts and Sciences. In addition, courses taught in other schools and professional programs at UAB may be relevant to the curriculum developed by a student in pursuit of his or her specific career goals.

International Studies is an interdisciplinary major. Courses eligible to apply to this major may vary with the emphasis that a student chooses. See your advisor for identifying an appropriate curriculum in your area of interest.

**Bachelor of Arts with a Major in International Studies**

Requirements		Hours
Required International Studies		
PSC 103	Foundations of International Relations	3
FLL 120	Foreign Cultures	3
ITS 470/ PSC 402	Seminar in International Studies	3
or ITS 471/ PSC 403	Seminar in International Studies	
ITS Internship		
ITS 482	Internship in International Affairs	3
Economic Awareness		
Select one of the following:		3
ANTH 318	Economic Development and Indigenous Societies	
EC 210	Principles of Microeconomics	
EC 211	Principles of Macroeconomics	
EC 304	Intermediate Microeconomics	
EC 305	Intermediate Macroeconomics	
EC 405	Economic Development and Growth	
EC 407	International Economics	
MG 305	Nonprofit Organization Mgmt/SL	
PSC 355	Politics of Development	
PSC 461	International Political Economy	
Socio-Political Concentration		
Select three of the following courses, from at least two different departments:		9
ANTH 242	Peoples of World/South America Indians	
ANTH 245	Peoples of the World:Mediterranean	
ANTH 248	Peoples of the World: Latin America	
ANTH 330	Nationalism Ethnicity and Violence	
ANTH 351	Anthropology of Human Rights	
ANTH 459	Politics, Drugs and Society in Latin America	
HY 234	The World Since 1945	
HY 245	Introduction to Latin American History	
HY 247	Indians, Spaniards & Creoles	
HY 248	Modern Latin America	

HY 262	Introduction to Early Modern Spanish History
HY 263	History of the Russian Empire
HY 265	History of the Soviet Union 1917-1991
HY 272	Modern East Asia
HY 317	History of Ancient Greece
HY 318	History of the Roman Empire
HY 319	Late Antiquity and Early Middle Ages
HY 341	The U.S. and Latin America
HY 342	Sex & Latin American Society
HY 343	Modern Latin America
HY 372	Modern East Asia
HY 375	The Pacific War, 1931-1945
HY 419	The Second World War
HY 421	The Vietnam Wars, 1945-1975
HY 446	Nations of the Andes
HY 447	Modern Mexico
HY 453	Clash of Civilizations
HY 456	Seventeenth-Century Europe: Absolutism, Revolution and Science
HY 457	Nineteenth-Century Europe
HY 458	Modern Europe
HY 464	Modern Great Britain
HY 466	The French Revolution
HY 467	Modern France 1815 - Present
HY 468	Modern German History
HY 469	Stalin and Stalinism
HY 470	The Soviet Union Since 1953
HY 471	Russian Intellectual History
HY 472	Terror and Terrorism from French Revolution to Present
HY 475	Modern China
HY 476	Japan to the 19th Century
HY 477	Modern Japan
CJ 115	Comparative Criminal Justice Systems
PSC 102	Foundations of Comparative Politics
PSC 350	African Politics
PSC 360	International Security
PSC 362	Diplomacy
PSC 363	Nationalism in World Politics
PSC 456	Revolution and Political Violence
PSC 465	International Law
SOC 200	Forces of Change
SOC 278	Our Interconnected World

**Cultural Literacy**

Select three of the following courses, from at least two different departments: 9

AAS 385	The History of Haiti
ANTH 101	Introduction to Cultural Anthropology
ANTH 104	Introduction to Peace Studies
ANTH 319	Food and Culture
ANTH 320	Comparative Religion
ANTH 357	Anthropology of Gender
ANTH 409	Peace through Global Governance
ANTH 412	Peaceful Societies and Peace Systems
ANTH 421	Technological Monitoring of Cultural Resources, Human Rights and Conflict
ANTH 446	Explorers, Mummies and Hieroglyphs
ANTH 450	Advanced Cultural Anthropology

ANTH 483	Intern in Peace, Justice and Environmental Study
ARH 101	The Art Experience
ARH 203	Ancient and Medieval Art
ARH 204	Early Modern-Contemporary Art
ARH 206	Survey of Asian Art
EH 217	World Literature I: Before 1660
EH 218	World Literature II: 1660-Present
FLL 121	Special Topics through World Cultures
FLL 220	Foreign Literatures in English Translation
HY 218	History of the Roman Empire
HY 230	Middle East 550 BCE to 1453 CE
HY 235	War in the Modern World
HY 285	Mapping Our World
HY 314	Roman Republic
HY 330	Middle East 550 BCE to 1453 CE
HY 271/371	Traditional East Asian History and Culture
HY 357	Religion in Early Modern European History
HY 371	Traditional East Asian History and Culture
HY 370	End of the U.S.S.R.
HY 454	Topics in Middle Eastern History
HY 459	Spain and the Spanish Inquisition
HY 465	French Enlightenment
HY 478	Topics in European History
MU 366	Music in World Cultures
MU 367	Introduction to Ethnomusicology
PHL 232	Classical Political Thought
PHL 233	Modern Political Theory
PHL 239	Classical Thought of India China and the West
PSC 104	Foundations of Political Theory
PSC 341	Classical Political Thought
PSC 342	Modern Political Theory

**Electives**

Students must take six semester hours from any of the above approved list of courses AND/OR from the list below: 6

CMST 416	Issues in Global Communication
FLL 485	Foreign Language Capstone Seminar
HY 339	The Holocaust in History and Literature
HY 422	Ethnic Cleansing & Genocide 1912-2012
PUH 302	Epidemiology

Total Hours 39

**Grade and Level Requirement**

A grade of C or better is required in all International Studies courses. Students must demonstrate second-year proficiency in a foreign language. Students must ensure that at least 9 hours are (a) taken in an approved geographic concentration. or (b) follow an approved global theme. Geographic areas currently include Europe, Africa, Asia, Latin America and the Middle East. At least 15 credits must be taken at the 300 level or above, including 9 hours at 400 level. Students must fulfill an international experience. This requirement may be satisfied by one of the following: participation in a study abroad program; participation in a course with a substantial international, applied component to it; or participation in an internship with an international organization or company or an entity offering an international component.

## Additional Requirements

### General Electives

Students must take general electives to reach the 120 semester hour requirement.

## Proposed Program of Study for a Major in International Studies

### Freshman

First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
MA 110		3 Core Curriculum Area II: Foreign Language	4
PSC 103		3 Core Curriculum Area IV: History	3
Core Curriculum Area IV: History		3 Core Curriculum Area IV: Social or Behavioral Sciences	3
Core Curriculum Area II: Fine Art		3 General Elective	3
	15		16

### Sophomore

First Term	Hours	Second Term	Hours
FLL 120		3 International Studies Major Courses	6
International Studies Major Course		3 Core Curriculum Area III: Natural Science with Laboratory	4
Core Curriculum Area II: Literature		3 Core Curriculum Area II: Humanities	3
Core Curriculum Area II: Foreign Language		4 Foreign Language (200-level)	3
Core Curriculum Area III: Natural Science with Lab		4	
	17		16

### Junior

First Term	Hours	Second Term	Hours
ITS 470		3 International Studies Major Course (300-level or above)	3
International Studies Major Course		3 International Studies Major Course (400 level)	3
Foreign Language (200-level)		3 Minor	3
Minor		3 General Elective	6
General Elective		3	
	15		15

### Senior

First Term	Hours	Second Term	Hours
International Studies Major Course (300 level or above)		3 International Studies Major Course	6
International Studies Major Course (400-level)		3 General Electives	9
General Electives		9	
	15		15

Total credit hours: 124

**A minor is required for the International Studies major. All core courses must be from the approved list for Core Area I-IV. The number of minor courses and general electives may vary.**

## Minor in International Studies

Requirements	Hours
<b>Required Courses</b>	
PSC 103 Foundations of International Relations	3
FLL 120 Foreign Cultures	3
<b>International Studies Electives</b>	<b>12</b>
Select twelve hours from the following courses, at least six hours must be taken at the 300 level or above:	
AAS 385 The History of Haiti	
ANTH 101 Introduction to Cultural Anthropology	
ANTH 104 Introduction to Peace Studies	
ANTH 231 Archaeology of the Origins of Civilization in Egypt, Mesopotamia, and the Mediterranean	
ANTH 245 Peoples of the World:Mediterranean	
ANTH 248 Peoples of the World: Latin America	
ANTH 318 Economic Development and Indigenous Societies	
ANTH 319 Food and Culture	
ANTH 320 Comparative Religion	
ANTH 357 Anthropology of Gender	
ANTH 360 Ecological Anthropology	
ANTH 407 Peace Ethology	
ANTH 408 Conflict Resolution in Cross-Cultural Perspective	
ANTH 413 Peace & Environmental Sustainability	
ANTH 418 The Power of Nonviolence	
ANTH 419 Religion, Reconciliation, & Forgiveness	
ANTH 432 Villains, Victims, & Vigilantes	
ANTH 447 Advanced Peace Studies	
ANTH 450 Advanced Cultural Anthropology	
ARA 201 Intermediate Arabic I	
ARH 101 The Art Experience	
ARH 203 Ancient and Medieval Art	
ARH 204 Early Modern-Contemporary Art	
ARH 206 Survey of Asian Art	
ARH 471 Post-Partition Identity in South Asian Cinema	
ARH 478 Seminar: Buddhist Arts of East Asia	
CHI 201 Intermediate Chinese I	
CJ 115 Comparative Criminal Justice Systems	
EC 405 Economic Development and Growth	
EC 407 International Economics	
EH 217 World Literature I: Before 1660	
EH 218 World Literature II: 1660-Present	
EH 421 World Literature	
EH 422/522 African Literature	
EH 423/523 African Women's Literature	
FLL 121 Special Topics through World Cultures	
FLL 220 Foreign Literatures in English Translation	
FLL 485 Foreign Language Capstone Seminar	
FR 201 Intermediate French I	
GN 201 Intermediate German I	
HY 234 The World Since 1945	
HY 239 The Holocaust in History and Literature	
HY 245 Introduction to Latin American History	
HY 247 Indians, Spaniards & Creoles	
HY 248 Modern Latin America	
HY 251 Nineteenth-Century Europe	
HY 252 Twentieth Century Europe	

HY 262	Introduction to Early Modern Spanish History
HY 263	History of the Russian Empire
HY 264	Russian Revolution: 1917-1921
HY 265	History of the Soviet Union 1917-1991
HY 271	Traditional East Asian History and Culture
HY 272	Modern East Asia
HY 285	Mapping Our World
HY 317	History of Ancient Greece
HY 318	History of the Roman Empire
HY 319	Late Antiquity and Early Middle Ages
HY 341	The U.S. and Latin America
HY 342	Sex & Latin American Society
HY 343	Modern Latin America
HY 353	The Christians in History
HY 355	The Reformation
HY 357	Religion in Early Modern European History
HY 370	End of the U.S.S.R.
HY 371	Traditional East Asian History and Culture
HY 375	The Pacific War, 1931-1945
HY 419	The Second World War
HY 421	The Vietnam Wars, 1945-1975
HY 422	Ethnic Cleansing & Genocide 1912-2012
HY 446	Nations of the Andes
HY 447	Modern Mexico
HY 453	Clash of Civilizations
HY 454	Topics in Middle Eastern History
HY 455	Renaissance and Reformation
HY 456	Seventeenth-Century Europe: Absolutism, Revolution and Science
HY 457	Nineteenth-Century Europe
HY 458	Modern Europe
HY 459	Spain and the Spanish Inquisition
HY 461	English History: 1307-1660
HY 463	Victorian Britain
HY 464	Modern Great Britain
HY 465	French Enlightenment
HY 466	The French Revolution
HY 467	Modern France 1815 - Present
HY 468	Modern German History
HY 469	Stalin and Stalinism
HY 470	The Soviet Union Since 1953
HY 471	Russian Intellectual History
HY 472	Terror and Terrorism from French Revolution to Present
HY 475	Modern China
HY 476	Japan to the 19th Century
HY 477	Modern Japan
ITL 201	Intermediate Italian I
ITS 482	Internship in International Affairs
JPA 201	Intermediate Japanese I
MU 366	Music in World Cultures
MU 367	Introduction to Ethnomusicology
PHL 239	Classical Thought of India China and the West
PSC 102	Foundations of Comparative Politics
PSC 104	Foundations of Political Theory
PSC 266/466	The United Nations
PSC 341	Classical Political Thought

PSC 342	Modern Political Theory
PSC 350	African Politics
PSC 355	Politics of Development
PSC 360	International Security
PSC 362	Diplomacy
PSC 363	Nationalism in World Politics
PSC 461	International Political Economy
PSC 465	International Law
PUH 201	Introduction to Public Health
PUH 202	Introduction to Global Health
PUH 302	Epidemiology
PY 319	Psychopathology and Culture
SOC 200	Forces of Change
SOC 278	Our Interconnected World
SOC 335	Human Sexuality: A Comparative Approach
SOC 370	Population Problems
SOC 480	Sociology of Health and Illness
SPA 201	Intermediate Spanish I

Total Hours

18

## Grade & Residency Requirement

A C or better is required in all International Studies courses applied to the minor. At least half of the minor must be completed at UAB or through BACHE.

## Honors Program in International Studies Purpose

The ITS Honors Program is designed for qualified, self-motivated international studies majors. Through special course distribution and credit hours requirements, as well as a directed honors thesis, students are prepared for in-depth ITS research and related graduate or professional opportunities.

## Eligibility

Students must meet the following eligibility criteria:

1. 3.0 cumulative GPA at UAB, 3.3 GPA in ITS (and maintenance of these minima).
2. Junior standing.
3. Declaration of ITS as student's major.
4. Letter of Intent to the Director. The Director approves admission into the program in consultation with the ITS faculty.

## Requirements

Students are required to successfully complete the following:

1. Completion of ITS 470 or ITS 471 Seminar in International Studies (3 credits).
2. Enrollment in ITS 497 Honors Research in International Studies (3 credits) after completion of the Seminar.
3. Following completion of ITS 497, preparation of an advanced research project which will lead to the development of a substantial research paper and, in some cases, a senior thesis under faculty supervision (all faculty affiliated with ITS are eligible to supervise the paper).

- 4. Defense of paper/thesis in colloquium, composed of ITS faculty and other ITS 497 students
- 5. Participation in SIR, the international studies honor society.

Benefits

Honors students will benefit from one-on-one mentoring with faculty in the program, which will lead to a more thorough understanding of the field and practice of international studies. This is particularly useful as students choose career goals, such as graduate school, international public service, the U.S. Foreign Service, or other opportunities. Additionally, students who complete the program will receive a certificate at the annual UAB Honors Convocation and will graduate "With Honors in International Studies."

Contact

For more information and/or admission to the International Studies Honors Program, contact the ITS Director, 560 Heritage Hall, UAB, Birmingham, AL 35294-1152; Telephone (205) 934-5643.

Courses

- ITS 101. Introduction to International Studies. 3 Hours.**  
A survey of the problems and practice of global cooperation and conflict. Particular attention is paid to issues of global power, wealth and social justice. This course meets the Core Curriculum requirements for Area IV: Social and Behavioral Sciences.
- ITS 110. Directed Readings in International Studies. 1-3 Hour.**  
Critique of current popular works in International Studies. Prerequisite: permission of ITS director.
- ITS 223. International Study Abroad. 3 Hours.**  
Independent study done in International setting in conjunction with non-UAB academic program. Prerequisite: permission of ITS Director.
- ITS 229. International Study Abroad. 3 Hours.**  
Current events in international setting. Part of program supported by UAB Education Abroad. Permission of ITS director and UAB Education Abroad director.
- ITS 250. Special Topics. 3 Hours.**  
Topics in world geography and international issues. Prerequisite: permission of ITS director.
- ITS 299. Problems in International Studies. 1-3 Hour.**  
Study of international relation and world culture subjects.
- ITS 470. Seminar in International Studies. 3 Hours.**  
International Studies exit seminar that draws together program themes and summarizes main threads of current global issues. Prerequisite: permission of ITS director.
- ITS 471. Seminar in International Studies. 3 Hours.**  
Analyzing and writing in depth about the ethics and rationale for using and abusing the film medium to relate to, undermine, or support political authority. Writing, Ethics and Civic Responsibility are significant components of this course.
- ITS 480. Advanced Problems in International Studies. 1-3 Hour.**  
Independent study. Prerequisite: permission of ITS director.
- ITS 482. Internship in International Affairs. 1-3 Hour.**  
Individually arranged assignments in international companies or organizations, monitored and evaluated by the director of international studies. Prerequisite: permission of ITS director.

- ITS 497. Honors Research in International Studies. 3 Hours.**  
Directed research by international studies honors students under faculty supervision. Prerequisite: open only to International Studies Honors students by permission of ITS director.
- ITS 499. Advanced Seminar in International Studies. 3 Hours.**  
Special-topic seminar treating major current event or international problem.

Media Studies  
Interdisciplinary Minor

Director: Michele Forman (Department of History)

The Media Studies minor is an interdisciplinary program for students interested in learning the theory and production practices of new media technology. The minor provides students a solid grounding in the history, theory and practice of documentary film, film history, oral history, ethnography, community studies, and media theory. Students will gain experience in community-based research, as well as attain proficiency in various new media technologies.

The courses are taught by members of the UAB Arts and Sciences faculty, offering students instruction in digital video cinematography, field audio recording, computer-based editing, applied research techniques, and professional presentation methods. The minor in Media Studies emphasizes experiential learning and offers students opportunities for hands-on participation in local communities through service learning and internships with non-profit organizations, businesses, and educational and governmental institutions.

Requirements

The Media Studies minor will require 18 semester hours, including three courses in the core for the minor (9 hours), six hours of additional advanced media studies coursework (either 2 courses or one 6 hour-course), and one elective (3 hours). The elective will be drawn from a number of relevant courses already existing in the curriculum of the College of Arts and Sciences involving technology, media, and/or community studies. No grade below C will be counted as credit for the minor.

Minor in Media Studies

Requirements		Hours
Media Studies Core - Select three courses or 9 hours from this list		9
DCS 101	Media and Society	
DCS 150	Introduction to Film and History	
DCS 201	History of Documentary Film	
DCS 391	Digital Storytelling	
DCS 401	Ethnographic Filmmaking/SL	
DCS 460	Independent Media Studies	
DCS 470	Internship in Media Studies	
Media and Film-related Courses - Select 9 hours from this list <sup>1</sup>		9

<sup>1</sup> Select from: AAS 311, AAS 335, ARS 103, ARS 104, ARS 110, ARS 260, ARS 280, ARS 360, ARS 361, ARS 362, ARS 460, CMST 283, CMST 383, CMST 483, DCS 101, DCS 150, DCS 201, DCS 208, DCS 309, DCS 391, DCS 401, DCS 450, DCS 455, DCS 460, DCS 470, DCS 471, DCS 490, DCS 499, EH 210, EH 309, EH 431, FLL 303, FLL 304, HY 206, HY 208, HY 305, HY 307, HY 309, HY 310, HY 311, HY 431, HY 498, MU 115, MU 245, MU 441, PSC 270, PSC 370, SOC 316, THR 102, THR 200, THR 216, THR 316

## Courses

### **DCS 101. Media and Society. 3 Hours.**

This course offers an introduction to the study of the media industries and their impact on society. Aimed at consumers of media of any form, this course examines the technology, aesthetics, and rhetoric of the media through history and encourages a critical analysis about media's influence on our understanding of social reality.

### **DCS 150. Introduction to Film and History. 3 Hours.**

This course will examine fiction and non-fiction films as socially significant documents. Students will receive an introduction to the techniques of film analysis in the class.

### **DCS 201. History of Documentary Film. 3 Hours.**

This course will provide a history of the documentary tradition by studying the major stylistic movements, works, and filmmakers of non-fiction film and photography in the 20th century.

### **DCS 208. Women in Film. 3 Hours.**

This course will provide a history of women in film, focusing on both women working in the film industry and the representation of women on screen. The course will focus on American film history, 1930's Hollywood to the present.

### **DCS 250. Community and Service. 3-6 Hours.**

This service-learning course provides students the opportunity to explore social and community issues by volunteering with a local agency, non-profit or community group. Students will use multimedia to highlight their community partner, document their experience and share their interests. Methods such as participant observation and ethnographic field approaches will provide the framework for student exploration.

### **DCS 266. New Urbanism. 3 Hours.**

This course investigates the community development model of New Urbanism which promotes the values of walkability, diversity and connectivity for healthy living and neighborhood sustainability. Students will explore local communities, connecting New Urbanist design principles to community values and social interaction.

### **DCS 291. Community Ethnography and Public History. 3 Hours.**

This experiential course addresses how to investigate and represent local community history and stories through the methodologies of service learning, participant observation, ethnographic research and oral history. This class addresses the concepts of human memory, nostalgia, folklore, storytelling and public history. Students will learn how to use new media technologies, such as digital video, podcasting and website production, as a way to represent community history and culture for the public.

### **DCS 309. American Independent Film. 3 Hours.**

This course will provide a history of the American Independent filmmaking tradition by studying the major stylistic movements, works, and filmmakers of the 1970s-the present.

### **DCS 390. Life, Liberty, and the Pursuit of Happiness: Representing American Identity on Film. 3 Hours.**

An interdisciplinary course in which students investigate the formation and representation of early American identity and produce their own films representing contemporary American identity.

### **DCS 391. Digital Storytelling. 3 Hours.**

In this non-fiction video production course, students will learn how to use new media technologies, such as digital video, digital audio, music, graphics, and still photography, as a way to represent community history, personal narratives, and local culture for the public.

### **DCS 401. Ethnographic Filmmaking/SL. 6 Hours.**

This course is an interdisciplinary course in which students pair up to produce a short documentary film which represents a community in the Birmingham area. The course contains four key elements: 1) community outreach, 2) intro to social science theory and methods, 3) film theory and the aesthetics of filmmaking, and 4) technical aspects of camera work and digital video editing. This is a designated service-learning course integrating academic learning, civic learning and meaningful service to the community. Preq: Permission of the instructor.

**Prerequisites:** DCS 101 [Min Grade: C] and DCS 201 [Min Grade: C]

### **DCS 450. Media and Public Service. 3 Hours.**

This course offers students hands-on experience creating and analyzing media pieces about community issues, including documentary films, public service announcements, translation of academic research to lay audiences, and multimedia grant proposals and reports. Emphasis will be on communicating effectively in the non-profit sector. This course is a designated capstone experience. Permission of Instructor.

**Prerequisites:** DCS 401 [Min Grade: C]

### **DCS 455. Professional Producing. 3 Hours.**

This course offers students the practical application of producing skills and techniques to prepare them for professional work in the media and film industry. The course includes project development, budgeting, grant and pitch preparation, professional reel and website development. Emphasis is on non-fiction media.

**Prerequisites:** DCS 401 [Min Grade: C]

### **DCS 460. Independent Media Studies. 3-6 Hours.**

This course will provide an opportunity for advanced students to pursue individual projects in multimedia studies. Prerequisites: Permission of the Instructor.

**Prerequisites:** DCS 401 [Min Grade: C]

### **DCS 470. Internship in Media Studies. 3-6 Hours.**

Internships will provide students with the opportunity for hands-on experience with digital technology in workplace setting. This course is a designated capstone experience. Permission of the Instructor.

**Prerequisites:** DCS 401 [Min Grade: C]

### **DCS 471. Internship in Media Studies Production. 3 Hours.**

This internship course will provide students with the opportunity for hands-on experience with digital technology working with UAB and its community partners. This course is a designated capstone experience. Permission of the Instructor is required.

**Prerequisites:** DCS 401 [Min Grade: C]

### **DCS 490. Special Topics in Media. 3 Hours.**

Study of thematic topics throughout media studies. This course is a designated capstone experience.

### **DCS 499. Special Topics in Media Studies. 3 Hours.**

Study of thematic topics throughout media studies.

## Natural Science

### Interdisciplinary Major

The purpose of the Natural Science degree is to enable students to receive a general science education based on a course of study which is broader, but less in-depth in a single area, than a typical science major in the College of Arts and Sciences.

Requirements are successful completion of 30 semester hours approved and offered by one science department (designated the major) and 27 semester hours approved and offered by a second science department (designated the minor). The five science departments are found within the College of Arts and Sciences and include Biology, Chemistry, Computer Science, Mathematics, and Physics. At least 9 semester hours of the major must be at the 400 level or above. The major requires a Capstone experience.

Because departments within the college offer a variety of courses for diverse purposes, not every course listed in this catalog can be counted toward the natural science degree. Students must obtain approval of a plan of study leading toward this degree from the department chair of both the major and minor departments. It is advisable to do this as soon as possible to avoid taking courses that might not be approved toward the degree.

In addition to the number of hours, there is a requirement of at least a C average in courses counted toward the major and also in courses counted toward the minor. At least one-third of the hours in both the major and minor must be completed at UAB, and at least a C average must be maintained in these courses. Individual departments may be contacted for specific listings of courses required or recommended for the major or minor in that department for the natural science degree, or for information about particularly effective major/minor pairings.

Students interested in pursuing a major in Natural Science should email Dr. Catherine Danielou, Senior Associate Dean for Undergraduate Academic Affairs in the College of Arts and Sciences, and will be referred to an appropriate academic adviser ([danielou@uab.edu](mailto:danielou@uab.edu)), or call (205) 934-5643.

## Neuroscience

Neuroscience is an ideal major for motivated students who want to pursue careers in medicine, research, and other health related disciplines. The curriculum for a BS degree in Neuroscience combines coursework in biology, chemistry, math, physics, psychology, and neurobiology to provide students an interdisciplinary understanding of the body's most complex organ system.

The UAB Undergraduate Neuroscience Program (UNP) is an interdisciplinary major between the Department of Neurobiology in the Heersink School of Medicine and the Department of Psychology in the College of Arts and Sciences. Neuroscience is the study of the development, structure, and function of the nervous system, with a special focus on the brain and its role in behavior and cognitive functions. Neuroscience also seeks to understand the molecular basis of nervous system disorders and diseases. Multidisciplinary in nature, the field of Neuroscience spans the anatomy, evolution, development, genetics, biochemistry, cell biology, physiology, electrophysiology, pharmacology, circuitry, and pathology of the nervous system. Therefore, neuroscience integrates biology, chemistry, physics, mathematics, psychology, and

computer science. It is one of the most rapidly advancing fields in biomedical research.

The goals of the UNP are to prepare and advance UAB undergraduates to careers in research and health-related sciences in highly competitive programs and to enable UAB graduates to become accomplished research scientists, clinicians and health-care professionals who will be ideally equipped for future study of the nervous system and treatment and discovery of cures for neurological, psychiatric and neurodevelopmental disorders and injury.

The UNP and its Training Faculty accomplish these goals by four complementary mechanisms. First, students are provided with a solid academic and intellectual foundation through coursework in biology, chemistry, mathematics, physics, psychology and neuroscience. Second, students conduct original hands-on laboratory research under the direction of faculty mentors to learn the state-of-the-art experimental approaches and methods in Neuroscience research. Third, students are mentored in the development of skills in scientific method, experimental analysis, and effective oral and written communication. Students are expected to become active "colleagues" in faculty laboratories, which should result in publications in scientific journals and presentations at professional meetings. Fourth, students are provided with one-on-one academic and career counseling to identify professional programs most suited to their interests, and strategies to be competitive applicants to these programs.

Students earning the B.S. in Neuroscience at UAB are ideally suited for admission into the nation's most prestigious graduate programs, medical and professional schools.

### Admissions

The UNP is designed for graduating high school seniors and college freshmen or sophomores with a strong academic record and the motivation to pursue a career in biomedical science. Please note carefully the following items.

High school students with an ACT score of 28 or higher and a GPA of 3.5 or higher (the UAB Honors College admissions criteria) are eligible for immediate acceptance into the Neuroscience major. Others may choose to attend UAB before applying in the freshman or sophomore year. Current UAB students whose high school credentials meet the minimum requirements and/or whose academic performance in freshman science courses is excellent may apply at any time. Please contact Dr. Cristin Gavin ([cfgavin@uab.edu](mailto:cfgavin@uab.edu)) or Dr. Robert Sorge ([rsorge@uab.edu](mailto:rsorge@uab.edu)), if you would like to be considered for admission to the Program. Program Leadership is available to meet with high school students and their parents, or with current UAB students, to discuss the Program.

### Advising and Information

Program Leadership:

Dr. Cristin Gavin  
Co-Director, Undergraduate Neuroscience Program  
Assistant Professor of Neurobiology, School of Medicine  
(205) 934-6433  
[cfgavin@uab.edu](mailto:cfgavin@uab.edu)

Dr. Robert Sorge  
Co-Director, Undergraduate Neuroscience Program  
Associate Professor of Psychology  
(205) 934-8563

rsorge@uab.edu (rkana@uab.edu)

Academic Advising:

Whitney Woodard  
Heritage Hall Building 402  
(205) 934-6135  
wmwoodard@uab.edu

## Major Requirements for Neuroscience

Requirements	Hours
<b>Biology</b>	
BY 123 Introductory Biology I	4
BY 124 Introductory Biology II	4
<b>Chemistry</b>	
CH 115 General Chemistry I	4
& CH 116 and General Chemistry I Laboratory	
CH 117 General Chemistry II	4
& CH 118 and General Chemistry II Laboratory	
CH 235 Organic Chemistry I	4
& CH 236 and Organic Chemistry I Laboratory	
CH 237 Organic Chemistry II	4
& CH 238 and Organic Chemistry II Laboratory	
CH 460 Fundamentals of Biochemistry	3
<b>Psychology and Neurobiology</b>	
NBL 230 Brain Science: Biology, Disorders, and Clinical Therapies (Part I of III)	3
or PY 253 Brain, Mind and Behavior	
PY 101/201 Introduction to Psychology	3
NBL 355 Synapses, Neurons and Brains (Part II of III)	3
NBL 356 Mechanisms of Sensation, Movement & Cognition (Part III of III)	3
<b>Neuroscience Colloquium</b>	
401 should be taken fall of sophomore year, and 402 should be taken spring of junior year.	2
NBL 401 Colloquium in Basic, Cognitive and Clinical Neuroscience	
NBL 402 Colloquium in Basic, Cognitive and Clinical Neuroscience	
<b>Advanced Neuroscience Courses</b>	
Select any three courses from the following	9
NBL 410 Molecular Biology of the Neuron	
NBL 420 No Self Control: Motivation, Reward and Addiction	
NBL 423 Functional MRI (The title of this course should be updated to "Functional MRI")	
NBL 425 Methods in Human Neuroimaging	
NBL 427 Anatomical Journey thru the Brain	
NBL 430 How to Build a Brain	
PY 431 The Dynamics of Pain	
NBL 433 Diseases of the Nervous System	
NBL 434 Mechanisms of Memory	
PY 435 Motivation and Emotion	
PY 453 Advanced Behavioral Neuroscience	
PY 463 Cognitive Neuroscience	
or PY 464 Honors Cognitive Neuroscience	
PY 468 Cognitive Neuroimaging	
PY 472 Social Psychophysiology	
VIS 456 Visual Neuroscience	
<b>Physics</b>	

Select one group PH 201 & 202 or PH 221 & 222	8
PH 201 & 201L College Physics I and College Physics Laboratory I	
PH 202 College Physics II	
PH 221 & 221L General Physics I and General Physics Laboratory I	
PH 222 & 222L General Physics II and General Physics Laboratory II	
<b>General</b>	
MA 125 Calculus I	4
PHL 116 Bioethics	3
<b>Statistics</b>	
Select one of the following: <sup>1</sup>	3-4
PUH 250 Biostatistics	
PY 216 & 216L Elementary Statistical Methods and Elementary Statistical Methods Laboratory	
MA 180 Introduction to Statistics	
<b>Research</b>	
Students may choose to complete a laboratory- or literature-based research thesis.	6 total
For the research-based thesis students complete:	
NBL 398 Research Practicum in Neurobiology <sup>2</sup>	
or PY 398 Research Practicum in Psychology	
For the literature-based thesis students complete:	
NBL 390 Neurobiology Research Laboratory <sup>3</sup>	
or NBL 398 Research Practicum in Neurobiology	
NBL 399 Senior Seminar in Neuroscience	
Total Hours	74-69

- <sup>1</sup> Medical school requires 6 hours of college math. AP Calculus can be substituted for 3 credit hours, but pre-medical students must take another math course at UAB. MA 180 or PUH 250 both satisfy the requirement; therefore, students planning to attend medical school should take one of those two courses as opposed to other options.
- <sup>2</sup> Research credit hours (NBL/PY 398) are distributed across multiple semesters. Students should register for NBL 398 if their research mentor resides in the School of Medicine, Dentistry, or Optometry, and PY 398 if their mentor resides in the College of Arts and Sciences. PSDO 200 is a prerequisite to register for NBL 398. NBL 398 and PY 398 credit can be applied toward completion of the Science and Technology Honors Program.
- <sup>3</sup> 3 credit hours of PY 398 can also be applied toward a literature-based thesis.

Neuroscience majors in the laboratory-based research track should be working under the direction of a faculty mentor no later than the first semester of their junior year. However, students may identify a mentor and begin conducting research following completion of PSDO 200 in their freshman year.

### Recommended but not Required:

NBL 240 Introduction to Neuroscience Methods (3 credit hours)

NBL 327 100 Things You've Always Wanted to Know About the Brain (3 credit hours)

NBL 245 The Neurobiology of Learning and Memory (3 credit hours)

BY 330 Cell Biology (3 credit hours)

BY 210 Genetics (3 credit hours)

PY 236 Introduction to Research with Animal Models (3 credit hours)

PY 340 Behavioral MCAT Preparation (3 credit hours)

PY 372 Social Psychology (3 credit hours)

PY 380 The Sensory and Perceptual Brain (3 credit hours)

PY 390 Animal Behavior (3 credit hours)

PY 470 Introduction to Neurobiology (3 credit hours)

Premedical students should take SOC 100.

**Academic Performance Requirement:** Neuroscience majors must maintain an overall GPA of 3.0 to remain in the program. Any students falling below the academic requirement will be given 2 semesters to raise their GPA and a subsequent semester of academic probation with the program.

## Laboratory-Based Research Options

### Freshman

First Term	Hours	Second Term	Hours
MA 125		4 PY 101 or 201	3
CH 115 & CH 116		4 BY 123	4
PHL 116		3 CH 117 & CH 118	4
PSDO 200		1 NBL 401 <sup>2</sup>	1
HC 117 (or other honors seminar or FYE equivalent)		3 EH 102	3
EH 101 <sup>1</sup>		3	
	18		15

### Sophomore

First Term	Hours	Second Term	Hours
CH 235 & CH 236		4 CH 237 & CH 238	4
BY 124 <sup>3</sup>		4 NBL 355	3
PY 253 or NBL 230		3 PUH 250 or MA 180	3
Core Area II Fine Arts		3 NBL 398 or PY 398 (Begin mentored research) <sup>4</sup>	2
	14		12

### Junior

First Term	Hours	Second Term	Hours
CH 460		3 PH 202 or 222	4
NBL 356		3 Upper level elective	3
PH 201 or 221		4 NBL 401	1
NBL 398 or PY 398		2 Core Area IV Social/Behavioral Science	3
General Elective/Minor		3 NBL 398 or PY 398	2
		General Elective/Minor	3
	15		16

### Senior

First Term	Hours	Second Term	Hours
Upper level elective		3 Upper level elective	3
Core Area II Literature		3 Final History/Lit Series	3
Core Area IV History		3 Area II/Area IV Core	3
General Elective/Minor		3 General Elective/Minor	3
General Elective/Minor		3 General Elective/Minor	3

NBL 499 0

15 15

Total credit hours: 120

<sup>1</sup> Often use AP credit for EH 101, can take EH 102 instead<sup>2</sup> First colloquium is taken spring of freshman year, advanced colloquium is taken spring of junior year<sup>3</sup> Sometimes taken summer after freshman year<sup>4</sup> A total of 6 credit hours of NBL 398 or PY 398 can be distributed across multiple semesters.

## Literature-Based Research Option

### Freshman

First Term	Hours	Second Term	Hours
MA 125		4 PY 101 or 201	3
CH 115 & CH 116		4 BY 123	4
EH 101 <sup>1</sup>		3 CH 117 & CH 118	4
HC 117 (or other honors seminar or FYE equivalent)		3 EH 102	3
PSDO 200		1 NBL 401 <sup>2</sup>	1
PHL 116		3	
	18		15

### Sophomore

First Term	Hours	Second Term	Hours
CH 235 & CH 236		4 CH 237 & CH 238	4
BY 124 <sup>3</sup>		4 NBL 355	3
PY 253 or NBL 230		3 PUH 250 or MA 180	3
Core Area II Fine Arts		3 Core Area IV History	3
	14		13

### Junior

First Term	Hours	Second Term	Hours
CH 460		3 PH 202 or 222	4
NBL 356		3 NBL 390 or 240 <sup>4</sup>	3
PH 201 or 221		4 NBL 401	1
Core Area II Literature		3 Upper level elective	3
General Elective/Minor		3 Core Area IV Social/Behavioral Science	3
		General Elective/Minor	3
	16		17

### Senior

First Term	Hours	Second Term	Hours
NBL 399		3 Upper level elective	3
Upper level elective		3 Area II/Area IV Core	3
Final History/Lit Series		3 General Elective/Minor	3
General Elective/Minor		3 General Elective/Minor	3
General Elective/Minor		General Elective/Minor	3
NBL 499		0	
	12		15

Total credit hours: 120

<sup>1</sup> Often use AP credit for EH 101, can take EH 102 instead<sup>2</sup> First colloquium is taken spring of freshman year, advanced colloquium is taken spring of junior year<sup>3</sup> Sometimes taken summer after freshman year

- <sup>4</sup> NBL 240/NBL 390 can be taken any semester after a student completes PSDO 200. Three credit hours of NBL 398 or PY 398 can satisfy the requirement for NBL 240/390.

## Minor Requirements for Neuroscience

Requirements	Hours
PY 253 Brain, Mind and Behavior	3
or NBL 230 Brain Science: Biology, Disorders, and Clinical Therapies	
NBL 355 Synapses, Neurons and Brains	3
NBL 356 Mechanisms of Sensation, Movement & Cognition	3
or PY 353 Behavioral Neuroscience	
<b>Required: 3 electives at the 200 level or above with one elective at the 400 level or above</b>	<b>9</b>
NBL 210 Scientific Reasoning and Medical Research Design	
NBL 225 No Self Control: Motivation, Reward and Addiction	
NBL 240 Introduction to Neuroscience Methods	
NBL 245 The Neurobiology of Learning and Memory	
NBL 324 Anatomical Journey thru the Brain	
NBL 327 100 Things You've Always Wanted to Know About the Brain	
NBL 410 Molecular Biology of the Neuron	
NBL 420 No Self Control: Motivation, Reward and Addiction	
NBL 425 Methods in Human Neuroimaging	
NBL 427 Anatomical Journey thru the Brain	
NBL 430 How to Build a Brain	
NBL 433 Diseases of the Nervous System	
NBL 434 Mechanisms of Memory	
NBL 440 Memento Mori: neurodegeneration from cradle to coffin and bench to bedside	
PY 201 Honors Introduction to Psychology	
PY 340 Behavioral MCAT Preparation	
PY 354 Autism: Brain and Cognition	
PY 363 Cognitive Psychology	
PY 380 The Sensory and Perceptual Brain	
PY 390 Animal Behavior	
PY 405 Biofeedback, Meditation, and Self-Regulation	
PY 420 Special Topics in Psychology	
PY 431 The Dynamics of Pain	
PY 435 Motivation and Emotion	
PY 453 Advanced Behavioral Neuroscience	
PY 455 Psychology of Eating Disorders and Obesity	
PY 463 Cognitive Neuroscience	
PY 468 Cognitive Neuroimaging	
VIS 429 Intro to Neurobiology	
VIS 456 Visual Neuroscience	
Total Hours	18

## Courses

### NBL 120. Basic Neuroscience. 3 Hours.

### NBL 121. Basic Neuroscience. 3 Hours.

### NBL 150. The Brain: A User's Guide. 4 Hours.

Neuroscience is one of the fastest growing disciplines in all of science. Using tools and perspectives adopted from across many scientific realms, neuroscience researchers have now learned more about the brain in the last two decades than in all of human history combined. Like never before, neuroscience is providing us with information pertinent to our everyday lives and in the process become a part of contemporary culture. In this lecture and integrated lab course, we will explore a range of neuroscience-related topics, including but not limited to creativity, consciousness, perception, love and emotion, brain health, motivation, stress, personality, and the differences between the male and female brain. There will be no required text for the course, and participants need no scientific background to participate.

### NBL 210. Scientific Reasoning and Medical Research Design. 3 Hours.

The goal of this course is to teach biomedical research design basics and critical thinking skills in the context of neuroscience research. This knowledge should be helpful for understanding and conducting scientific research, as well as for the updated sections of the 2015 MCAT test for medical school admission.

### NBL 220. Special Topics Neuroscience 1. 1 Hour.

This course covers different topics that have to do with Neurobiology.

### NBL 222. Special Topics Neuroscience 2. 2 Hours.

This course covers different topics that have to do with Neurobiology.

### NBL 225. No Self Control: Motivation, Reward and Addiction. 3 Hours.

Survival of self and species has been evolutionarily wired into the brain. Largely, involving sub-cortical networks, animals are strongly rewarded by beneficial outcomes and driven away from aversive situations. Overseeing these opposing subconscious determinants of motivated behavior is a pre-frontal cortical command center, which along with additional systems that provide for experiential memory and emotional significance, guide the choices we make. This course will provide the participant with an introduction to the neuronal pathways that underlie normal decision making, with a major focus on how this circuitry becomes compromised during addiction. These topics should be relevant to students interested in biomedicine, health professions or counseling.

### NBL 230. Brain Science: Biology, Disorders, and Clinical Therapies. 3 Hours.

This course is an introduction to the mammalian nervous system, intended to give a strong foundation or understanding of the human brain. Topics include the composition and function of neurons and glia, sensory systems and perception, movement, basic learning and memory, and select diseases of the brain. Students also explore the principles of experimental design and apply those to contemporary neuroscience techniques. PY 101 (or equivalent) and BY 123 strongly recommended.

### NBL 240. Introduction to Neuroscience Methods. 3 Hours.

This course is designed to develop practical, experience-based laboratory skills in undergraduate student researchers with minimal prior laboratory exposure. Students will be exposed to a variety of techniques ranging from cellular and molecular to vertebrate animal applications. Any student that completes this course should have the rudimentary skills (and confidence!) to begin supervised research in primary laboratories around campus. No background in Neuroscience required.

**NBL 245. The Neurobiology of Learning and Memory. 3 Hours.**

This course focuses on the biological mechanisms involved in the processes of learning and memory in the nervous system. We will examine these mechanisms at the molecular, cellular and systems levels of the brain. Topics range from memory-associated molecules and synaptic plasticity to animal models and human behavior. In addition, students will be introduced to the many behavioral paradigms and molecular genetic techniques used by neuroscientists to study learning and memory in the brain.

**NBL 298. Special Topics Neuroscience 4. 1 Hour.**

This course covers different topics that have to do with Neurobiology.

**NBL 310. Evolution of the Vertebrate Brain. 3 Hours.****NBL 311. From Wet Brains to Artificial Stupidity. 1-3 Hour.****NBL 323. Special Topics Neurobiology 1. 1 Hour.**

This course covers different topics that have to do with Neurobiology.

**NBL 324. Anatomical Journey thru the Brain. 3 Hours.**

Have you every wanted to know where the amygdala sits in the brain, or how the brainstem connects to the thalamus and basal ganglia? Would you like to know about processing in the spinal cord, and how this information is sent to and from the cortex? This course will show you how to find any structure in the nervous system, and how these regions interact to control body movements, give rise to sensory perception, generate emotions and experiences, make decisions, and create personality. Each week will use interactive didactic sessions, anatomical drawing exercises, real brain lab experiences, radiographic imaging, and small group medical case discussions, to break down the brain into manageable components, to see how its outer coverings, blood supply, gray and white matter are structurally and functionally organized to make you who you are. This course may be beneficial for students considering careers in the medical, dental or optometry fields, along with those wanting to pursue graduate research in neuroscience. Students without a general neuroscience background may consider taking NBL 230 or PY 253 (recommended but not required).

**NBL 325. Special Topics Neurobiology 3. 2 Hours.**

This course covers different topics that have to do with Neurobiology.

**NBL 327. 100 Things You've Always Wanted to Know About the Brain. 3 Hours.**

This course examines intriguing questions in neuroscience as they are presented to the layperson through TED Talks, video presentations, podcasts, Scientific American articles, and newspaper/magazine science op-eds. The aim is to expose students to a wide range of topics about the brain, some fundamental, some controversial, in ways they may not have thought about before; challenging them to discuss the evidence for and against various theories of brain function. There will be no memorization of information, only the willingness to read, post and discuss scientific opinions on articles/videos. Non majors are encouraged!.

**NBL 355. Synapses, Neurons and Brains. 3 Hours.**

Introduction to the cellular and molecular biology, biochemistry, biophysics, genetics and function of the mammalian nervous system. This course will emphasize the development, anatomy, cellular and molecular biology and biochemistry of neurons and glial cells, and introduce electrical, biophysical and chemical signaling within and across neurons.

**Prerequisites:** BY 123 [Min Grade: C] and (CH 117 [Min Grade: C] or CH 127 [Min Grade: C]) and (NBL 230 [Min Grade: C] or PY 253 [Min Grade: C])

**NBL 356. Mechanisms of Sensation, Movement & Cognition. 3 Hours.**

Introduction to the cellular and molecular biology, biochemistry, biophysics, genetics and function of the mammalian nervous system. This course will emphasize mechanisms of synaptic transmission, sensory systems, neuropharmacology, and synaptic plasticity; and introduce the molecular basis of diseases and disorders of the central and peripheral nervous systems.

**Prerequisites:** PY 355 [Min Grade: C] or NBL 355 [Min Grade: C]

**NBL 390. Neurobiology Research Laboratory. 3 Hours.**

Hands-on instruction will be provided in contemporary methods used in neurobiology research. These will include molecular cloning, DNA sequencing, cell transformation and culture, western blotting, immunohistochemistry and electrophysiology.

**NBL 396. Teaching Practicum in Neurobiology. 1 Hour.**

Teaching experience in neurobiology courses, supervised by a faculty member. Student must have previously taken the course for which the student will work within.

**NBL 397. Community-Based Practicum in Neurobiology. 1-6 Hour.**

Community work in various supervised settings related to practical applications of neuroscience (for example, non-profits, educational settings, and other outreach) are significant components of this course.

**NBL 398. Research Practicum in Neurobiology. 0-6 Hours.**

Project or research activity supervised by faculty. Cannot be taken Pass/Fail.

**Prerequisites:** PSDO 200 [Min Grade: C]

**NBL 399. Senior Seminar in Neuroscience. 3 Hours.**

All (Thesis Track) Neuroscience majors will participate in the Senior Seminar, which is a capstone experience in their study of Neuroscience. The seminar will meet weekly for in-depth discussions of current topics in neuroscience. Over the course of the semester, students will independently develop and complete a capstone research paper on a topic of their choosing while working closely with a supervising faculty member. The research report serves as a culminating academic and intellectual experience that works to develop critical thinking, research skills, and both written and oral communication. Students will present their papers at the completion of the course. (Fall and Spring availability).

**NBL 400. Special Topics in Neurobiology 1. 3 Hours.**

This course covers different topics that have to do with Neurobiology.

**NBL 401. Colloquium in Basic, Cognitive and Clinical Neuroscience. 1 Hour.**

The Colloquium in Basic, Cognitive and Clinical Neuroscience is a faculty seminar. The Colloquium will expose students to cutting edge research programs and technologies from approximately 25 faculty each year who serve as mentors for the Undergraduate Neuroscience Major and Graduate Neuroscience Program. Faculty will also discuss strategies for development of careers in medicine and research. Students will prepare by reading an assigned research article authored by the speaker and be prepared for a group discussion. Class meets for one and a half hours a week.

**NBL 402. Colloquium in Basic, Cognitive and Clinical Neuroscience. 1 Hour.**

This class serves as an introduction to professional expectations and practices related to careers in the biomedical field. Students will identify and discuss pre-professional competencies, create discipline-specific writing for applications to graduate and professional school, and develop competency in oral communication on topics such as research and leadership. This class is open to Neuroscience majors in their junior or senior year.

**Prerequisites:** NBL 401 [Min Grade: C]

**NBL 403. Special Topics in Neurobiology 2. 3 Hours.**

This course covers different topics that have to do with Neurobiology.

**NBL 410. Molecular Biology of the Neuron. 3 Hours.**

Molecular Neuroscience will provide students an advanced understanding of how the brain works with a focus on protein function. Everything the brain does is built upon the actions of proteins, many of which are completely unique to the brain. Together we will work to thoroughly understand the exact molecular mechanisms utilized by the brain to support the complex function of our most fascinating organ. Topics covered will include brain morphogenesis, axonal outgrowth, synapse formation, neurotransmitter biosynthesis, intracellular signaling, and the blood brain barrier. This lecture course is designed to fulfill a neuroscience major's requirement for an advanced course. Non-neuroscience majors should seek course master approval before enrolling and must have a significant background in biology and/or chemistry. Students will be required to purchase a text. Grades will be assigned based on points accumulated through weekly quizzes, cumulative exams, and written reports.

**Prerequisites:** (NBL 230 [Min Grade: C] or PY 253 [Min Grade: C]) and (NBL 355 [Min Grade: C] or PY 355 [Min Grade: C]) and (NBL 356 [Min Grade: C] or PY 356 [Min Grade: C])

**NBL 420. No Self Control: Motivation, Reward and Addiction. 3 Hours.**

Survival of self and species has been evolutionarily wired into the brain. Largely, involving sub-cortical networks, animals are strongly rewarded by beneficial outcomes and driven away from aversive situations. Overseeing these opposing subconscious determinants of motivated behavior is a pre-frontal cortical command center, which along with additional systems that provide for experiential memory and emotional significance, guide the choices we make. This course will provide the participant with an introduction to the neuronal pathways that underlie normal decision making, with a major focus on how this circuitry becomes compromised during addiction. These topics should be relevant to students interested in biomedicine, health professions or counseling. In addition to listed prerequisites, NBL 356 is strongly recommended.

**Prerequisites:** (NBL 230 [Min Grade: C] or PY 253 [Min Grade: C]) and (NBL 355 [Min Grade: C] or PY 353 [Min Grade: C])

**NBL 423. Functional MRI. 3 Hours.**

This course covers different topics that have to do with Neurobiology.

**NBL 425. Methods in Human Neuroimaging. 3 Hours.**

The ability to perform neuroimaging studies on awake human individuals has produced a conceptual revolution in the study of human cognition. This course will examine the methods and techniques in human neuroimaging with the primary goal of building basic understanding of how these tools work. The course will explore techniques, such as single cell recordings, deep brain stimulation, electroencephalography, magnetoencephalography, and diffusion weighted imaging, and focuses on functional magnetic resonance imaging. By the end of the course, students will have gained basic knowledge in the field and will be able to read and critically assess scientific journal articles that make use of a variety of neuroimaging methods. The secondary and implicit goal of this course is to create and nurture, in students, a genuine interest in neuroscience and neuroimaging.

**NBL 427. Anatomical Journey thru the Brain. 3 Hours.**

Have you every wanted to know where the amygdala sits in the brain, or how the brainstem connects to the thalamus and basal ganglia? Would you like to know about processing in the spinal cord, and how this information is sent to and from the cortex? This course will show you how to find any structure in the nervous system, and how these regions interact to control body movements, give rise to sensory perception, generate emotions and experiences, make decisions, and create personality. Each week will use interactive didactic sessions, anatomical drawing exercises, real brain lab experiences, radiographic imaging, and small group medical case discussions, to break down the brain into manageable components, to see how its outer coverings, blood supply, gray and white matter are structurally and functionally organized to make you who you are. This course may be beneficial for students considering careers in the medical, dental or optometry fields, along with those wanting to pursue graduate research in neuroscience. Students without a general neuroscience background may consider taking NBL 230 or PY 253 (recommended but not required).

**NBL 430. How to Build a Brain. 3 Hours.**

It starts with a dividing glob of cells. Not a single cell is any different, but with the right application of magic and a few short days, not only is your stomach a stomach, and your brain a brain, but all of the different kinds of cells of your brain needs to function are in the perfect spot and at the perfect number. Every neuron finds its exact target even when that means having to read a complex set of signals that change every few micrometers. Add to this exquisite complexity, all the things that can go wrong from genetics to environmental exposures and it is truly amazing that neurodevelopment happens successfully as often as it does. This course will explore the "magic" that is the development of the nervous system. Students will understand the complex cellular and molecular mechanisms at play to form a functional brain and explore where problems can occur to cause the most common neurodevelopmental disorders.

**NBL 433. Diseases of the Nervous System. 3 Hours.**

Molecular mechanisms and treatments for neurological, psychiatric, and injury based disorders and diseases of the nervous system. Topics include neurodevelopmental disorders (including intellectual disability and autism spectrum disorders), neurological disorders (including neurodegenerative and demyelinating disease), neuropsychiatric disorders (including depression disorders and schizophrenia), and injury to the nervous system (including stroke and traumatic brain and spinal cord injury).

**Prerequisites:** PY 356 [Min Grade: C] or NBL 356 [Min Grade: C]

**NBL 434. Mechanisms of Memory. 3 Hours.**

Molecular, cellular, systems and medical components of neuroscience, with an emphasis on cognition and cognitive disorders. Covers topics ranging from genes and molecules to human behavior, using cognitive function and clinical cognitive disorders as the unifying theme, with a focus on learning and memory and disorders of these processes.

**Prerequisites:** (NBL 355 [Min Grade: C] or PY 355 [Min Grade: C]) and (NBL 356 [Min Grade: C] or PY 356 [Min Grade: C])

**NBL 440. Memento Mori: neurodegeneration from cradle to coffin and bench to bedside. 3 Hours.**

We all die. We live in a wealthy enough country that many of us will survive long enough to die with a neurodegenerative disease. As the population ages, neurodegenerative diseases are becoming more and more common, so it's important to understand them and figure out how to treat them. This course will cover multiple neurodegenerative diseases, from ones that begin in childhood to slow-progressing diseases that occur late in life. We will discuss approaches to treat the diseases, the basics of the therapeutic pipeline, basic disease mechanisms, and common themes across neurodegeneration. Prerequisites: NBL 230 or PY 253 are required, and NBL 433 is recommended but not required.

**Prerequisites:** NBL 230 [Min Grade: C] or PY 253 [Min Grade: C]

**NBL 442. Sp Tp Neuroscience 2. 2 Hours.**

This course covers different topics that have to do with Neurobiology.

**NBL 444. Special Topics Neuroscience 3. 3 Hours.**

This course covers different topics that have to do with Neurobiology.

**NBL 446. Special Topics Neuroscience 4. 4 Hours.**

This course covers different topics that have to do with Neuroscience.

**NBL 454. Mind/Brain Course. 3 Hours.**

**NBL 499. Neurobiology Thesis. 0 Hours.**

Students should register for this class the semester they plan to submit their undergraduate thesis. If completing a literature based thesis in NBL 399, register for this class concurrently.

# Peace, Justice and Ecology

## Interdisciplinary Minor

**Director:** Peter Verbeek (Anthropology)

The Peace, Justice, and Ecology minor, housed in the College of Arts and Sciences, is an interdisciplinary program for students seeking a broad learning experience in human-ecological interactions, bio-cultural diversity, and strategies to foster social justice, peace, and environmental sustainability from a holistic perspective. The Peace, Justice, and Ecology studies minor offers students the opportunity to examine themes of ecological adaptation and sustainability as well as environmental health and human rights in local, cross-cultural, and global contexts, and to apply scientific, philosophical, and ethical reasoning to real-world problems.

Students interested in Peace Studies and this particular minor can contact Dr. Verbeek, Department of Anthropology (University Hall 3165).

## Grade Requirement

A C or better is required in all courses applied to the minor.

# Minor in Peace, Justice, and Ecology

Requirements		Hours
ANTH 104	Introduction to Peace Studies	3
In addition to ANTH 104, any one of the the following courses is required:		3
ANTH 413	Peace & Environmental Sustainability	
ANTH 483	Intern in Peace, Justice and Environmental Study	
Peace, Justice & Ecology Electives		
Select any four of the following:		12
ANTH 101	Introduction to Cultural Anthropology	
ANTH 318	Economic Development and Indigenous Societies	
ANTH 330	Nationalism Ethnicity and Violence	
ANTH 351	Anthropology of Human Rights	
ANTH 357	Anthropology of Gender	
ANTH 407	Peace Ethology	
ANTH 408	Conflict Resolution in Cross-Cultural Perspective	
ANTH 412	Peaceful Societies and Peace Systems	
ANTH 413	Peace & Environmental Sustainability	
ANTH 414	Prehistory of War and Peace in North America	
ANTH 416	War & Peace in Ancient Mesopotamia	
ANTH 417	Anthropology of Peoples and their Dogs	
ANTH 419	Religion, Reconciliation, & Forgiveness	
ANTH 421	Technological Monitoring of Cultural Resources, Human Rights and Conflict	
ANTH 424	Transitional Justice and Human Rights	
ANTH 432	Villains, Victims, & Vigilantes	
ANTH 438	The Conquest of Mexico	
ANTH 443	Propaganda, Fake News, and Hate Speech	
ANTH 445	Medical Anthropology & Health Disparities	
ANTH 447	Advanced Peace Studies	
ANTH 454	Biological Anthropology and Contemporary Issues	
ANTH 483	Intern in Peace, Justice and Environmental Study	
ANTH 487	Special Problems in Peace Research	
ANTH 488	Special Problems in Human Rights	
BY 108	Human Population and the Earth's Environment	
CE 236	Environmental Engineering	
CE 433	Solid and Hazardous Wastes Management	
CE 447	Principles of Sustainable Development	
CHHS 223	Introduction to Disease Prevention in Community Health and Human Services	
CJ 403	Restorative Justice	
EC 308	Economics of Environment	
HY 303	Women in American History	
HY 304	U.S. Civil Rights Movement	
HY 374	LGBT History	
PHL 115	Contemporary Moral Issues	
PHL 116	Bioethics	
PHL 135	The Rule of Law	
PHL 225	Environmental Ethics	
PHL 318	Ethics of War	
PHL 335	Philosophy of Law	
PSC 316	Human Rights	
PSC 368	Women and War	
PSC 458	Human Trafficking	
PSC 465	International Law	
SOC 200	Social Change	
SOC 431	Environmental Sociology	

SW 208 Disaster Preparedness

Total Hours 18

## Urban Affairs

### Interdisciplinary Minor

**Directors:** Jeffery Walker (Chair, Department of Criminal Justice)

Urban Affairs provides a broad, interdisciplinary examination of the development, functions, and problems of metropolitan areas. Urban Affairs focuses on the social, health, and spatial characteristics of neighborhoods and cities. It highlights the application of social science principles in the study of how formal and informal forces influence urban people and neighborhoods. The minor crosses the disciplines of Urban Studies, Criminal Justice, Social Work, Sociology, Political Science/Public Administration, Public Health, Anthropology, History, Geography, and others. It prepares students to work in a variety of social service and technical areas in public and private organizations in metropolitan areas.

Requirements	Hours
Select 18 hours from courses below: <sup>1</sup>	18
CJ 463 Urban Structures	
CJ 307 Crime and Everyday Life	
CJ 464 Crime and Place	
CJ 466 Spatial Analysis	
DCS 250 Community and Service	
EC 413 Urban Economics	
GEO 109 Intro to Urban Geography	
HY 226 History and Development of Birmingham	
HY 280 Historic Preservation and Public Policy	
SOC 275 Urban Sociology	
SOC 250 Sociology of Race and Ethnicity	
SW 452 Birmingham Neighborhood Studies	

<sup>1</sup> A grade of C or better is required in all coursework applied toward the minor.

## Women's and Gender Studies

### Interdisciplinary Minor

**Director:** Lisa Sharlach (Political Science and Public Administration)

**Faculty:** R. Blanton (Political Science and Public Administration), Cormier (Anthropology), Cummings (Art History), Dallow (Art History), Drentea (Sociology), Forman (Media Studies), Jessee (English), Koskinen (Theatre), Leban (Criminal Justice), Lariscy (English), Morgan (African American Studies & Criminal Justice), Morrison (Communication Studies), Murray (History), Reuter (Political Science and Public Administration & Anthropology), Sharlach (Political Science and Public Administration), Thomeer (Sociology), Zaretsky (History).

Women's and Gender Studies, formerly Women's Studies, is an interdisciplinary minor within the College of Arts and Sciences. Courses address sexuality and the gendered dynamics of history, politics, society, literature and the arts, philosophy and theology, and health. The minor may be of interest to students pursuing careers in government, the justice system, education, social services, economic development, and the health professions.

## Minor in Women's and Gender Studies

Requirements	Hours
<b>Required Women's and Gender Studies courses</b>	
<u>WS 100</u> Introduction to Women's and Gender Studies <sup>1</sup>	
<b>Women's and Gender Studies Electives <sup>2</sup></b>	
Select five of the following:	15
<u>ANTH 357</u> Anthropology of Gender	
<u>ANTH 458</u> Human Sexuality	
<u>ARH 483</u> Special Topics: Gender and the Visual Arts	
<u>CMST 324</u> Gender, Sex Similarities and Differences in Communication	
<u>EH 423</u> African Women's Literature	
<u>EH 444</u> Women's Literature and Theory	
<u>EH 460</u> American Women Writers Before 1900	
<u>EH 467</u> Black Women Writers	
<u>HY 208</u> Women in Film	
<u>HY 274</u> LGBT History	
<u>HY 279</u> Women Rogues, Radicals and Reformers	
<u>HY 303</u> Women in American History	
<u>HY 342</u> Sex & Latin American Society	
<u>HY 374</u> LGBT History	
<u>HY 379</u> Women Rogues, Radicals and Reformers	
<u>HY 423</u> Southern Women: Image and Reality	
<u>CJ 442</u> Race, Crime, Gender and Social Policy	
<u>CJ 443</u> Women and the Criminal Justice System	
<u>PSC 316</u> Human Rights	
<u>PSC 322</u> Gender, Politics, & Policy	
<u>PSC 364</u> Gender in World Politics	
<u>PSC 368</u> Women and War	
<u>PSC 422</u> Gender, Politics, & Policy	
<u>PY 108</u> Human Sexuality	
<u>PY 417</u> Psychology of Gender	
<u>PY 420</u> Special Topics in Psychology	
<u>SOC 135</u> Human Sexuality	
<u>SOC 220</u> Sociology of Sex and Gender	
<u>SOC 335</u> Human Sexuality: A Comparative Approach	
<u>SOC 482</u> Gender and Health	
<u>SOC 490/</u> Independent Study: Sociology	
<u>WS 480</u>	
<u>SOC 491</u> Independent Study and Special Courses in Sociology	
<u>SW 207</u> Racism, Sexism and Other Isms	
<u>WS 280</u> Special Topics in Women's and Gender Studies	
<u>WS 380</u> Special Topics: Women's and Gender Studies	
<u>WS 400</u> Theory and Practice of Women's and Gender Studies: Senior Seminar	
<u>WS 480</u> Special Topics in Women's and Gender Studies	
<u>WS 491</u> Directed Studies in Women's and Gender Studies	
<u>WS 495</u> Internship in Women's and Gender Studies	
Total Hours	15

<sup>1</sup> Note: WS 100 may also be eligible to count toward Core Curriculum Area IV; check the Core Curriculum for your particular major.

<sup>2</sup> Or seek approval for those not listed.

The following is not a comprehensive list of courses; other courses can be considered for credit in the Women's and Gender Studies Program. For full descriptions of courses other than Women's and Gender Studies,

refer to the appropriate department's course listings in this catalog. Note: Special topics courses with the same numerical designation may be repeated for credit. However, courses with the same content may not be repeated.

## Grade & Residency Requirement

A C or better is required in all courses applied to the minor. At least half of the minor must be completed at UAB.

## Courses

### **WS 100. Introduction to Women's and Gender Studies. 3 Hours.**

Interdisciplinary study of roles of women in society through social, political, economic, philosophical, historical, and biological perspectives. Required for Women's and Gender Studies Minor. This course meets the Core Curriculum requirements for Area IV: Social and Behavioral Sciences.

### **WS 280. Special Topics in Women's and Gender Studies. 3 Hours.**

Subjects of special interest, such as women and religion, women and war and theories of women's studies. Varies in content depending upon topic. Students may enroll under these numbers multiple times but topic may not be repeated.

### **WS 380. Special Topics: Women's and Gender Studies. 3 Hours.**

Subjects of special interest, such as women and religion, women and war, and theories of women's and queer studies. Varies in content depending upon topic. Students may enroll under these numbers multiple times, but topic may not be repeated.

### **WS 400. Theory and Practice of Women's and Gender Studies: Senior Seminar. 3 Hours.**

Everyday applications of feminist and queer theories. Required for the minor.

**Prerequisites:** WS 100 [Min Grade: D]

### **WS 480. Special Topics in Women's and Gender Studies. 1-3 Hour.**

Subjects of special interest, such as women and religion, women and war, and theories of women's studies. Varies in content depending upon topic. Students may enroll under these numbers multiple times but topic may not be repeated.

### **WS 490. Directed Readings in Women's and Gender Studies. 1-3 Hour.**

Independent study with faculty guidance of selected gender-related issues.

### **WS 491. Directed Studies in Women's and Gender Studies. 1-3 Hour.**

Independent research with faculty guidance on selected gender-related issues.

### **WS 495. Internship in Women's and Gender Studies. 1-3 Hour.**

Experience in community agency working with women or gender issues. Course requirements dependent upon number of credits student wishes to take.

# Department of Anthropology

**Chair:** Chris Kyle

The Anthropology Department offers the Bachelor of Arts degree and the Master of Arts degree. In addition to the Anthropology Major, the department offers two minors, one in Anthropology and the other in Peace, Justice, and Ecology. Anthropology is a social science discipline committed to the comparative and historical study of humankind. Anthropology is the broadest in scope and the most methodologically diverse of the social sciences.

Our Departmental mission is to advance knowledge of anthropology through scientific and humanistic research, high quality teaching, professional publications, and community outreach. The faculty conducts research, teaches, and trains in the four subfields of anthropology, cultural anthropology, linguistics, archaeology and biological anthropology as well as in the applied areas of peace and conflict studies, ecology, social justice, and human rights. Current faculty do research and teach in areas of satellite or space archaeology, Egyptology, medical anthropology, historical ecology, paleo-ecology, war and political violence, peace studies, human rights, and social justice.

Students interested in careers in the fields of law, teaching, public service, international affairs, business, journalism, and a variety of other areas involving the social sciences and humanities will find the anthropology major beneficial and rewarding. Anthropology provides a solid foundation for the following careers: multicultural training, cross-cultural research, international health, forensic science, cultural resource management, national park service, teaching, international business, language interpreters, primatology, global issues, environmental conservation, tribal anthropology, and museum curation.

An undergraduate student has latitude in selecting a personalized program of study in the major that satisfies individual interests and maintains the holistic integrity of an undergraduate degree in general anthropology.

## Anthropology Graduate Program

For information, contact the Department Chair or the Graduate Program Director.

## Bachelor of Arts with a Major in Anthropology

Requirements	Hours
<b>Required Anthropology Courses</b> <sup>1</sup>	
<a href="#">ANTH 101</a> Introduction to Cultural Anthropology	3
<a href="#">ANTH 102</a> Introduction to Biological Anthropology	3
<a href="#">ANTH 106</a> Introductory Archaeology	3
<a href="#">ANTH 120</a> Language and Culture	3
<b>Advanced Anthropology</b>	
Select two of the following Capstones:	6
<a href="#">ANTH 450</a> Advanced Cultural Anthropology	
<a href="#">ANTH 451</a> Advanced Archaeological Anthropology	
<a href="#">ANTH 452</a> Advanced Linguistic Anthropology	
<a href="#">ANTH 453</a> Advanced Biological Anthropology	
<b>Select 18 credit hours in Anthropology (ANTH)</b> <sup>2</sup>	<b>18</b>
Total Hours	36

- <sup>1</sup> Completing [ANTH 101](#), [ANTH 106](#) and [ANTH 120](#) will satisfy six hours of Core Curriculum Area IV.
- <sup>2</sup> Courses not listed above, including 3 hours at the 400 level and 6 hours at the 300-level or above.

## Grade Requirement

A grade of C or better is required in all anthropology courses.

## Additional Requirements

### General Electives

Students must take general electives to reach the 120 semester hour requirement.

## Proposed Program of Study for a Major in Anthropology

### Freshman

First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
MA 110		3 ANTH 106	3
ANTH 101		3 ANTH 120	3
Core Curriculum Area IV: History <sup>1</sup>		3 Core Curriculum Area II: Humanities	3
Core Curriculum Area II: Fine Arts <sup>2</sup>		3 Core Curriculum Area IV: History <sup>1</sup>	3
	15		15

### Sophomore

First Term	Hours	Second Term	Hours
ANTH 102		3 Core Curriculum Area II: Humanities	3
Core Curriculum Area II: Literature <sup>3</sup>		3 Core Curriculum Area III: Natural Science with Laboratory	4
Core Curriculum Area III: Natural Science with Laboratory		4 Anthropology (ANTH) Elective	3
Minor		3 Minor	3
General Elective		3 General Elective	3
	16		16

### Junior

First Term	Hours	Second Term	Hours
Advanced Anthropology Course <sup>4</sup>		Advanced Anthropology Course <sup>4</sup>	3
Minor		3 Anthropology (ANTH) Elective	3
General Elective		6 Minor	3
		General Elective	6
	9		15

### Senior

First Term	Hours	Second Term	Hours
Anthropology (ANTH) Elective (400 level)		3 Anthropology (ANTH) Elective (300-400 level)	3
Anthropology (ANTH) Elective		3 Minor	3
Minor		3 General Elective	7-9
General Elective		6	
	15		13-15

Total credit hours: 114-116

- 1
- Select one: HY 101, HY 102, HY 104, HY 105, HY 120 or HY 121.
- 2
- Select One: ARH 101, ARH 203, ARH 204, ARH 206, MU 120, THR 100, THR 105 or THR 200.
- 3
- Select One: EH 216, EH 217, EH 218, EH 221, EH 222, EH 223 or EH 224
- 4
- Select One: ANTH 450, ANTH 451, ANTH 452, ANTH 453

Minor in Anthropology 1

Requirements	Hours
<b>Introductory Anthropology Courses</b>	
Select three of the following: 2	9
ANTH 101 Introduction to Cultural Anthropology	
ANTH 102 Introduction to Biological Anthropology	
ANTH 106 Introductory Archaeology	
ANTH 120 Language and Culture	
<b>Advanced Anthropology Courses</b>	
Select one of the following:	3
ANTH 450 Advanced Cultural Anthropology	
ANTH 451 Advanced Archaeological Anthropology	
ANTH 452 Advanced Linguistic Anthropology	
ANTH 453 Advanced Biological Anthropology	
<b>Anthropology Electives</b>	
Select 6 credit hours from Anthropology (ANTH) courses	6
Total Hours	18

- 1
- A grade of C or better is required in all courses for the minor
- 2
- ANTH 101, ANTH 106 and ANTH 120 may also be eligible to count toward Core Curriculum Area IV; check the Core Curriculum for your particular major.

Minor in Peace, Justice, and Ecology

Requirements	Hours
ANTH 104 Introduction to Peace Studies	3
In addition to ANTH 104, any one of the the following courses is required:	3
ANTH 413 Peace & Environmental Sustainability	
ANTH 483 Intern in Peace, Justice and Environmental Study	
<b>Peace, Justice &amp; Ecology Electives</b>	
Select any four of the following:	12
ANTH 101 Introduction to Cultural Anthropology	
ANTH 318 Economic Development and Indigenous Societies	
ANTH 330 Nationalism Ethnicity and Violence	
ANTH 351 Anthropology of Human Rights	
ANTH 357 Anthropology of Gender	
ANTH 407 Peace Ethology	
ANTH 408 Conflict Resolution in Cross-Cultural Perspective	
ANTH 412 Peaceful Societies and Peace Systems	
ANTH 413 Peace & Environmental Sustainability	
ANTH 414 Prehistory of War and Peace in North America	
ANTH 416 War & Peace in Ancient Mesopotamia	
ANTH 417 Anthropology of Peoples and their Dogs	
ANTH 419 Religion, Reconciliation, & Forgiveness	
ANTH 421 Technological Monitoring of Cultural Resources, Human Rights and Conflict	
ANTH 424 Transitional Justice and Human Rights	
ANTH 432 Villains, Victims, & Vigilantes	
ANTH 438 The Conquest of Mexico	

ANTH 443	Propaganda, Fake News, and Hate Speech
ANTH 445	Medical Anthropology & Health Disparities
ANTH 447	Advanced Peace Studies
ANTH 454	Biological Anthropology and Contemporary Issues
ANTH 483	Intern in Peace, Justice and Environmental Study
ANTH 487	Special Problems in Peace Research
ANTH 488	Special Problems in Human Rights
BY 108	Human Population and the Earth's Environment
CE 236	Environmental Engineering
CE 433	Solid and Hazardous Wastes Management
CE 447	Principles of Sustainable Development
CHHS 223	Introduction to Disease Prevention in Community Health and Human Services
CJ 403	Restorative Justice
EC 308	Economics of Environment
HY 303	Women in American History
HY 304	U.S. Civil Rights Movement
HY 374	LGBT History
PHL 115	Contemporary Moral Issues
PHL 116	Bioethics
PHL 135	The Rule of Law
PHL 225	Environmental Ethics
PHL 318	Ethics of War
PHL 335	Philosophy of Law
PSC 316	Human Rights
PSC 368	Women and War
PSC 458	Human Trafficking
PSC 465	International Law
SOC 200	Social Change
SOC 431	Environmental Sociology
SW 208	Disaster Preparedness
Total Hours	18

Grade & Residency Requirement

A grade of C or better is required in all courses applied to the minor. At least half of the minor must be completed at UAB.

Honors Program in Anthropology

Purpose

The Anthropology Honors Program is designed to prepare students for advanced work at the graduate or professional level.

Eligibility

All regularly admitted students with a declared major in anthropology are eligible to enter the program, although continuing participation requires maintenance of an overall 3.0 GPA and a 3.25 GPA in anthropology.

Thirty-three semester hours in anthropology are required plus the completion of one of three statistics/foreign language options listed below. Students will be required to complete a minor.

Requirements	Hours
<b>Anthropology Courses</b>	
ANTH 101 Introduction to Cultural Anthropology	3
ANTH 102 Introduction to Biological Anthropology	3
ANTH 106 Introductory Archaeology	3
ANTH 120 Language and Culture	3

**Advanced Anthropology Electives**

Select two of the following:	6
ANTH 450      Advanced Cultural Anthropology	3
ANTH 451      Advanced Archaeological Anthropology	3
ANTH 452      Advanced Linguistic Anthropology	3
ANTH 453      Advanced Biological Anthropology	3
<b>Senior Year Thesis</b>	
ANTH 498      Honors Thesis Research	3-6
<b>Additional Anthropology Courses</b>	
Four additional courses from any of the department offerings	12
Total Hours	45-48

**Options Selection**

Requirements	Hours
<b>Option 1</b>	
SOC 410      Social Statistics	4
CS 103      Introduction to Computer Science in Python & 103L      and Introduction to Computer Science in Python Lab	4
Total Hours	8

Requirements	Hours
<b>Option 2</b>	
SOC 410      Social Statistics	4
Two courses in a foreign language (or demonstrated proficiency at the 102 level)	8
Total Hours	12

Requirements	Hours
<b>Option 3</b>	
Three courses in a foreign language, including one at the 200 level or above (or demonstrated proficiency at the 200 level)	9-11
Total Hours	9-11

**Benefits**

Students will benefit from the Anthropology Department Honors Program by acquiring additional research skills to successfully enter and compete in internationally-oriented graduate and professional programs. Students who complete the program will graduate "With Honors in Anthropology."

**Contact**

For additional information and/or admission to the Anthropology Honors Program, contact the Department Chairperson, 3165 University Hall, UAB, Birmingham, AL 35294-1241; Telephone (205) 934-3508.

**Courses****ANTH 101. Introduction to Cultural Anthropology. 3 Hours.**

Cultures of world's peoples; ideas used to explain similarities and differences among human groups. Ethics and Civic Responsibility are significant components of this course. This course meets the Core Curriculum requirements for Area IV: Social and Behavioral Sciences.

**ANTH 102. Introduction to Biological Anthropology. 3 Hours.**

Biological evolution; interpretation of human fossil record; race; human population genetics and primate behavior.

**ANTH 104. Introduction to Peace Studies. 3 Hours.**

An overview of concepts and practices related to conflict, social justice, and peace. Students are introduced to theories, terms, analytical skills and tools in terms of peace building and conflict transformation.

**ANTH 106. Introductory Archaeology. 3 Hours.**

Archaeological methods and theory used to reconstruct and interpret past. This course meets the Core Curriculum requirements for Area IV: Social and Behavioral Sciences.

**ANTH 120. Language and Culture. 3 Hours.**

Nonverbal communication; language origins and acquisition; universals; language classification and processes of change; language as expression of cultural values and social structure; beginning componential and structural analysis. This course meets the Core Curriculum requirements for Area IV: Social and Behavioral Sciences.

**ANTH 200. Applied Anthropology. 3 Hours.**

Applied anthropology stresses the practical application of anthropological perspectives, theories, and methods to the real world needs of contemporary communities, organizations, and institutions. Within this context, applied anthropology is viewed as a critically important fifth subfield of anthropology ideally suited to aid in the resolution of modern challenges. Topics addressed include global challenges related to public policy; the environment; sustainable development; health, poverty, social, racial, and gender inequality; social advocacy; and cultural tolerance.

**ANTH 202. Science Fiction and Anthropology. 3 Hours.**

Anthropological concepts in works of science fiction; the place of anthropology in contemporary science fiction literature, film, and television. Topics include culture, language, archaeology and human evolution.

**ANTH 210. Monkeys and Apes. 3 Hours.**

Behavior and social organization of humans' closest living relatives. Living primates and why they behave as they do.

**ANTH 211. Human Evolution. 3 Hours.**

Human organism's evolution as systemic whole. Process of human evolutionary change as depicted in behavior and fossil record.

**ANTH 222. Prehistory of North America. 3 Hours.**

Prehistoric America north of Mexico from terminal Pleistocene to early historic times.

**ANTH 226. Archaeological Field School. 1-6 Hour.**

Participation in all phases of excavation, laboratory study, and report preparation. Off campus.

**ANTH 231. Archaeology of the Origins of Civilization in Egypt, Mesopotamia, and the Mediterranean. 3 Hours.**

Development of complex society in the Fertile Crescent and surrounding lands in Egypt, Mesopotamia, and Mediterranean from origins of agriculture to Alexander the Great.

**ANTH 235. Immigration Transnationalism and Diasporas. 3 Hours.**

What happens to culture and the social organization of groups after they migrate from one country to another? This course focuses on two possible responses: (1) How immigrants assimilate to the host society through a process of becoming disorganized or uprooted and then reorganizing themselves in a new context, and (2) How immigrants, or transnationals are influenced by their persisting ties to their home countries and elsewhere.

**ANTH 242. Peoples of World/South America Indians. 3 Hours.**

Ethnology of indigenous peoples of South America including ecological adaptation, social organization, religious systems, and culture change. Emphasis on lowland South Americans.

**ANTH 244. Peoples of the World: Africa. 3 Hours.**

Local and regional African cultures. Geographical, racial, and historical backgrounds; contemporary African social systems.

**ANTH 245. Peoples of the World:Mediterranean. 3 Hours.**

This course covers both the western part of the Ancient Middle East and the Mediterranean Area, first introducing Neolithic Europe and Turkey/Anatolia (e.g., Catal Huyuk; Stonehenge), but focusing on Bronze Age Greece, the Aegean, and Anatolia:ca. 3000-1200 BCE. This includes an examination of the Minoans and Mycenaeans in the first part of the course (e.g., Knossos; Thera; Mycenae), and a look at the Hittites and Trojans in the second half of the semester (e.g., Hattusas; Troy), culminating with the Trojan War and Sea Peoples ca. 1200 BCE.

**ANTH 248. Peoples of the World: Latin America. 3 Hours.**

Holistic survey of cultures of Latin America from pre-Columbian times to present. Processes of cultural change (including revolution), ethnic group relations, and functioning of contemporary societies.

**ANTH 262. Mythbusters! Arch hoaxes, doc. 3 Hours.**

This course will provide an in depth examination of a number of known and not-so-well known archaeological hoaxes throughout history, allowing the class to explore the myriad of social, legal, and economic pressures which precipitated such discoveries. The course will explore subjects like the shroud of Turin, Atlantis, the Jesus Tomb, and the curse surrounding the discovery of King Tutankhamen's tomb in 1922. As part of the course, students will watch and evaluate a number of documentaries for the "truth" behind the story, and will follow ongoing media coverage of major archaeological discoveries.

**ANTH 292. Anthropology of Slavery. 3 Hours.**

This course is a mixed format including, lectures, student projects, and potential fieldwork. The class will provide a broad cross-cultural perspective on different types of slavery that have existed across the globe (Americas, Africa, the Near East, Oceania) and examine slavery in the American South, especially Alabama. Issues of race, hierarchy, ethnicity, political, economy, religion, ideology, and social relations will be discussed.

**ANTH 309. Egypt in the Age of the Pyramids. 3 Hours.**

This course begins with the Prehistoric and Predynastic-Early Dynastic roots of Ancient Egypt, and focuses upon the pyramid building age of the Old through Middle Kingdoms, and concludes with the Second Intermediate Period (i.e., Dynasties 1-17: ca. 3200 - 1550 BCE). It will focus broadly on the archaeology, history, art, architecture, religion, and literature of this period. It is designed to stand independently of its companion course imperial and Post-imperial Egypt.

**ANTH 310. Imperial and Post-Imperial Egypt. 3 Hours.**

This course focuses mainly on Egypt's imperial period, spanning the New Kingdom (Dynasties 18-20: ca. 1550-1069 BCE), and concludes with a shorter overview of the post-imperial period of Egypt's encounters with the Kushite (Nubian), Assyrian, Neo-Babylonian, and Persian empires (Dynasties 21-31: ca. 1069-332 BCE). It focuses broadly on the archaeology, history, art, architecture, religion, and literature of this time span and is designed to stand independently of its companion course Egypt in the Age of the Pyramids.

**ANTH 318. Economic Development and Indigenous Societies. 3 Hours.**

Effects of industrialization on indigenous societies and role of anthropologists in economic development projects.

**ANTH 319. Food and Culture. 3 Hours.**

This course is designed to present a broad view of the role of food in human culture through time and in a variety of geographic settings, offering students and opportunity to reflect on the cultural meanings of food in human life. Class lectures, assigned readings, and films will be used to enhance each student's understanding of the subject from a cross cultural perspective. We will examine the biological basis of diet, how foodways develop and change, how and why anthropologists study diet, and variations in foodways around the world.

**ANTH 320. Comparative Religion. 3 Hours.**

The cross cultural study of ritual, religion, the sacred, and the spiritual is unique to the discipline of anthropology (which investigates humans and their culture across space and time). Concepts of the sacred and what we refer to as "religion" can be found in all cultures both past and present. For the purposes of this course the term religion may be viewed broadly as human beliefs and practices associated with supernatural or non-empirical beings and forces, including spirituality, witchcraft, cults, magic, and superstition. The goal of this course is for students to gain a broad understanding of religion cross culturally, to closely examine case studies of particular religious practices in their culture context, to explore theories of religion and their evolution, and to achieve a perspective of cultural relativism and a greater appreciation of human diversity.

**ANTH 329. Egypt: Archeological Field Study. 3-6 Hours.**

Two week field school in Egypt. Students will visit Egypt old and new, including Islamic Cairo, Coptic churches, the pyramids of Giza, Alexandria, the tombs and temples of Luxor (Valley of the Kings), Aswan (Abu Simbel), and an archaeological excavation. Experience Egyptian folklore through dance and musical performances.

**ANTH 330. Nationalism Ethnicity and Violence. 3 Hours.**

Social and cultural analysis of ethnicity and nationalist ideologies particularly where these have led to violent confrontations within modern nation-states. Primordialist versus constructionist theories of difference; varying weight to be attributed to political, historical, and cultural factors in study of nationalism; politics of culture versus culture of politics.

**ANTH 340. Archaeology and History Bible Lands. 3 Hours.**

Archaeology and History of the Bible Lands. Examination of region spanning modern Syria, Lebanon, Israel, and Jordan from 10,000-585 BC.

**ANTH 351. Anthropology of Human Rights. 3 Hours.**

Examination of conceptual, political, and legal aspects of human rights from an anthropological perspective. Topics considered may include: state violence; the history of human rights claims; the opposition of cultural rights and human rights claim; human rights as a form of political discourse; human rights practices in select contemporary settings.

**ANTH 353. Primatology. 3 Hours.**

Biology, behavior, and distribution of living nonhuman primates. Field studies of old-world monkeys and apes.

**ANTH 355. Archaeology of Alabama. 3 Hours.**

This course will explore the archaeology of Alabama with an emphasis on current regional research which may include historical archaeology, industrial archaeology, and the archaeology of Native Americans. It may include both field and class room components.

**ANTH 357. Anthropology of Gender. 3 Hours.**

Roles of women, men, and other genders from a cross-cultural perspective; includes bio-cultural approaches to sex and gender and changing gender roles over time. Course involves substantial writing component in essay examinations and research papers. Writing is a significant component of this course.

**ANTH 360. Ecological Anthropology. 3 Hours.**

Interactions among behavioral, technological, organizations, and ideological features of human cultures that serve to adapt societies to their physical environment.

**ANTH 365. Economic Anthropology. 3 Hours.**

Comparative ethnology of economic organizations and processes in non-industrial societies. Precapitalist social settings and transformations of precapitalist economies that have occurred, and are occurring, as result of development and expansion of industrial capitalism.

**ANTH 371. Service Learning in Anthropology. 3 Hours.**

This is a designated service-learning course integrating academic learning, civic learning and meaningful service to the community.

**ANTH 400. Human Osteology. 3 Hours.**

This class focused on the identification of human skeletal remains. As a combined laboratory and lecture course it provides the groundwork for much of the work in biological and forensic anthropology.

**ANTH 401. Forensic Anthropology. 4 Hours.**

Applied human osteology, emphasizing ability to identify age, sex, and population type of skeletal material. Effects of disease and behavior on bones.

**ANTH 402. Methods in Peace & Human Rights Research & Practice. 3 Hours.**

The study of peace, justice, ecology, and human rights draws on a diverse methodological tool-kit and comprehensive skill-sets. This course introduces students to some of these methods such as using online databases, conducting interviews, text analysis, meta-analyses and literature reviews, participant observation, behavior observation, and content analysis. Concrete examples of research methods and practice reveal the interconnectedness of basic and applied research as well as theory and practice.

**ANTH 404. Human Rights, Peace, and Justice. 3 Hours.**

This course offers an introductory exploration of theories, concepts, and issues involved in the study of peace, human rights, social justice, and conflict resolution. It considers the relationship of human rights to achieving peace with justice, including the role of international law. It introduces the concepts of positive peace, human security, and global interdependence. Finally, the course includes an examination and critique of anthropological approaches to peace and the associated practical applications to real world conflicts, rights violations, and global challenges.

**ANTH 407. Peace Ethology. 3 Hours.**

This course provides insights into causes, mechanisms, development, function, and evolution of peaceful behavior in humans and nonhuman animals. The course shows how studying the role of peaceful behavior in the survival and propagation of animal life has direct significance for improving our understanding of the evolved abilities for peace in humans.

**ANTH 408. Conflict Resolution in Cross-Cultural Perspective. 3 Hours.**

This course explores conflict and conflict management from an anthropological perspective. It includes ethnographic examples from around the globe. Do all societies engage in war? How are conflicts handled in other cultures? The course will challenge a Western view that humans are naturally violent and warlike and consider some interesting anthropological controversies. Specific topics considered include conflict models, origins of war, conflict resolution, socialization of conflict styles, third party mediation, and ways to reduce violence and prevent war.

**ANTH 409. Peace through Global Governance. 3 Hours.**

Global governance represents a new dimension in social organization. Anthropology has much to contribute to understanding it. Global governance has the potential to promote social progress and human development, the protection of human rights, peace, and human security. The course examines security—military, collective, and human security—and the evolution of international identity, norms, values, and laws and their contributions to the development of global civil society.

**ANTH 411. Field Archaeology. 3-6 Hours.**

Archaeological field and laboratory techniques, including excavation, surveying, and artifact analysis and description; general problems of archaeological interpretation.

**ANTH 412. Peaceful Societies and Peace Systems. 3 Hours.**

This course explores peaceful societies, some of which are internally peaceful and some of which do not make war, as well as peace systems, that is, clusters of neighboring societies that do not make war on each other and possibly not with any outside groups either. The main questions addressed in the course are: How do peaceful societies and peace systems manage to successfully keep the peace? What lessons do peaceful societies and peace systems hold for creating a less violent and warless world?.

**ANTH 413. Peace & Environmental Sustainability. 3 Hours.**

By highlighting that ecology sets the stage for the social and economic domains, this course traces our interdependence with nature and makes the case that sustaining the natural conditions that are essential for the functioning of the ecosystem on which our lives depends equals sustaining peace. The course takes a positive peace perspective on environmental sustainability goals and methods to achieve them.

**ANTH 414. Prehistory of War and Peace in North America. 3 Hours.**

This course explores the origins, development, and consequences of conflict and warfare among the prehistoric and early historic indigenous cultures of North America, as well as the complimentary processes of cooperation and peace-making. Archaeological, biological, and ethnohistorical sources are utilized to understand the ways in which war and peace were carried out among Native American cultures from the earliest evidence of human occupation to European contact and beyond. Both indigenous and European practices of war and peace are considered.

**Prerequisites:** ANTH 101 [Min Grade: C] or ANTH 106 [Min Grade: C]

**ANTH 415. Ethnographic Field Methods. 3-6 Hours.**

Classroom instruction and practical experience in techniques of ethnographic fieldwork, including participant observation, household surveys, structured and unstructured interviewing, and genealogies.

**ANTH 416. War & Peace in Ancient Mesopotamia. 3 Hours.**

"War & Peace in Ancient Mesopotamia" (ca. 10,000 - 323 BCE) begins with an introduction to the advent of farming, urban life, various crafts, writing, and other innovations in the region of the "Two Rivers," namely the Tigris and Euphrates' flood plain. It proceeds with the rise and fall of early state complex societies and empires in the Bronze and Iron Ages, and terminates in the Persian period. Although providing much focus on diverse issues dealing with war, alliances, diplomacy, treaties, and peace, this course also integrates a comprehensive background context and overview of other aspects of past societies in this region, including history, archaeology, language, literature, religion, architecture, art, material culture, and trade. The course material is introductory, with no specific prerequisite, but a prior enrollment in either ANTH 245 (Peoples of the Mediterranean), or ANTH 340 (Archaeology & History of Bible Lands), is helpful since these courses introduce past societies from contemporary, adjacent regions frequently in direct contact with Ancient Mesopotamia.

**ANTH 417. Anthropology of Peoples and their Dogs. 3 Hours.**

This course explores how a comprehensive assessment of the long-term mutualistic relationship between humans and dogs can yield insights and offer ways in which modern global challenges of peace and sustainable development can be approached. The course takes a four-field approach as it discusses the evolution of the domestic dog from its wild ancestor the grey wolf, investigates the archeology of dog domestication, looks into the etymology of words used to describe dogs and the specifics of their bond with humans across multiple cultures, and investigates and describes the origins of modern dog breeds within their relevant cultural context. The emergence of the evolutionary, economic and social relationships between humans and dogs serves as an example of the relationships that exist between humans and all other domestic and wild animals. Dealing with global challenges of peace and sustainable development requires a perspective that not only places humans squarely among other animals, but also considers the shifting relationships between people and all other organisms. The dog-centric and four-field approach of this Anthropology course aims to provide a new model for future academic inquiry and engagement with both local and global peace agendas.

**ANTH 418. The Power of Nonviolence. 3 Hours.**

This course introduces students to the theory and practice of nonviolence as a manner of social change and as a philosophy. The course explores some of the classic writings on nonviolence such as those by Tolstoy, Gandhi, and King as well as current research findings on the efficacy of nonviolent social change, for instances, the work of Sharp, Nagler, Ackerman, and Chenoweth. Readings, films, small group and whole class discussions, guest lectures by activists will contribute to an understanding of the necessary skills for practicing and promoting nonviolent social change. Students will develop projects and presentations that utilize an online nonviolence database.

**ANTH 419. Religion, Reconciliation, & Forgiveness. 3 Hours.**

This course examines the role of religion, spirituality, reconciliation, apology, and forgiveness in conflict situations, from the individual to the global. Topics include the role of religion in both war and peace. The course has a cross-cultural and inclusive dimension and goes well beyond Christianity to also consider Buddhism, Confucianism, Islam, and other religions. The spiritual dimensions of Gandhian nonviolence are also considered.

**ANTH 421. Technological Monitoring of Cultural Resources, Human Rights and Conflict. 3 Hours.**

This class will give students an overview of how cultural heritage and humanitarian work intersects with innovation and technological advances. The class will introduce students to how social media, remote sensing technologies/drones, cell phones, open source, crowd sourcing, Big Data, cloud computing, the Internet, and sensors are all changing how we collect data and interpret the world around us, and how that information is revolutionizing cultural preservation efforts as well as humanitarian and conflict monitoring.

**ANTH 422. Landscape Archaeology. 3 Hours.**

The course will cover the techniques and strategies employed by archaeologists to reconstruct past landscape, which involves scientific testing, remote sensing, GIS, survey, excavation and environmental analysis. Examples will be drawn from projects across diverse landscape types in Europe, the Middle East, Africa, Central America and Asia. In-field and laboratory application of techniques will be emphasized.

**ANTH 423. Vikings: Raiders, Traders, Farmers. 3 Hours.**

The Vikings are most popularly thought of as warriors raiding settlements along the northern coastline of Europe during the Viking Age (ca. 793 – 1050 AD), but their society and activities extended well beyond this scope. This course furnishes an overview of Viking social structure, subsistence, art, architecture, religion, language, and literature. It covers hostile and peaceful interactions with the peoples of Greenland, the Arctic, Labrador and Newfoundland and considers the evidence for Norse explorations and influence in North America.

**ANTH 424. Transitional Justice and Human Rights. 3 Hours.**

Significant developments in politics, law, and human rights occur during periods of transitional justice. Anthropology is invaluable for understanding these developments, including conceptions of justice, truth-seeking, memory and memorials, reparations, institutional reform, and human rights discourse. This course begins with the Nuremberg Trials and progresses through the major historical events that shaped transitional justice throughout the 20th and 21st centuries. These include the abuse of amnesty laws during the Cold War; the development of truth and justice commissions, international criminal tribunals, and hybrid courts in the 1990s; and the establishment of the International Criminal Court (ICC) in the 2000s. The course concludes by examining contemporary issues such as reparations, war torts, post-conflict memory and education, ongoing conflicts worldwide, and the future of the ICC.

**ANTH 425. The Law of Historical and Cultural Resources. 3 Hours.**

This survey course will familiarize students with federal and state laws and regulations relevant to archaeology and anthropology, such as the Antiquities Act, National Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA), Archeological and Historic Preservation Act (AHPA), Archaeological Resources Protection Act (ARPA), and the Native American Graves Protection and Repatriation Act (NAGPRA), and among others. It will also introduce students to other legal issues such as obtaining National Register listings, preservation easements and federal income tax rehabilitation credits.

**Prerequisites:** ANTH 106 [Min Grade: C]

**ANTH 426. NAGPRA, Repatriation, and Indigenous Rights. 3 Hours.**

Debates over the return of Native American cultural property from university and museum settings across the country lie at the forefront of modern archaeological research in the United States. Central to these debates are critical questions about the rights of Indigenous peoples, the intellectual freedom of researchers, the importance of cultural resource and heritage management, and the history and role of museums today. This seminar course introduces students to the Native American Graves Protection and Repatriation Act (NAGPRA) as federal law and further examines the impacts of this law through a multiplicity of involved perspectives. Class discussions will examine legal, ethical, anthropological, museum, and tribal perspectives, including both the theoretical and practical aspects of NAGPRA compliance and repatriation.

**Prerequisites:** ANTH 106 [Min Grade: C]

**ANTH 427. Archaeological Laboratory Methods. 3 Hours.**

This course introduces students to the principles and practice of archaeological laboratory research. The goal of the course is to familiarize students with the stages of archaeological research that follow fieldwork and precede publication. Emphasis is placed on practical, hands-on experience in identifying and analyzing archaeological remains, as well as building interpretations of the past through their analysis.

**Prerequisites:** ANTH 106 [Min Grade: C]

**ANTH 428. Drugs and Culture. 3 Hours.**

This course takes a cross-cultural perspective on experiences with mind-altering substances. It explores world views about what counts as a 'drug' and how drugs fit in with systems of moral judgement and social relationships. Together, we will consider case studies that explore how drugs fit into cultural and social contexts around the world. Specific topics include drug use in human history, drugs in contexts of healing, spirituality, and recreation; addiction, drug production and trade as a form of livelihood, and legality and the War on Drugs (considering drug penalties, public health vs. criminal approaches, social justice & human rights, etc.). We will also examine career contexts where cross-cultural knowledge of drugs would be beneficial.

**ANTH 430. Zooarchaeology. 3-6 Hours.**

Methods and theories of zooarchaeological research are discussed in this lab/lecture course. Practical experience in processing, identification, and interpretation of animal bone remains from archaeological sites forms a large part of this class.

**Prerequisites:** ANTH 106 [Min Grade: C]

**ANTH 431. Memory and Memorialization. 3 Hours.**

This class explores memory, collective memory, and the uses made of historical narratives, artifacts, and memorials in diverse cultural settings. The course begins with an exploration of the complex relationship between history, cultural identity, and collective memory. It then considers collective memory at multiple levels of society, including nationalism and national memory, post-conflict settings and the development of traumatic memory and social amnesia, and conflicting narratives over peace and war monuments and memorialization.

**ANTH 432. Villains, Victims, & Vigilantes. 3 Hours.**

This course examines ways in which the concepts of "rights" and "justice" are understood and enacted in local communities, particularly in regions of the world experiencing high rates of violent criminality. Beginning with a review of formal law and legal principles underlying state systems of justice, the course surveys settings in which dissatisfaction with state efforts to protect rights have induced communities to develop alternate policing and judicial institutions.

**ANTH 433. Anthropology of Art. 3 Hours.**

This course surveys the anthropology of art, focusing on economic, historical, and aesthetic dimensions of Western and non-Western art forms. The course considers the problem of whether "art" is a universal cultural phenomenon and examines cross-cultural aesthetics; form, style, and meaning in multiple cultural contexts; and the convergence of anthropology, art history, museum studies, and the marketing of culture. The course concludes with a brief discussion of contemporary art practices with respect to expressive culture and considers the power of art as it relates to knowledge, language, and culture.

**ANTH 434. Observing the Earth from Space. 3 Hours.**

The course will give students the ability to analyze remotely sensed data from satellite images as part of the newly established Joint Programs for Remote Sensing and Health. Students will learn about the physics and mathematics behind remote sensing. They will also learn about wide range of satellite images and techniques to analyze them via ERDAS Imagine, ER Mapper and other programs. Applications of remote sensing to a variety of fields will form a key component of the class. The course will culminate in a term project involving remote sensing applications to the UAB faculty-led initiatives in health, medicine, geography and anthropology. There will be a weekly lab component of the course.

**ANTH 436. Community Internship. 3-6 Hours.**

Application of anthropological approaches to efforts in public or private sector.

**ANTH 437. Real World Remote Sensing Applications. 3 Hours.**

This course will be offered as a research seminar focusing on real world applications of remote sensing technology. Students will work closely with UAB professors and scientists at NASA's Marshall Space Flight Center in Huntsville doing original remote sensing research on new satellite datasets. These datasets cover diverse areas including terrorism, global warming, health, anthropology / archaeology, atmospheric studies, urban expansion and coastal management. Students will be responsible for analyzing the satellite imagery and presenting papers to NASA.

**ANTH 438. The Conquest of Mexico. 3 Hours.**

This course examines the Spanish conquest of Mexico from both Spanish and indigenous perspectives. It further surveys the institutionalization of Spanish control over the fallen Aztec Empire the broader intellectual and material consequences of the conquest.

**ANTH 439. Ethnography of Mexico. 3 Hours.**

Survey of the incorporation of rural Mexican communities into the country's developing industrial economy.

**ANTH 442. Historical Archaeology. 3 Hours.**

This course involves all stages of archaeological field work at a historical archaeology site. Students will learn survey skills, excavation, mapping, recovery, and post-field analysis techniques.

**ANTH 443. Propaganda, Fake News, and Hate Speech. 3 Hours.**

This course examines the challenges of propaganda, fake news, and hate speech for human rights and peacebuilding. It begins with a brief history of propaganda and explores the relationship between technology and mass persuasion, including the speed and scope of social media in the current global context. The course then draws from anthropology to understand how misinformation, disinformation, and hate speech interact with culture, politics, and public discourse, and ultimately influence individual decision-making. The course then turns to human rights, peace studies, and law to explore open questions regarding speech freedoms, prohibitions against hate speech, international speech crime trials, and current measures taken by social media companies, courts, and governmental agencies to regulate speech online.

**ANTH 444. Theories of Anthropology. 3 Hours.**

This course provides an overview of the discipline and theories of anthropology, taking into consideration perspectives from the classic four anthropological sub-disciplines. It is intended for students entering the UAB graduate program who do not have a strong background in the four sub-fields of anthropology. Concepts and theory are covered in cultural anthropology, linguistic anthropology, biological anthropology, and archaeology.

**ANTH 445. Medical Anthropology & Health Disparities. 3 Hours.**

This course explores the bio-cultural basis of health and cross-cultural variation in illness and healing which includes theoretical bases of medical anthropology, comparative health care systems, and social, political, and economic issues related to health care delivery around the globe.

**ANTH 446. Explorers, Mummies and Hieroglyphs. 3 Hours.**

This course provides a thematic approach to pharaonic Egypt in general, with one portion covering diverse aspects such as geography, an overview of the history of Dynasties 1-31, society and government, daily religion, mortuary religion, architecture, literature, the military, trade, economy, and daily life. Another portion of the course provides several documentaries regarding early to more recent explorers and Egyptologists (e.g., Belzoni; Champollion; Petrie; Carter; modern Egyptology) with written responses. The third part introduces Egyptian hieroglyphs in eight grammar classes and follow-up user-friendly, in-class exercises, aiming to enable students to translate basic hieroglyphic texts.

**ANTH 447. Advanced Peace Studies. 3 Hours.**

Intensive exploration of concepts and issues involved in the study of peace, social justice, nonviolence, and conflict resolution. Students will engage in an in-depth examination and critique of anthropological approaches to peace and the associated theoretical and practical problems and applications. ANTH 104 (Introduction to Peace Studies) is recommended before taking this class, but not required.

**ANTH 450. Advanced Cultural Anthropology. 3 Hours.**

Critical review of theoretical approaches in cultural anthropology.

**ANTH 451. Advanced Archaeological Anthropology. 3 Hours.**

This course examines the theoretical approaches of 20th century archaeology: historical, processual, and post-processual. This reading intensive seminar is focused on theory and its impact on practice and the development of the subdiscipline of archaeology relative to anthropology.

**ANTH 452. Advanced Linguistic Anthropology. 3 Hours.**

Historical development of theory and field practice of linguistics; acquisition, sociolinguistics, nonverbal communication, semiotics, and ethnosemantics; applied linguistics.

**Prerequisites:** ANTH 120 [Min Grade: C]

**ANTH 453. Advanced Biological Anthropology. 3 Hours.**

Human evolution and primatology; race; human genetics. Tasks performed by physical anthropologists.

**Prerequisites:** ANTH 102 [Min Grade: D]

**ANTH 454. Biological Anthropology and Contemporary Issues. 3 Hours.**

This course applies a biological anthropological perspective to explore what it means to be human and to develop critical perspectives on our culture, science, and media. How did humanity arrive in its current position? How do we understand human diversity? What can we learn from the differences among people, their overwhelming biological similarity, and their common humanity? How do we use this knowledge to build a sustainable future for ourselves?

**ANTH 458. Human Sexuality. 3 Hours.**

This course will explore human sexuality and gender from an anthropological perspective, including biological and cultural perspectives, as well as the areas where anthropology meets psychology. The evolution of sexual behavior in humans and in non-human primates will be examined, as well as how sexuality is embedded in socio-cultural context both across and within societies.

**ANTH 459. Politics, Drugs and Society in Latin America. 3 Hours.**

This course will examine the role of drug production and the drug trade in the economic and political life of Latin American societies. Viewed historically and ethnographically, the course will include coverage of the traditional uses of drugs in indigenous societies as well as the more recent globalization of the industry.

**ANTH 464. Political Anthropology. 3 Hours.**

Individuals and associations of individuals in all societies variously compete and cooperate in the course of daily life. This course will draw upon the global inventory of ethnographic information to examine these political processes. Whereas the causes of socio-political competition and cooperation vary widely from one culture to the next, socio-political competition and cooperation are nevertheless universal facts of life for individuals living in a society.

**ANTH 467. Museum Studies. 3 Hours.**

This course uses case studies, analysis of topical issues, and problem-based learning exercises to explore the many aspects of museum studies relevant to the administration and management of not-for-profit museums. This course provides an interdisciplinary introduction to museum work.

**ANTH 483. Intern in Peace, Justice and Environmental Study. 1-3 Hour.**

Individually designed program that places students in local environmental organizations, divisions of local businesses or government, or special projects to gain professional experience in preparation for careers focused on peace, social justice, and/or environment.

**ANTH 486. Special Problems in Applied Anthropology. 3 Hours.**

Supervised study of specified topic area; defined problem explored in depth; topics determined by student and instructor interest.

**ANTH 487. Special Problems in Peace Research. 1-3 Hour.**

Supervised study of specified topic area in peace studies; defined problem explored in depth. Topics are determined by student and instructor interest.

**ANTH 488. Special Problems in Human Rights. 1-3 Hour.**

Supervised study of specified topic area in Human Rights; defined problem explored in depth. Topics are determined by student and instructor interest.

**ANTH 490. Special Problems in Cultural Anthropology. 3 Hours.**

Supervised study of specified topic area; defined problem explored in depth; topics determined by student and instructor interest.

**ANTH 492. Special Problems in Archaeology. 3,6 Hours.**

Supervised in-depth study of specified topic area in archaeology. Topics determined by student and instructor interest.

**ANTH 494. Special Problems in Linguistics. 3 Hours.**

Supervised in-depth study of specified topic area in linguistics. Topics determined by student and instructor interest.

**ANTH 496. Special Problems in Biological Anthropology. 3 Hours.**

Supervised, in-depth study of specified topic area in biological anthropology. Topic determined by student and instructor interest.

**ANTH 497. Special Topics in Anthropology. 3 Hours.**

Topics vary. See class schedule for topic.

**ANTH 498. Honors Thesis Research. 3-6 Hours.**

Independent development of research project.

## Department of Art & Art History

**Chair:** Rich Gere

The Department of Art and Art History grants the following undergraduate degrees: a Bachelor of Arts and a Bachelor of Fine Arts. The B.A. has two areas of concentration: Art Studio and Art History. The department awards a Master of Arts in Cultural Heritage Studies as well as a Master of Arts in Art History in conjunction with the University of Alabama at Tuscaloosa. The MA in Art Education degree is granted through the School of Education. UAB's Department of Art and Art History is accredited by the National Association of Schools of Art and Design. Nationally and internationally active scholars and artists who promote creative inquiry, scholarship and innovation are actively teaching in their classrooms and studios.

### Art History:

Emphasizing skills in critical thinking and visual literacy, students study a breadth of art history across time periods and culture preparing students for a wide range of careers and graduate study.

The Master of Arts degree in Art History prepares students for further academic study at the doctoral level or for professional careers in teaching, museums, galleries, and other arts-related fields. The M.A. degree in Cultural Heritage Studies provides students with the theoretical background and practical skills necessary to enter a career in the emerging fields of cultural heritage practice, policy, and management.

### Studio Art:

Studio art courses enable students to emphasize the skills and concepts of communicating visually, critically and conceptually. Students are encouraged to create a trajectory and drive for making art through experiencing the disciplines of the fine arts and design.

Students gain hands-on experience as they learn to formulate an understanding of the principles and elements of artistic practice. Students execute artworks by choosing media and technologies that support their ideas. They learn to develop sound research and production values, work in teams, analyze artwork, create professional portfolios and present their work orally and in writing.

## Bachelor of Arts with a Major in Art and an Art History Concentration

The B.A. degree in Art is offered for students who seek a liberal arts education with a concentration in art history.

Must earn a C or better in all coursework.

Requirements	Hours
<b>Freshman Year Experience</b> <sup>1</sup>	
College of Arts and Sciences Freshman Year Experience course	1
<b>Art Survey</b> <sup>2</sup>	
Select three of the following:	9
ARH 203 Ancient and Medieval Art	
ARH 204 Early Modern-Contemporary Art	
ARH 206 Survey of Asian Art	
ARH 205 Survey of African Art	
ARH 207 Special Topics in Art History	

### Art History Methods

ARH 299	Introduction to Research in Art History	3
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### Art Studio Requirement

Select two of the following:	6
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ARS 100	Drawing: Observations and Perceptions
ARS 101	Two-Dimensional Design Foundations
ARS 102	Spacial Solutions
ARS 103	Type and Image
ARS 104	Time and Duration
ARS 110	Visual Literacy & Application Foundations
ARS 280	Creativity and Imagination <sup>2</sup>

### Asian/Non-Western Art<sup>5</sup>

Select one of the following:	3
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ARH 370	Tomb Art in East Asia
ARH 372	Buddhist & Hindu Art in India to 1200
ARH 373	Japanese Prints/Printmakers
ARH 374	Landscape and Image in East Asia
ARH 375	Japanese Art
ARH 377	Piety and Power: Art in India after 1200
ARH 405	Special Topics in African Art
ARH 471	Post-Partition Identity in South Asian Cinema
ARH 478	Seminar: Buddhist Arts of East Asia
ARH 479	Study Abroad: Art & Culture of South Asia
ARH 486	Special Topics: South Asia
ARH 488	Special Topics: East Asian Art
ARH 493	Seminar: South Asian Art
ARH 494	Seminar: East Asian Art

### Early Modern<sup>5</sup>

Select one of the following:	3
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ARH 321	Italian Renaissance Art
ARH 324	Northern Renaissance Art
ARH 331	Seventeenth-Century Painting
ARH 422	The Invention of Painting in Renaissance Europe
ARH 423	Study Abroad: European Art
ARH 435	Arts of Power in Early Modern Europe
ARH 481	Special Topics: Early Modern Art
ARH 495	Seminar: Early Modern Art

### Eighteenth and Nineteenth Century<sup>5</sup>

Select one of the following:	3
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ARH 340	19th Century Art I: Neoclassicism, Romanticism, Realism
ARH 341	19th Century Art II: Impressionism and Post-Impressionism
ARH 350	American Art and Material Culture
ARH 430	Eighteenth-Century Art in Europe

### Twentieth Century/Contemporary<sup>5</sup>

Select one of the following:	3
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ARH 360	Twentieth-Century Art to 1945
ARH 361	Modern Design
ARH 364	Art Since 1945
ARH 367	Modern Architecture
ARH 368	Race and Representation
ARH 465	Aspects of Contemporary Art
ARH 471	Post-Partition Identity in South Asian Cinema
ARH 480	Art Criticism and Theory
ARH 482	Special Topics: Modern Art
ARH 484	Special Topics: Contemporary Art

ARH 485	Special Topics: Museum Studies
ARH 487	Special Topics: Field Study
ARH 496	Seminar: Modern Art
ARH 497	Seminar: Contemporary Art
<b>Art History Elective</b> <sup>3,5</sup>	
Select three of the following:	
ARH 321	Italian Renaissance Art
ARH 324	Northern Renaissance Art
ARH 331	Seventeenth-Century Painting
ARH 340	19th Century Art I: Neoclassicism, Romanticism, Realism
ARH 341	19th Century Art II: Impressionism and Post-Impressionism
ARH 350	American Art and Material Culture
ARH 360	Twentieth-Century Art to 1945
ARH 361	Modern Design
ARH 364	Art Since 1945
ARH 367	Modern Architecture
ARH 368	Race and Representation
ARH 370	Tomb Art in East Asia
ARH 372	Buddhist & Hindu Art in India to 1200
ARH 373	Japanese Prints/Printmakers
ARH 374	Landscape and Image in East Asia
ARH 375	Japanese Art
ARH 377	Piety and Power: Art in India after 1200
ARH 405	Special Topics in African Art
ARH 409	Egypt in the Age of the Pyramids
ARH 410	Imperial and Post Imperial Egypt
ARH 419	Arts of Death in the Middle Ages
ARH 422	The Invention of Painting in Renaissance Europe
ARH 423	Study Abroad: European Art
ARH 430	Eighteenth-Century Art in Europe
ARH 435	Arts of Power in Early Modern Europe
ARH 465	Aspects of Contemporary Art
ARH 471	Post-Partition Identity in South Asian Cinema
ARH 478	Seminar: Buddhist Arts of East Asia
ARH 479	Study Abroad: Art & Culture of South Asia
ARH 480	Art Criticism and Theory
ARH 481	Special Topics: Early Modern Art
ARH 482	Special Topics: Modern Art
ARH 483	Special Topics: Gender and the Visual Arts
ARH 484	Special Topics: Contemporary Art
ARH 485	Special Topics: Museum Studies
ARH 486	Special Topics: South Asia
ARH 487	Special Topics: Field Study
ARH 488	Special Topics: East Asian Art
ARH 490	Art Theory: Special Topics
ARH 491	Independent Study
ARH 492	Museum/Gallery Internship
ARH 493	Seminar: South Asian Art
ARH 494	Seminar: East Asian Art
ARH 495	Seminar: Early Modern Art
ARH 496	Seminar: Modern Art
ARH 497	Seminar: Contemporary Art
ARH 498	AEIVA Internship

**Art History/Art Studio Elective** <sup>5</sup>

Select one course from Art History (ARH) or Art Studio (ARS):

9

3

ARH 101	The Art Experience
ARH 321	Italian Renaissance Art
ARH 324	Northern Renaissance Art
ARH 331	Seventeenth-Century Painting
ARH 207	Special Topics in Art History
ARH 340	19th Century Art I: Neoclassicism, Romanticism, Realism
ARH 341	19th Century Art II: Impressionism and Post-Impressionism
ARH 350	American Art and Material Culture
ARH 360	Twentieth-Century Art to 1945
ARH 361	Modern Design
ARH 364	Art Since 1945
ARH 367	Modern Architecture
ARH 368	Race and Representation
ARH 370	Tomb Art in East Asia
ARH 372	Buddhist & Hindu Art in India to 1200
ARH 373	Japanese Prints/Printmakers
ARH 374	Landscape and Image in East Asia
ARH 375	Japanese Art
ARH 377	Piety and Power: Art in India after 1200
ARH 405	Special Topics in African Art
ARH 409	Egypt in the Age of the Pyramids
ARH 410	Imperial and Post Imperial Egypt
ARH 419	Arts of Death in the Middle Ages
ARH 422	The Invention of Painting in Renaissance Europe
ARH 423	Study Abroad: European Art
ARH 430	Eighteenth-Century Art in Europe
ARH 435	Arts of Power in Early Modern Europe
ARH 465	Aspects of Contemporary Art
ARH 471	Post-Partition Identity in South Asian Cinema
ARH 478	Seminar: Buddhist Arts of East Asia
ARH 479	Study Abroad: Art & Culture of South Asia
ARH 480	Art Criticism and Theory
ARH 481	Special Topics: Early Modern Art
ARH 482	Special Topics: Modern Art
ARH 483	Special Topics: Gender and the Visual Arts
ARH 484	Special Topics: Contemporary Art
ARH 485	Special Topics: Museum Studies
ARH 486	Special Topics: South Asia
ARH 487	Special Topics: Field Study
ARH 488	Special Topics: East Asian Art
ARH 490	Art Theory: Special Topics
ARH 491	Independent Study
ARH 492	Museum/Gallery Internship
ARH 493	Seminar: South Asian Art
ARH 494	Seminar: East Asian Art
ARH 495	Seminar: Early Modern Art
ARH 496	Seminar: Modern Art
ARH 497	Seminar: Contemporary Art
ARH 498	AEIVA Internship
ARS 100	Drawing: Observations and Perceptions
ARS 101	Two-Dimensional Design Foundations
ARS 102	Spacial Solutions
ARS 103	Type and Image
ARS 104	Time and Duration
ARS 110	Visual Literacy & Application Foundations

ARS 280	Creativity and Imagination	
ARS 200	Beginning Drawing	
ARS 210	Beginning Painting	
ARS 220	Beginning Sculpture	
ARS 240	Beginning Printmaking	
ARS 250	Beginning Graphic Design	
ARS 260	Beginning New Media	
ARS 270	Beginning Photography	
ARS 300	Drawing - Special Topics 1	
ARS 301	Drawing - Special Topics 2	
ARS 302	Drawing - Special Topics 3	
ARS 310	Painting - Special Topics 1	
ARS 311	Painting - Special Topics 2	
ARS 312	Painting - Special Topics 3	
ARS 320	Sculpture - Special Topics 1	
ARS 321	Sculpture - Special Topics 2	
ARS 322	Sculpture - Special Topics 3	
ARS 340	Printmaking - Special Topics 1	
ARS 341	Printmaking - Special Topics 2	
ARS 342	Printmaking - Special Topics 3	
ARS 350	Graphic Design - Special Topics 1	
ARS 351	Graphic Design - Special Topics 2	
ARS 352	Graphic Design - Special Topics 3	
ARS 360	New Media - Special Topics 1	
ARS 361	New Media- Special Topics 2	
ARS 362	New Media- Special Topics 3	
ARS 370	Photography - Special Topics 1	
ARS 371	Photography - Special Topics 2	
ARS 372	Photography - Special Topics 3	
ARS 495	Special Topics-Interdisciplinary	

**B.A. Capstone (taken at senior level)**

ARH 489	Art History Senior Capstone	1
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**Foreign Language Requirement <sup>4</sup>** **4**

Select one of the following:

CHI 102 & 102L	Introductory Chinese II and Introductory Chinese II Lab	
FR 102 & 102L	Introductory French II and Introductory French II Lab Practice	
GN 102 & 102L	Introductory German II and Introductory German II Lab Practice	
ITL 102 & 102L	Introductory Italian II and Introductory Italian II Lab	
JPA 102 & 102L	Introductory Japanese II and Introductory Japanese Lab II	

Total Hours	48
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<sup>1</sup> Freshmen must take either University 101 or another College of Arts and Sciences Freshman Year Experience Course.

<sup>2</sup> ARH 203, 204, 206, and ARS 280 satisfy Core Curriculum Area II.

<sup>3</sup> For students accepted into honors program: ARH 499 and two courses from Art History (ARH) at the 400-level.

<sup>4</sup> Italian, Chinese, or Japanese must be approved by the art history undergraduate advisor (alternatively, students may receive equivalent placement; this option reduces the credit hours of this requirement to zero).

<sup>5</sup> At least 9 hours must be taken at the 400 level

## Bachelor of Arts with a Major in Art and an Art Studio Concentration

The B.A. degree in Art is offered for students who seek a liberal arts education with a concentration in art studio.

Requirements		Hours
A C or better is required in all coursework.		
<b>Freshman Year Experience <sup>1</sup></b>		
College of Arts and Sciences Freshman Year Experience		1
<b>Required Art Studio</b>		
ARS 100	Drawing: Observations and Perceptions	3
ARS 102	Spacial Solutions	3
ARS 103	Type and Image	3
ARS 104	Time and Duration	3
<b>200- Level Art Studio</b>		
Select four of the following:		12
ARS 200	Beginning Drawing	
ARS 210	Beginning Painting	
ARS 220	Beginning Sculpture	
ARS 240	Beginning Printmaking	
ARS 260	Beginning New Media	
ARS 250	Beginning Graphic Design	
ARS 270	Beginning Photography	
ARS 280	Creativity and Imagination	
<b>ARS 295 Special Topics in Studio Art</b>		
<b>300-Level Art Studio</b>		
Select four of the following (must have 200 level prerequisite)		12
ARS 300	Drawing - Special Topics 1	
ARS 301	Drawing - Special Topics 2	
ARS 302	Drawing - Special Topics 3	
ARS 310	Painting - Special Topics 1	
ARS 311	Painting - Special Topics 2	
ARS 312	Painting - Special Topics 3	
ARS 320	Sculpture - Special Topics 1	
ARS 321	Sculpture - Special Topics 2	
ARS 322	Sculpture - Special Topics 3	
ARS 340	Printmaking - Special Topics 1	
ARS 341	Printmaking - Special Topics 2	
ARS 342	Printmaking - Special Topics 3	
ARS 350	Graphic Design - Special Topics 1	
ARS 351	Graphic Design - Special Topics 2	
ARS 352	Graphic Design - Special Topics 3	
ARS 360	New Media - Special Topics 1	
ARS 361	New Media- Special Topics 2	
ARS 362	New Media- Special Topics 3	
ARS 370	Photography - Special Topics 1	
ARS 371	Photography - Special Topics 2	
ARS 372	Photography - Special Topics 3	
<b>400 Level Requirements</b>		<b>9</b>
ARS 495	Special Topics-Interdisciplinary (repeat two times)	
ARS 489	Professionalism, Project Management and Entrepreneurship	
<b>Art History Requirements</b>		
Select one of the following survey courses:		3
ARH 203	Ancient and Medieval Art	
ARH 204	Early Modern-Contemporary Art <sup>2</sup>	

ARH 205	Survey of African Art	
ARH 206	Survey of Asian Art <sup>2</sup>	
ARH 207	Special Topics in Art History	
Select one of the following (Ancient, Medieval, Early Modern, Non-Western):		3
ARH 321	Italian Renaissance Art	
ARH 324	Northern Renaissance Art	
ARH 331	Seventeenth-Century Painting	
ARH 370	Tomb Art in East Asia	
ARH 372	Buddhist & Hindu Art in India to 1200	
ARH 373	Japanese Prints/Printmakers	
ARH 374	Landscape and Image in East Asia	
ARH 377	Piety and Power: Art in India after 1200	
ARH 405	Special Topics in African Art	
ARH 409	Egypt in the Age of the Pyramids	
ARH 410	Imperial and Post Imperial Egypt	
ARH 419	Arts of Death in the Middle Ages	
ARH 422	The Invention of Painting in Renaissance Europe	
ARH 423	Study Abroad: European Art	
ARH 435	Arts of Power in Early Modern Europe	
ARH 471	Post-Partition Identity in South Asian Cinema	
ARH 478	Seminar: Buddhist Arts of East Asia	
ARH 479	Study Abroad: Art & Culture of South Asia	
ARH 481	Special Topics: Early Modern Art	
ARH 486	Special Topics: South Asia	
ARH 488	Special Topics: East Asian Art	
ARH 493	Seminar: South Asian Art	
ARH 494	Seminar: East Asian Art	
ARH 495	Seminar: Early Modern Art	
Choose one of the following (Modern and Contemporary Art):		3
ARH 340	19th Century Art I: Neoclassicism, Romanticism, Realism	
ARH 341	19th Century Art II: Impressionism and Post-Impressionism	
ARH 350	American Art and Material Culture	
ARH 360	Twentieth-Century Art to 1945	
ARH 361	Modern Design	
ARH 364	Art Since 1945	
ARH 367	Modern Architecture	
ARH 368	Race and Representation	
ARH 430	Eighteenth-Century Art in Europe	
ARH 465	Aspects of Contemporary Art	
ARH 471	Post-Partition Identity in South Asian Cinema	
ARH 480	Art Criticism and Theory	
ARH 482	Special Topics: Modern Art	
ARH 483	Special Topics: Gender and the Visual Arts	
ARH 484	Special Topics: Contemporary Art	
ARH 485	Special Topics: Museum Studies	
ARH 487	Special Topics: Field Study	
ARH 496	Seminar: Modern Art	
ARH 497	Seminar: Contemporary Art	
Total Hours		55

## Footnotes

<sup>1</sup> Freshmen must take CAS 112 (College of Arts and Sciences Freshman Year Experience Course) or another approved first-year experience.

<sup>2</sup> Note: ARH 203, or ARH 204, or ARH 206 will also satisfy Core Curriculum Area II.

## Bachelor of Fine Arts -Major in Art

The Department of Art and Art History's Bachelor of Fine Arts degree offers students an intensive exploration across a breadth of media and depth of discipline. Within this context, the undergraduate student prepares to be an artist or designer, begin a career in the arts, or to continue their studies in graduate school. Students gain skills and competencies including: team-based learning, technology, communication, problem solving, aesthetic judgment, interdisciplinary approaches, innovative thinking, critical analysis and professional development throughout their program of study. The BFA exhibition, a highlight of the undergraduate career, both demonstrates and celebrates the students' accomplishments.

### Notes:

Admission to the B.F.A. program requires a portfolio review of the student's work submitted to the B.F.A. committee of the Department of Art and Art History. Portfolios are reviewed twice a year, in the Fall and Spring semesters, following announced deadlines for application to the program. Students must receive a C or higher grade in all studio courses. Students select a member of the studio faculty to serve as their primary mentor for their BFA exhibition /capstone course which occurs each spring in the Abrams-Engel Institute for the Visual Arts. All BFA students must complete a minimum of two formal BFA reviews by the departmental faculty before graduation.

Requirements		Hours
A C or better is required in all coursework.		
<b>Freshman Year Experience <sup>1</sup></b>		
College of Arts and Sciences Freshman Year Experience		1
<b>Required Art Studio Courses</b>		
ARS 100	Drawing: Observations and Perceptions	3
ARS 101	Two-Dimensional Design Foundations	3
ARS 102	Spacial Solutions	3
ARS 103	Type and Image	3
ARS 104	Time and Duration	3
ARS 110	Visual Literacy & Application Foundations	3
<b>200-level Art Studio Courses</b>		
Select four of the following :		12
ARS 200	Beginning Drawing	
ARS 210	Beginning Painting	
ARS 220	Beginning Sculpture	
ARS 240	Beginning Printmaking	
ARS 250	Beginning Graphic Design	
ARS 260	Beginning New Media	
ARS 270	Beginning Photography	
ARS 280	Creativity and Imagination	
<b>300/400-level Studio Course Sequences <sup>3</sup></b>		
Select one of the following discipline sequences (must have 200 level prerequisite):		12
<b>Drawing</b>		
ARS 300	Drawing - Special Topics 1	
ARS 301	Drawing - Special Topics 2	
ARS 302	Drawing - Special Topics 3	
ARS 400	Advanced Drawing	
<b>Painting</b>		
ARS 310	Painting - Special Topics 1	

ARS 311	Painting - Special Topics 2
ARS 312	Painting - Special Topics 3
ARS 410	Advanced Painting
<b>Sculpture</b>	
ARS 320	Sculpture - Special Topics 1
ARS 321	Sculpture - Special Topics 2
ARS 322	Sculpture - Special Topics 3
ARS 420	Advanced Sculpture
<b>Printmaking</b>	
ARS 340	Printmaking - Special Topics 1
ARS 341	Printmaking - Special Topics 2
ARS 342	Printmaking - Special Topics 3
ARS 440	Advanced Printmaking
<b>Graphic Design</b>	
ARS 350	Graphic Design - Special Topics 1
ARS 351	Graphic Design - Special Topics 2
ARS 352	Graphic Design - Special Topics 3
ARS 450	Advanced Graphic Design
<b>New Media</b>	
ARS 360	New Media - Special Topics 1
ARS 361	New Media- Special Topics 2
ARS 362	New Media- Special Topics 3
ARS 460	Advanced New Media
<b>Photography</b>	
ARS 370	Photography - Special Topics 1
ARS 371	Photography - Special Topics 2
ARS 372	Photography - Special Topics 3
ARS 470	Advanced Photography
<b>Elective Studio Courses</b>	
Select four of the following (must have 200 level prerequisites, no course repeat except ARS 495):	
ARS 300	Drawing - Special Topics 1
ARS 301	Drawing - Special Topics 2
ARS 302	Drawing - Special Topics 3
ARS 310	Painting - Special Topics 1
ARS 311	Painting - Special Topics 2
ARS 312	Painting - Special Topics 3
ARS 320	Sculpture - Special Topics 1
ARS 321	Sculpture - Special Topics 2
ARS 322	Sculpture - Special Topics 3
ARS 340	Printmaking - Special Topics 1
ARS 341	Printmaking - Special Topics 2
ARS 342	Printmaking - Special Topics 3
ARS 350	Graphic Design - Special Topics 1
ARS 351	Graphic Design - Special Topics 2
ARS 352	Graphic Design - Special Topics 3
ARS 360	New Media - Special Topics 1
ARS 361	New Media- Special Topics 2
ARS 362	New Media- Special Topics 3
ARS 370	Photography - Special Topics 1
ARS 371	Photography - Special Topics 2
ARS 372	Photography - Special Topics 3
ARS 490	Independent Study in Studio Art
ARS 492	Studio or Gallery Internship
ARS 495	Special Topics-Interdisciplinary
ARS 498	AEIVA Internship

**400-level Requirements**

12

ARS 489	Professionalism, Project Management and Entrepreneurship <sup>3</sup>
ARS 491	B.F.A. Exhibition <sup>4</sup>
ARS 495	Special Topics-Interdisciplinary (repeat 2 times)
<b>Art History Requirements</b>	
Select two of the following surveys:	
ARH 203	Ancient and Medieval Art <sup>2</sup>
ARH 204	Early Modern-Contemporary Art <sup>2</sup>
ARH 205	Survey of African Art
ARH 206	Survey of Asian Art <sup>2</sup>
ARH 207	Special Topics in Art History
Select one of the following (Ancient, Medieval, Early Modern, Non-Western):	
ARH 321	Italian Renaissance Art
ARH 405	Special Topics in African Art
ARH 409	Egypt in the Age of the Pyramids
ARH 324	Northern Renaissance Art
ARH 331	Seventeenth-Century Painting
ARH 370	Tomb Art in East Asia
ARH 372	Buddhist & Hindu Art in India to 1200
ARH 373	Japanese Prints/Printmakers
ARH 374	Landscape and Image in East Asia
ARH 375	Japanese Art
ARH 377	Piety and Power: Art in India after 1200
ARH 410	Imperial and Post Imperial Egypt
ARH 419	Arts of Death in the Middle Ages
ARH 422	The Invention of Painting in Renaissance Europe
ARH 423	Study Abroad: European Art
ARH 435	Arts of Power in Early Modern Europe
ARH 471	Post-Partition Identity in South Asian Cinema
ARH 478	Seminar: Buddhist Arts of East Asia
ARH 479	Study Abroad: Art & Culture of South Asia
ARH 481	Special Topics: Early Modern Art
ARH 486	Special Topics: South Asia
ARH 488	Special Topics: East Asian Art
ARH 493	Seminar: South Asian Art
ARH 494	Seminar: East Asian Art
ARH 495	Seminar: Early Modern Art
Select one of the following (Modern and Contemporary Art):	
ARH 340	19th Century Art I: Neoclassicism, Romanticism, Realism
ARH 341	19th Century Art II: Impressionism and Post-Impressionism
ARH 350	American Art and Material Culture
ARH 360	Twentieth-Century Art to 1945
ARH 361	Modern Design
ARH 364	Art Since 1945
ARH 367	Modern Architecture
ARH 368	Race and Representation
ARH 430	Eighteenth-Century Art in Europe
ARH 465	Aspects of Contemporary Art
ARH 471	Post-Partition Identity in South Asian Cinema
ARH 480	Art Criticism and Theory
ARH 482	Special Topics: Modern Art
ARH 483	Special Topics: Gender and the Visual Arts
ARH 484	Special Topics: Contemporary Art
ARH 485	Special Topics: Museum Studies

6

3

3

ARH 487	Special Topics: Field Study
ARH 496	Seminar: Modern Art
ARH 497	Seminar: Contemporary Art

Total Hours 79

- <sup>1</sup> Freshmen must take either University 101 or another College of Arts and Sciences Freshman Year Experience Course.
- <sup>2</sup> Note: ARH 203, or ARH 204, or ARH 206 will also satisfy Core Curriculum Area II: Fine Arts.
- <sup>3</sup> Only offered during the Fall semester
- <sup>4</sup> Only offered during the Spring semester

## Proposed Program of Study for a Major in Art - Art History

\*General Electives should be taken to reach 120 hour requirement

### Freshman

First Term	Hours	Second Term	Hours
ARH 203, 205, or 207 <sup>1</sup>		3 ARH 203, 204, 205, 206, or 207	3
Freshman Year Experience		3 Choose one ARS Course <sup>2</sup>	3
Core Curriculum Area IV: History		3 Core Curriculum Area IV: History	3
Core Curriculum Area IV or Freshman Learning Community		3 Core Curriculum Area IV or Freshman Learning Community	3
	12		12

### Sophomore

First Term	Hours	Second Term	Hours
ARH 203, 204, 205, 206, or 207		3 Choose one 300 or 400 ARH Course: Early Modern <sup>4</sup>	3
ARH 299		3 Choose one ARS course <sup>2</sup>	3
Core Curriculum Area II: Literature		3 Choose one Foreign Language Course	4
Core Curriculum Area III: Natural Science with Laboratory		4 Core Curriculum Area III: Natural Science with Laboratory	4
	13		14

### Junior

First Term	Hours	Second Term	Hours
Choose one ARS Course <sup>1</sup>		3 Choose one 300 or 400-level ARH Course: Twentieth Century/Contemporary <sup>6</sup>	3
Choose one 400-level ARH course: Asian/Non-Western <sup>3</sup>		3 Choose one ARH Elective <sup>7</sup>	3
Core Curriculum Area III: Mathematics		3 Core Curriculum Area II: Humanities	3
	9		9

### Senior

First Term	Hours	Second Term	Hours
ARH 489		1 Choose one ARH Elective Course <sup>7</sup>	3
Choose one 400-Level ARH Course: Eighteenth & Nineteenth Century <sup>5</sup>		3 Core Curriculum Area II: Humanities	3
Choose One 400-level ARH elective course <sup>7</sup>		3 General Elective	3

Core Curriculum Area II: Humanities	3
	10
	9

Total credit hours: 88

- <sup>1</sup> Satisfies Core Curriculum Area II: Fine Art
- <sup>2</sup> ARS 100, ARS 101, ARS 102, ARS 103, ARS 104, ARS 110, ARS 280
- <sup>3</sup> Asian/Non-Western: ARH 205, ARH 370, ARH 372, ARH 373, ARH 374, ARH 375, ARH 377, ARH 471, ARH 478, ARH 479, ARH 486, ARH 488, ARH 493, ARH 494
- <sup>4</sup> Early Modern: ARH 321, ARH 324, ARH 331, ARH 422, ARH 423, ARH 435, ARH 481, ARH 495
- <sup>5</sup> Eighteenth and Nineteenth Century: ARH 340, ARH 341, ARH 350, ARH 430
- <sup>6</sup> Twentieth Century/Contemporary: ARH 360, ARH 361, ARH 364, ARH 367, ARH 368, ARH 465, ARH 471, ARH 480, ARH 482, ARH 483, ARH 484, ARH 485, ARH 487, ARH 496, ARH 497
- <sup>7</sup> Art History Elective: ARH 321, ARH 324, ARH 331, ARH 340, ARH 341, ARH 350, ARH 360, ARH 361, ARH 364, ARH 367, ARH 368, ARH 370, ARH 372, ARH 373, ARH 374, ARH 375, ARH 377, ARH 405, ARH 409, ARH 410, ARH 419, ARH 422, ARH 423, ARH 430, ARH 435, ARH 465, ARH 471, ARH 478, ARH 479, ARH 480, ARH 481, ARH 482, ARH 483, ARH 484, ARH 485, ARH 486, ARH 487, ARH 488, ARH 490, ARH 491, ARH 492, ARH 493, ARH 494, ARH 495, ARH 496, ARH 497
- <sup>8</sup> CHI 102, FR 102, GN 102, JPA 102

## Proposed Program of Study for a Major in Art - Art Studio

### Freshman

First Term	Hours	Second Term	Hours
ARS 110		3 100 level ARS course <sup>1</sup>	3
Freshman Year Experience		1 100 level ARS course <sup>1</sup>	3
Core Curriculum Area IV: History		3 Core Curriculum Area IV: History	3
Core Curriculum Area IV or Freshman Learning Community		3 Core Curriculum Area IV or Freshman Learning Community	3
	10		12

### Sophomore

First Term	Hours	Second Term	Hours
100 level ARS course <sup>1</sup>		3 100 level ARS course <sup>1</sup>	3
100 level ARS course <sup>1</sup>		3 ARS 280 ( or 200 level ARS course) <sup>2</sup>	3
Core Curriculum Area II: Literature		3 200 level ARS course in discipline focus <sup>2</sup>	3
Core Curriculum Area III: Natural Science with Laboratory		3 Core Curriculum Area III: Natural Science with Laboratory	3
	12		12

### Junior

First Term	Hours	Second Term	Hours
ARS 300 (discipline focus)		3 ARS 300 (discipline focus)	3
Drawing <sup>3</sup>		Drawing <sup>3</sup>	
Painting <sup>4</sup>		Painting <sup>4</sup>	
Sculpture <sup>5</sup>		Sculpture <sup>5</sup>	

Printmaking <sup>6</sup>	Printmaking <sup>6</sup>		
Graphic Design <sup>7</sup>	Graphic Design <sup>7</sup>		
New Media <sup>8</sup>	New Media <sup>8</sup>		
Photography <sup>9</sup>	Photography <sup>9</sup>		
Core Curriculum Area II: Fine Art (200 level ARH course) <sup>10</sup>	3 ARS 495	3	
	Core Curriculum Area II: Humanities	3	
	6	9	
<b>Senior</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
ARS 495		3 400 level ARH course: Modern and Contemporary <sup>12</sup>	3
ARS 489		3 Core Curriculum Area II: Humanities	3
400 level ARH course: Ancient, Medieval, Early Modern, Non-Western <sup>11</sup>		3 General Elective	3
	9		9

Total credit hours: 79

\*General Electives should be taken to reach 120 hour requirement

- <sup>1</sup> ARS 100, ARS 101, ARS 102, ARS 103, ARS 104
- <sup>2</sup> ARS 200, ARS 210, ARS 240, ARS 250, ARS 260, ARS 270
- <sup>3</sup> Drawing: ARS 300, ARS 301, ARS 302
- <sup>4</sup> Painting: ARS 310, ARS 311, ARS 312
- <sup>5</sup> Sculpture: ARS 320, ARS 321, ARS 322
- <sup>6</sup> Printmaking: ARS 340, ARS 341, ARS 342
- <sup>7</sup> Graphic Design: ARS 350, ARS 351, ARS 352
- <sup>8</sup> New Media: ARS 360, ARS 361, ARS 362
- <sup>9</sup> Photography: ARS 370, ARS 371, ARS 372
- <sup>10</sup> Art History Survey: ARH 203, ARH 204, ARH 206
- <sup>11</sup> ARH 300 or 400 level/Ancient, Medieval, Early Modern, Non-Western: ARH 321, ARH 324, ARH 331, ARH 370, ARH 372, ARH 373, ARH 374, ARH 375, ARH 377, ARH 405, ARH 409, ARH 410, ARH 419, ARH 422, ARH 423, ARH 435, ARH 471, ARH 478, ARH 479, ARH 481, ARH 486, ARH 488, ARH 493, ARH 494, ARH 495
- <sup>12</sup> ARH 300 or 400 level/ Contemporary and Modern: ARH 340, ARH 341, ARH 350, ARH 360, ARH 361, ARH 364, ARH 367, ARH 368, ARH 430, ARH 465, ARH 471, ARH 480, ARH 482, ARH 483, ARH 484, ARH 485, ARH 487, ARH 496, ARH 497

## Proposed Program of Study for a Bachelor of Fine Arts

<b>Freshman</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
ARS 110		3 100 level ARS course <sup>1</sup>	3
100 level ARS course <sup>1</sup>		3 100 level ARS course <sup>1</sup>	3
Freshman Year Experience		1 Core Curriculum Area IV: History	3
Core Curriculum Area IV: History		3 Core Curriculum Area IV or Freshman Learning Community	3

Core Curriculum Area IV or Freshman Learning Community	3		
	13		12

### Sophomore

<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
100 level ARS course <sup>1</sup>		3 200 level ARS course <sup>2</sup>	3
100 level ARS course <sup>1</sup>		3 200 level ARS course <sup>2</sup>	3
Core Curriculum Area II: Literature		3 200 level ARH course	3
Core Curriculum Area II: Natural Science with Laboratory		3 ARS 300 (discipline focus)	3
ARS 280 (or 200 level ARS course) <sup>2</sup>	3	Drawing <sup>3</sup>	
		Painting <sup>4</sup>	
		Sculpture <sup>5</sup>	
		Printmaking <sup>6</sup>	
		Graphic Design <sup>7</sup>	
		New Media <sup>8</sup>	
		Photography <sup>9</sup>	
		Core Curriculum Area III: Natural Science with Laboratory	3
	15		15

### Junior

<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
200 level ARS course <sup>3</sup>		3 300 level ARS elective <sup>3-9</sup>	3
ARS 300 (discipline focus)		3 300 level ARS elective <sup>3-9</sup>	3
Drawing <sup>3</sup>		ARS 300 (discipline focus)	3
Painting <sup>4</sup>		Drawing <sup>3</sup>	
Sculpture <sup>5</sup>		Painting <sup>4</sup>	
Printmaking <sup>6</sup>		Sculpture <sup>5</sup>	
Graphic Design <sup>7</sup>		Printmaking <sup>6</sup>	
New Media <sup>8</sup>		Graphic Design <sup>7</sup>	
Photography <sup>9</sup>		New Media <sup>8</sup>	
300 level ARS elective <sup>3-9</sup>	3	Photography <sup>9</sup>	
Core Curriculum Area II: Fine Art (200 level ARH course) <sup>10</sup>		3 ARS 495	3
		Core Curriculum Area II: Humanities	3
	12		15

### Senior

<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
ARS 495		3 ARS 491	3
ARS 495 (or elective ARS course) <sup>3-9, 14</sup>		3 300 or 400 level ARH course: Modern and Contemporary <sup>13</sup>	3
ARS 489		3 ARH elective <sup>12, 13</sup>	
400 level ARS course in discipline focus area <sup>11</sup>		3 Core Curriculum Area II: Humanities	3
300 or 400 level ARH course: Ancient, Medieval, Early Modern, Non-Western <sup>12</sup>		3 General Elective	3
	15		12

Total credit hours: 109

\*General Electives should be taken to reach 120 hour requirement

<sup>1</sup> ARS 100, ARS 101, ARS 102, ARS 103, ARS 104

<sup>2</sup> ARS 200, ARS 210, ARS 240, ARS 250, ARS 260, ARS 270

- <sup>3</sup> Drawing: ARS 300, ARS 301, ARS 302
- <sup>4</sup> Painting: ARS 310, ARS 311, ARS 312
- <sup>5</sup> Sculpture: ARS 320, ARS 321, ARS 322
- <sup>6</sup> Printmaking: ARS 340, ARS 341, ARS 342
- <sup>7</sup> Graphic Design: ARS 350, ARS 351, ARS 352
- <sup>8</sup> New Media: ARS 360, ARS 361, ARS 362
- <sup>9</sup> Photography: ARS 370, ARS 371, ARS 372
- <sup>10</sup> Art History Survey: ARH 203, ARH 204, ARH 206
- <sup>11</sup> Advanced Studio Disciplines: ARS 400, ARS 410, ARS 420, ARS 440, ARS 450, ARS 460, ARS 470
- <sup>12</sup> ARH 300 or 400 level/ Ancient, Medieval, Early Modern, Non-Western courses: ARH 321, ARH 324, ARH 331, ARH 370, ARH 372, ARH 373, ARH 374, ARH 375, ARH 377, ARH 405, ARH 409, ARH 410, ARH 419, ARH 422, ARH 423, ARH 435, ARH 471, ARH 478, ARH 479, ARH 481, ARH 486, ARH 488, ARH 493, ARH 494, ARH 495
- <sup>13</sup> ARH 300 or 400 level/ Contemporary and Modern: ARH 340, ARH 341, ARH 350, ARH 360, ARH 361, ARH 364, ARH 367, ARH 368, ARH 430, ARH 465, ARH 471, ARH 480, ARH 482, ARH 483, ARH 484, ARH 485, ARH 487, ARH 496, ARH 497
- <sup>14</sup> ARS 490, ARS 492

## Minor in Art History

Requirements	Hours
Select two of the following: <sup>1</sup>	6
ARH 203 Ancient and Medieval Art	
ARH 204 Early Modern-Contemporary Art	
ARH 205 Survey of African Art	
ARH 206 Survey of Asian Art	
ARH 207 Special Topics in Art History	
<b>Art History Electives</b>	
Select four of the following:	12
ARH 101 The Art Experience	
ARH 299 Introduction to Research in Art History	
ARH 321 Italian Renaissance Art (change from 400 level to 300 level)	
ARH 324 Northern Renaissance Art (change from 400 level to 300 level)	
ARH 331 Seventeenth-Century Painting (change from 400 level to 300 level)	
ARH 340 19th Century Art I: Neoclassicism, Romanticism, Realism (change from 400 level to 300 level)	
ARH 341 19th Century Art II: Impressionism and Post-Impressionism (change from 400 level to 300 level)	
ARH 350 American Art and Material Culture (change from 400 level to 300 level)	
ARH 360 Twentieth-Century Art to 1945 (change from 400 level to 300 level)	
ARH 361 Modern Design (change from 400 level to 300 level)	
ARH 364 Art Since 1945 (change from 400 level to 300 level)	
ARH 367 Modern Architecture (change from 400 level to 300 level)	
ARH 368 Race and Representation (change from 400 level to 300 level)	
ARH 370 Tomb Art in East Asia (change from 400 level to 300 level)	

ARH 372	Buddhist & Hindu Art in India to 1200 (change from 400 level to 300 level)
ARH 373	Japanese Prints/Printmakers (change from 400 level to 300 level)
ARH 374	Landscape and Image in East Asia (change from 400 level to 300 level)
ARH 375	Japanese Art (change from 400 level to 300 level)
ARH 377	Piety and Power: Art in India after 1200 (change from 400 level to 300 level)
ARH 405	Special Topics in African Art
ARH 409	Egypt in the Age of the Pyramids
ARH 410	Imperial and Post Imperial Egypt
ARH 419	Arts of Death in the Middle Ages
ARH 422	The Invention of Painting in Renaissance Europe
ARH 423	Study Abroad: European Art
ARH 430	Eighteenth-Century Art in Europe
ARH 435	Arts of Power in Early Modern Europe
ARH 465	Aspects of Contemporary Art
ARH 471	Post-Partition Identity in South Asian Cinema
ARH 478	Seminar: Buddhist Arts of East Asia
ARH 479	Study Abroad: Art & Culture of South Asia
ARH 480	Art Criticism and Theory
ARH 481	Special Topics: Early Modern Art
ARH 482	Special Topics: Modern Art
ARH 483	Special Topics: Gender and the Visual Arts
ARH 484	Special Topics: Contemporary Art
ARH 485	Special Topics: Museum Studies
ARH 486	Special Topics: South Asia
ARH 487	Special Topics: Field Study
ARH 488	Special Topics: East Asian Art
ARH 490	Art Theory: Special Topics
ARH 493	Seminar: South Asian Art
ARH 494	Seminar: East Asian Art
ARH 495	Seminar: Early Modern Art
ARH 496	Seminar: Modern Art
ARH 497	Seminar: Contemporary Art
Total Hours	18

<sup>1</sup> Note: ARH 203, or ARH 204, or ARH 206 will also satisfy Core Curriculum Area II.

<sup>2</sup> A grade of C or better is required for courses applying to this minor.

## Minor in Art Studio

Requirements	Hours
<b>Art Foundations</b>	12
Choose four of the following:	
ARS 100 Drawing: Observations and Perceptions	
ARS 101 Two-Dimensional Design Foundations	
ARS 102 Spatial Solutions	
ARS 103 Type and Image	
ARS 104 Time and Duration	
ARS 110 Visual Literacy & Application Foundations	
ARS 280 Creativity and Imagination <sup>1</sup>	
<b>Art History Survey</b> <sup>1</sup>	3
Choose one of the following:	
ARH 203 Ancient and Medieval Art	
ARH 204 Early Modern-Contemporary Art	

ARH 205	Survey of African Art
ARH 206	Survey of Asian Art
ARH 207	Special Topics in Art History
<b>Art Studio Courses</b>	
Choose one of the following:	
ARS 200	Beginning Drawing
ARS 210	Beginning Painting
ARS 220	Beginning Sculpture
ARS 240	Beginning Printmaking
ARS 250	Beginning Graphic Design
ARS 260	Beginning New Media
ARS 270	Beginning Photography
Total Hours	18

<sup>1</sup> Note: ARH 203, or ARH 204, or ARH 206, or ARS 280 will also satisfy Core Curriculum Area II.

<sup>2</sup> A grade of C or better is required for courses applying to this minor.

## Honors in Art History & Art Studio

### HONORS IN ART HISTORY:

#### Purpose

The Honors Program in Art History is designed for outstanding art history students. Through a program emphasizing critical analysis, enhanced writing and original research proficiencies, students will develop skills necessary to professional careers in the arts and humanities and to further graduate study.

#### Benefits

Students will work closely with faculty mentor and develop extensive research and writing skills. They will also receive a certificate at the spring UAB Honors Convocation and will graduate "With Honors in Art History."

#### Eligibility

To be accepted into the Honors Program in Art History, a student must:

- Be a B.A. Art major (Concentration in Art History).
- Have at least a 3.5 GPA in Art History courses.
- Have at least a 3.0 GPA overall.
- Have completed at least 12 hours in art history, 3 hours of which must be at the 400-level.
- Submit an Art History Honors Program application form to the B.A. Art History Advisor for the Department of Art and Art History.

Application forms can be found on the department website. The Department Chair approves admission into the program in consultation with the art history faculty.

#### Requirements

- Complete all required courses for the B.A. Art (Art History concentration) major.
- Maintain a 3.5 GPA in art history and 3.0 GPA overall.
- In the senior year, complete ARH 499 Honors Thesis. This course may fulfill one of the art history 400-level elective requirements for the

degree. Student should have completed ARH 489 (capstone course for B.A. Art major)

- ARH 499 Honors Thesis is a directed study course where the student will work intensively with a faculty mentor to write a formal, extensive research paper on a topic of the student's choice.
- Prior to registration in ARH 499, typically the preceding semester, the student will select a member of the art history faculty to serve as faculty mentor and submit a thesis project proposal (ca. 3 pages in length plus bibliography).
- Upon approval of the proposal by the faculty mentor, student may register in ARH 499.
- Formatting, title page, and length guidelines for the thesis should be discussed with the Art History advisor or faculty mentor.
- Obtain signature of faculty mentor on Honors Thesis final approval form.
- Submit 1 copy of signed approval form to Art History Advisor who will submit the form to the chair of the department.
- Signed approval form must be submitted by last day of classes (Fall and Spring semesters only), preceding the week of final exams.
- Submission of electronic copy of the thesis to the faculty mentor and to the department chair.

### Contact

For more information and/or admission to the Art History Honors Program, please review the application form found on the department website under student resources.

### HONORS IN ART STUDIO:

#### Purpose

Honors in Studio Art acknowledges outstanding overall achievement in the major, as demonstrated by the quality and depth of a student's work. To apply, eligible students must participate in an ARS491 AND submit a portfolio which includes an artist statement. Application for honors does not insure receipt of honors.

#### Benefits

You will receive a certificate at the spring UAB Honors Convocation and will graduate "With Honors in Art Studio."

#### Eligibility

To be accepted into the Honors Program in Art History, a student must:

- Be a B.F.A. Art Studio major
- Have at least a 3.5 GPA in studio art courses.
- Have at least a 3.0 GPA overall.
- Have completed all major foundations requirements (ARS 100, ARS 101, ARS 102, ARS 103, ARS 104, ARS 110) and at least two 200-level courses (ARS 200, ARS 210, ARS 220, ARS 240, ARS 250, ARS 260, ARS 270, ARS 280).
- Submit an Honors application form to the BFA advisor.

Application forms can be found on the department website. The Department Chair approves admission into the program in consultation with the art studio faculty. You will receive notification of your application from the Chair of the Department.

## Requirements

- Complete all required courses for the B.F.A. major.
- Maintain a 3.5 GPA in studio art and 3.0 GPA overall.
- In the senior year, complete [ARS 491: BFA Exhibition course](#). Student should have completed ARS 489 as a prerequisite (capstone course for B.F.A. major)
- Obtain signature of faculty mentor on Honors final approval form
- Submit a signed approval form to the departmental Chair's office.
- Signed approval form must be submitted by last day of classes (Fall and Spring semesters only), preceding the week of final exams.
- Submission of electronic copy of the portfolio (including artist statement) to the department honors faculty mentor.
- The awarding of honors is the decision of the Studio Art faculty. In addition to the above criteria, the following also play a role in the awarding of honors:
  - + You demonstrated familiarity with the critical issues in the areas of your work
  - + Your BFA Exhibition faculty member observed you to be self-directed and highly motivated throughout the course of study.
  - + Your work in the Senior Exhibition revealed an informed level of critical, conceptual, and technical competence.

## Contact

For more information, please review the application form found on the department website under student resources.

## ARH-Art History Courses

### ARH 101. The Art Experience. 3 Hours.

Introduction to the study of visual culture, prehistoric to present. Emphasis on form and context, and acquiring understanding of art materials and techniques. This course meets the Core Curriculum requirements for Area II: Fine Arts.

### ARH 203. Ancient and Medieval Art. 3 Hours.

Introduction to Western art from prehistoric cave paintings to Gothic Cathedrals. Focusing on ancient Eurasia, Mesopotamia, Egypt, Greece, Rome, and medieval Europe, this course examines the images, monuments, and ideas that shaped the pre-modern world. This course meets the Core Curriculum requirements for Area II: Fine Arts.

### ARH 204. Early Modern-Contemporary Art. 3 Hours.

Introduction to Western art from Renaissance painting to current bio-sculpture. Focusing on Europe, its colonies, the United States, and global contemporary art, this course examines the images, monuments, and ideas that shaped the modern world. This course meets the Core Curriculum requirements for Area II: Fine Arts.

### ARH 205. Survey of African Art. 3 Hours.

Significant monuments and artworks of the different cultures of Africa.

### ARH 206. Survey of Asian Art. 3 Hours.

Art and culture of India, China, and Japan. This course meets the Core Curriculum requirements for Area II: Fine Arts.

### ARH 207. Special Topics in Art History. 3 Hours.

Special topics in the history of art and visual culture. Subject will vary with each offering.

### ARH 299. Introduction to Research in Art History. 3 Hours.

This class is an introduction to the discipline of art history and its research methods. It is open to all majors. Students will learn the history of art history, methodological approaches to interpreting works of art, and research tools and methods. Writing intensive.

### ARH 321. Italian Renaissance Art. 3 Hours.

The visual arts of the Italian Renaissance (1300-1550) in their historic context.

**Prerequisites:** ARH 204 [Min Grade: C]

### ARH 324. Northern Renaissance Art. 3 Hours.

The visual arts of the Northern Renaissance (1300-1600) in their historic context.

**Prerequisites:** ARH 204 [Min Grade: C]

### ARH 331. Seventeenth-Century Painting. 3 Hours.

Painting in Europe from Italian and Spanish Baroque through the Dutch Golden Age.

**Prerequisites:** ARH 204 [Min Grade: C]

### ARH 340. 19th Century Art I: Neoclassicism, Romanticism, Realism. 3 Hours.

Painting, sculpture, and graphic arts in Europe, 1780-1860.

**Prerequisites:** ARH 203 [Min Grade: C] or ARH 204 [Min Grade: C] or ARH 205 [Min Grade: C] or ARH 206 [Min Grade: C] or ARH 207 [Min Grade: C] or ARH 299 [Min Grade: C]

### ARH 341. 19th Century Art II: Impressionism and Post-Impressionism. 3 Hours.

Painting, sculpture, and graphic arts in Europe, 1860-1900.

**Prerequisites:** ARH 204 [Min Grade: C]

### ARH 350. American Art and Material Culture. 3 Hours.

Painting, sculpture, and architecture in the U.S., with an emphasis on 19th Century.

**Prerequisites:** ARH 204 [Min Grade: C]

### ARH 360. Twentieth-Century Art to 1945. 3 Hours.

Painting, sculpture, and architecture in Europe and the United States, 1900-1945.

**Prerequisites:** ARH 203 [Min Grade: C] or ARH 204 [Min Grade: C] or ARH 205 [Min Grade: C] or ARH 206 [Min Grade: C] or ARH 207 [Min Grade: C] or ARH 299 [Min Grade: C]

### ARH 361. Modern Design. 3 Hours.

History of modern design. Will examine various design disciplines, design theory, well as the relationships between design, fine art, architecture and popular culture.

**Prerequisites:** ARH 203 [Min Grade: C] or ARH 204 [Min Grade: C] or ARH 205 [Min Grade: C] or ARH 206 [Min Grade: C] or ARH 207 [Min Grade: C] or ARH 299 [Min Grade: C]

### ARH 364. Art Since 1945. 3 Hours.

Painting, sculpture, and architecture primarily in the United States, 1945 to present.

**Prerequisites:** ARH 203 [Min Grade: C] or ARH 204 [Min Grade: C] or ARH 205 [Min Grade: C] or ARH 206 [Min Grade: C] or ARH 207 [Min Grade: C] or ARH 299 [Min Grade: C]

### ARH 367. Modern Architecture. 3 Hours.

History of modern architecture, covering examples from the late 18th century to the present and emphasizing the United States.

**Prerequisites:** ARH 204 [Min Grade: C]

### ARH 368. Race and Representation. 3 Hours.

History of 20th-Century African American art in context of contemporary theories of identity and issues of diversity, and in relation to African art. Includes study of objects in the Birmingham Museum of Art. Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** ARH 204 [Min Grade: C]

**ARH 370. Tomb Art in East Asia. 3 Hours.**

What is the purpose of a tomb? How do its structure and décor convey ancient perceptions of death? Who are the occupants, and how did they envision their journey into the afterlife? This course is a survey of the funerary arts of China, Korea, and Japan. By investigating tombs, shrines, sarcophagi, wall paintings, and grave goods throughout East Asia, we will gain a deeper understanding of ancient religions, social structures, ethnic identities, and cross-cultural interactions. Lectures will be supplemented by several visits to the Museum's Asian collections.

**Prerequisites:** ARH 206 [Min Grade: C]

**ARH 372. Buddhist & Hindu Art in India to 1200. 3 Hours.**

This course explores the environments of worship and devotion particular to India's major indigenous religious traditions, from their earliest expressions in approximately the fifth century BCE through to the arrival of Islam in India, ca. 1200. We will examine aesthetic conventions, religious ideals, and urban cultures by focusing on the sculpture and architecture traditions of Hinduism, Buddhism, and Jainism.

**Prerequisites:** ARH 206 [Min Grade: C]

**ARH 373. Japanese Prints/Printmakers. 3 Hours.**

A history of Japanese block prints and printmakers from seventeenth through twentieth centuries.

**Prerequisites:** ARH 206 [Min Grade: C]

**ARH 374. Landscape and Image in East Asia. 3 Hours.**

This course surveys the major traditions of landscape art in East Asia. We will explore the ways in which places and spaces are transformed into famous places and sacred sites and consider the critical role played by visual representation in this process. Major topics include the relationship between landscape and power, cultural memory, literature, mythology, seasonality, travel, and literati culture. We will examine the functions of landscape art in various cultural, geographical, and temporal contexts of East Asia. We will look at landscape painting in China from the Tang through the Ming dynasties and consider the complex processes of cultural dissemination and adaptation by looking at the reception of Chinese landscape painting tradition in Korea and Japan.

**Prerequisites:** ARH 206 [Min Grade: C]

**ARH 375. Japanese Art. 3 Hours.**

Art and culture, Neolithic era through nineteenth century.

**Prerequisites:** ARH 206 [Min Grade: C]

**ARH 377. Piety and Power: Art in India after 1200. 3 Hours.**

This course looks at the arts of India after 1200, when Indian art and culture was increasingly influenced and altered by religious and secular powers from outside the subcontinent. We will examine Islamic art and architecture under the patronage of various Sultanate traditions, and finally the Mughals, who expressed their power and piety in monumental architecture and extensively illustrated books. We will also consider the influence of Europeans in South Asia, culminating with the colonial project of the British Raj. Ongoing negotiations between these newly-arriving groups and Indians older, indigenous traditions will be studied. Throughout the course we will dissect the categories of knowledge about South Asia and its art that were constructed primarily by the British, considering, for example, the usefulness of dividing India's art history into categories of "Hindu," "Islamic," "European," and etc.

**Prerequisites:** ARH 206 [Min Grade: C]

**ARH 405. Special Topics in African Art. 3 Hours.**

Special topics in the history of African art and visual culture. Subject will vary with each offering.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 409. Egypt in the Age of the Pyramids. 3 Hours.**

This course spans the period 5000 B.C through 1550 B.C. (Predynastic and Dynasties 1-17), which encompasses Egypt's pyramid building age. It will focus broadly on the art, archaeology, history, architecture, religion, and literature of this period. It is designed to stand independently of its companion course Imperial and Post-Imperial Egypt.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 410. Imperial and Post Imperial Egypt. 3 Hours.**

This course spans the years of 1550 B.C. to the Ptolemaic-Roman periods, which covers Egypt's glorious imperial era (New Kingdom: Dynasties 18-10) and its decline in Dynasties 21-31, with the rise of other empires and Macedonian and Roman control of Egypt. It focuses broadly on the art, archaeology, history, architecture, religion, and literature of this time span and is designed to stand independently of its companion course Egypt in the Age of the Pyramids.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 419. Arts of Death in the Middle Ages. 3 Hours.**

The visual culture of death and the afterlife from the Roman catacombs to cadaver tombs, 300-1500.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 422. The Invention of Painting in Renaissance Europe. 3 Hours.**

The emergence of modern easel painting, 1300-1600.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 423. Study Abroad: European Art. 3 Hours.**

On-site study of art and architecture in Europe.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 430. Eighteenth-Century Art in Europe. 3 Hours.**

Visual culture in eighteenth-century Britain and France, including study of eighteenth-century holdings in the Birmingham Museum of Art.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 435. Arts of Power in Early Modern Europe. 3 Hours.**

The visual arts in service of kings, popes, and the people, 1300-1700.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 465. Aspects of Contemporary Art. 3 Hours.**

Topics in contemporary art, ca. 1970 to the present. Course offerings will vary from year to year and will study a specific historical moment, medium, theme, or subject.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 471. Post-Partition Identity in South Asian Cinema. 3 Hours.**

This class is about visual narrative in South Asian art, specifically the mode of film narrative, in the context of India's Partition, and the development of various post-Partition identities that Indian cinema reflects. This course explores the representation of religious conflicts, mass exodus and refugee lives in India in films. While official narratives of the Partition provide politically charged stories of nationalism, films locate stories within the context of families and provide a human dimension to the political process. The course presumes no prior knowledge of Asia or cinema and its artistic tradition. The goal of the course is to view and discuss, as a class, approximately ten films, emphasizing an understanding of their cultural background and an appreciation of their aesthetic merits as films and cultural settings in South Asia. Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 478. Seminar: Buddhist Arts of East Asia. 3 Hours.**

Survey of art and architecture created for Buddhist religious purposes in China, Japan, and to a lesser extent Korea and Central Asia. The course will include a brief overview of Buddhist monuments in South Asia, study of the iconography of Buddhist images in graphic and sculptural media, and analysis of a variety of Buddhist styles in painting, sculpture, and architecture.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 479. Study Abroad: Art & Culture of South Asia. 3 Hours.**

This course allows students to become immersed in the art and culture of Asia through direct experience in the field. Focus will primarily be on South Asia but may vary with each course offering to include Nepal, Tibet, and Southeast Asia. Preliminary lectures in Birmingham and significant written assignments required.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 480. Art Criticism and Theory. 3 Hours.**

A topics course on subjects in art criticism and theory. The specific focus will vary by instructor and may emphasize either non-Western or Western theories, criticisms, and approaches.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 481. Special Topics: Early Modern Art. 3 Hours.**

Special topics in the arts of the Early Modern period in the Western art tradition. Subject will vary with each offering.

**Prerequisites:** ARH 203 [Min Grade: C] or ARH 204 [Min Grade: C]

**ARH 482. Special Topics: Modern Art. 3 Hours.**

A special topics course on subjects in the Modern period in the Western tradition, beginning in the later eighteen century. Specific course topics will vary by semester.

**Prerequisites:** ARH 204 [Min Grade: C]

**ARH 483. Special Topics: Gender and the Visual Arts. 3 Hours.**

Topic will vary, depending on instructor. This course will address ways in which gender has affected the history of artistic practice and patronage. It will consider such issues as the gendering of pictorial practice and space, strategies of representing gendered subjects, and the impact of women as patrons of art and architecture.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 484. Special Topics: Contemporary Art. 3 Hours.**

Special topics in the arts of the Contemporary period in the Western Art tradition. Subject will vary with each offering.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 485. Special Topics: Museum Studies. 3 Hours.**

Museum operation; organization and preparation of exhibitions; cataloging objects in collection; experience with UAB Institute of Visual Art and Birmingham Museum of Art.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 486. Special Topics: South Asia. 3 Hours.**

Special topics in the arts of South Asia. Subject will vary with each offering.

**Prerequisites:** ARH 206 [Min Grade: C]

**ARH 487. Special Topics: Field Study. 3 Hours.**

Trips to prominent museums and galleries in United States. Preliminary lectures in Birmingham and significant written assignments required.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 488. Special Topics: East Asian Art. 3 Hours.**

Special topics in the arts of East Asia. Subject will vary with each offering.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 489. Art History Senior Capstone. 1 Hour.**

To be taken concurrently with a 400-level ARH elective. This course a culmination of the students' training in art history. Students will apply what they have learned throughout the degree program to a project, developed in conjunction with another 400-level ARH course and under the same instructor, such as curating a physical or virtual exhibition, presenting at an undergraduate conference, pursuing a research project and paper, writing and delivering a public lecture, creating valuable archival materials (such as recording oral histories), or another equivalent summation of their degree program.

**Prerequisites:** ARH 299 [Min Grade: C] and (ARH 305 [Min Grade: C] or ARH 309 [Min Grade: C] or ARH 310 [Min Grade: C] or ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C])

**ARH 490. Art Theory: Special Topics. 3 Hours.**

Topic of art theory will vary with each offering.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 491. Independent Study. 3-4 Hours.**

Project proposed by student and approved by Art History instructor.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 492. Museum/Gallery Internship. 3 Hours.**

Through active participation in the daily operations of a museum, gallery, or art space, students will acquire direct working knowledge of a cooperating art institution. Students will be required to work at the institution a minimum of 10 supervised hours per week during the term.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 493. Seminar: South Asian Art. 3 Hours.**

Seminar in the arts of South Asia. Subject will vary with each offering.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 494. Seminar: East Asian Art. 3 Hours.**

Seminar in the arts of East Asia. Subject will vary with each offering.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 495. Seminar: Early Modern Art. 3 Hours.**

Seminar in Early Modern Art. Subject will vary with each offering.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 496. Seminar: Modern Art. 3 Hours.**

Seminar in Modern Art. Subject will vary with each offering.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 497. Seminar: Contemporary Art. 3 Hours.**

Seminar in Contemporary Art. Subject will vary with each offering.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 498. AEIVA Internship. 3 Hours.**

The AEIVA Intern Team will participate in all phases of daily gallery operations, ranging from curatorial practices, exhibition design, video/photographic documentation and production, technical and analytical writing, graphic design, etc. This team will act as a support staff for the AEIVA curatorial/ administrative staff in a hands-on museum/gallery work environment. May be repeated to a maximum of 6 semester hours.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 341 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARH 499. Honors Thesis. 3 Hours.**

For students accepted into honors program in art history. Directed study in art history, in which student works with a faculty mentor to write an extensive research paper on a topic of the student's choice. Recommended to be taken at the senior level, the semester prior to graduation. Permission of instructor required. ARH 489 recommended.

**Prerequisites:** ARH 321 [Min Grade: C] or ARH 324 [Min Grade: C] or ARH 331 [Min Grade: C] or ARH 340 [Min Grade: C] or ARH 350 [Min Grade: C] or ARH 360 [Min Grade: C] or ARH 361 [Min Grade: C] or ARH 364 [Min Grade: C] or ARH 367 [Min Grade: C] or ARH 368 [Min Grade: C] or ARH 370 [Min Grade: C] or ARH 372 [Min Grade: C] or ARH 373 [Min Grade: C] or ARH 374 [Min Grade: C] or ARH 375 [Min Grade: C] or ARH 377 [Min Grade: C]

**ARS-Art Studio Courses****ARS 100. Drawing: Observations and Perceptions. 3 Hours.**

Students will investigate the fundamentals of drawing to learn the elements and principles of art, to improve their dexterity and visual perception, and build skill for advanced arts practice.

**ARS 101. Two-Dimensional Design Foundations. 3 Hours.**

The course provides students with a foundational knowledge of two-dimensional creative media and an understanding of working with the elements and principles of art and design.

**ARS 102. Spacial Solutions. 3 Hours.**

The course provides foundational knowledge of three-dimensional art and design focusing on the organization of space and form using a variety of materials, processes, and tools. Students will investigate formal, functional and conceptual issues while developing effective material choices, construction methods, and a safe studio practice.

**ARS 103. Type and Image. 3 Hours.**

This course provides foundational knowledge of two-dimensional art and design focusing on the digital means of image capture, creation, manipulation, imaging software, and research. Projects explore type and image, collage, story-telling, transformation, historical precedence, best practices and file management.

**ARS 104. Time and Duration. 3 Hours.**

This course introduces the foundational principles of 4D art practices. Formal elements of 4D art such as spatial relationships, tempo/speed, dynamics/intensity, and interactivity will be introduced. Work in digital photography, video, sound, animation, internet art, and emergent technologies will be explored.

**ARS 110. Visual Literacy & Application Foundations. 3 Hours.**

Students will learn to interpret visual images through closely engaging with the act of looking and making. Instruction will focus on the principles and elements of art and design and examines the work and studio practice of contemporary artists.

**ARS 195. Special Topics in Studio Art: Intro (non-art majors). 1-3 Hour.**

Specialized introductory studio problems in Studio Art for non-art majors. Subject will vary with each offering.

**ARS 200. Beginning Drawing. 3 Hours.**

This course will expand students' knowledge of drawing and will explore a variety of approaches and media to improve their creative practice. Students will engage in active research of their individual creative practice as well as collaborative experiences.

**Prerequisites:** ARS 100 [Min Grade: C]

**ARS 210. Beginning Painting. 3 Hours.**

This course will introduce the discipline of painting through creative explorations, development of skills and understanding of materials use. Students will engage in active research of their individual creative practice and collaborative experiences.

**Prerequisites:** ARS 100 [Min Grade: C]

**ARS 220. Beginning Sculpture. 3 Hours.**

This course will introduce the discipline of sculpture through creative explorations, development of skills and understanding of materials use. Students will engage in active research of their individual creative practice and collaborative experiences.

**ARS 230. Beginning Ceramics. 3 Hours.**

This course will introduce the discipline of ceramics through creative explorations and development of skills and materials use. Students will engage in action research of their creative practice and collaborative experiences.

**ARS 240. Beginning Printmaking. 3 Hours.**

This course will introduce the discipline of printmaking through creative explorations and development of skills and material use. Students will engage in action research of their creative practice and collaborative experiences.

**Prerequisites:** ARS 100 [Min Grade: C]

**ARS 250. Beginning Graphic Design. 3 Hours.**

This course will introduce the discipline of graphic design through creative explorations and development of skills and material use. Students will engage in action research of their creative practice and collaborative experiences.

**Prerequisites:** ARS 103 [Min Grade: C]

**ARS 260. Beginning New Media. 3 Hours.**

This course will introduce the discipline of new media through creative explorations, development of skills and material use. Students will engage in action research of their creative practice and collaboration experiences. Media practices including sound, animation and video capturing, as well as experimental projection techniques for the fine arts will be taught. Students will work with dedicated audio and video equipment to learn the basics of sound editing and capturing video footage. Dedicated projects such as in camera editing, montage and stop motion animation will allow students to build upon video editing skills. Historical context of media arts is given through screenings, readings and response papers. Technical workshops are given throughout the semester.

**ARS 270. Beginning Photography. 3 Hours.**

This course will introduce the discipline of photography through creative explorations and development of basic skills and material use. Students will engage in action research of their creative practice and collaborative experiences.

**Prerequisites:** ARS 103 [Min Grade: C]

**ARS 280. Creativity and Imagination. 3 Hours.**

This course provides students with a practical and theoretical basis for creative and imaginative practice. Students will explore issues of creativity, imagination and innovation through sketchbook exercises, discussions, and studying the work of notable artists and innovators in historical and contemporary contexts. This course meets the Core Curriculum requirements for Area II: Fine Arts.

**ARS 295. Special Topics in Studio Art. 1-3 Hour.**

Specialized problem solving and collaboration in Studio Art. Subject will vary with each offering.

**Prerequisites:** ARS 100 [Min Grade: C] and ARS 101 [Min Grade: C] and ARS 102 [Min Grade: C] and ARS 103 [Min Grade: C]

**ARS 300. Drawing - Special Topics 1. 3 Hours.**

Topics vary each semester. This course provides students with opportunities to engage in a range of methods, materials, sources, concepts and dialogue related to the discipline of drawing.

**Prerequisites:** ARS 100 [Min Grade: C] and ARS 101 [Min Grade: C] and ARS 102 [Min Grade: C] and ARS 103 [Min Grade: C] and ARS 104 [Min Grade: C] and ARS 110 [Min Grade: C] and ARS 200 [Min Grade: C]

**ARS 301. Drawing - Special Topics 2. 3 Hours.**

Topics vary each semester. This course provides students with opportunities to engage in a range of methods, materials, sources, concepts and dialogue related to the discipline of drawing.

**Prerequisites:** ARS 100 [Min Grade: C] and ARS 101 [Min Grade: C] and ARS 102 [Min Grade: C] and ARS 103 [Min Grade: C] and ARS 104 [Min Grade: C] and ARS 110 [Min Grade: C] and ARS 200 [Min Grade: C]

**ARS 302. Drawing - Special Topics 3. 3 Hours.**

Topics vary each semester. This course provides students with opportunities to engage in a range of methods, materials, sources, concepts and dialogue related to the discipline of drawing.

**Prerequisites:** ARS 100 [Min Grade: C] and ARS 101 [Min Grade: C] and ARS 102 [Min Grade: C] and ARS 103 [Min Grade: C] and ARS 104 [Min Grade: C] and ARS 110 [Min Grade: C] and ARS 200 [Min Grade: C]

**ARS 310. Painting - Special Topics 1. 3 Hours.**

Topics vary each semester. This course provides students with opportunities to engage in a range of methods, materials, sources, concepts and dialogue related to the discipline of painting.

**Prerequisites:** ARS 100 [Min Grade: C] and ARS 101 [Min Grade: C] and ARS 102 [Min Grade: C] and ARS 103 [Min Grade: C] and ARS 104 [Min Grade: C] and ARS 110 [Min Grade: C] and ARS 210 [Min Grade: C] and ARS 102 [Min Grade: C]

**ARS 311. Painting - Special Topics 2. 3 Hours.**

Topics vary each semester. This course provides students with opportunities to engage in a range of methods, materials, sources, concepts and dialogue related to the discipline of painting.

**Prerequisites:** ARS 100 [Min Grade: C] and ARS 101 [Min Grade: C] and ARS 103 [Min Grade: C] and ARS 104 [Min Grade: C] and ARS 110 [Min Grade: C] and ARS 210 [Min Grade: C]

**ARS 312. Painting - Special Topics 3. 3 Hours.**

Topics vary each semester. This course provides students with opportunities to engage in a range of methods, materials, sources, concepts and dialogue related to the discipline of painting.

**Prerequisites:** ARS 100 [Min Grade: C] and ARS 101 [Min Grade: C] and ARS 102 [Min Grade: C] and ARS 103 [Min Grade: C] and ARS 104 [Min Grade: C] and ARS 110 [Min Grade: C] and ARS 210 [Min Grade: C]

**ARS 320. Sculpture - Special Topics 1. 3 Hours.**

Topics vary each semester. This course provides students with opportunities to engage in a range of methods, materials, sources, concepts and dialogue related to the discipline of sculpture.

**Prerequisites:** ARS 100 [Min Grade: C] and ARS 101 [Min Grade: C] and ARS 102 [Min Grade: C] and ARS 103 [Min Grade: C] and ARS 104 [Min Grade: C] and ARS 110 [Min Grade: C] and ARS 220 [Min Grade: C]



**ARS 372. Photography - Special Topics 3. 3 Hours.**

Topics vary each semester. This course provides students with opportunities to engage in a range of methods, materials, sources, concepts and dialogue related to the discipline of photography.

**Prerequisites:** ARS 100 [Min Grade: C] and ARS 101 [Min Grade: C] and ARS 102 [Min Grade: C] and ARS 103 [Min Grade: C] and ARS 104 [Min Grade: C] and ARS 110 [Min Grade: C] and ARS 270 [Min Grade: C]

**ARS 395. Special Topics in Studio Art: Intermediate. 3 Hours.**

Specialize studio art problems at the intermediate level. Subject will vary with each offering.

**Prerequisites:** ARS 100 [Min Grade: C] and ARS 101 [Min Grade: C] and ARS 102 [Min Grade: C] and ARS 103 [Min Grade: C] and ARS 104 [Min Grade: C] and ARS 105 [Min Grade: C] and ARS 110 [Min Grade: C]

**ARS 400. Advanced Drawing. 3 Hours.**

Advanced studies in drawing with an emphasis on in-depth individually generated projects. Students will focus on professional development and portfolio preparation.

**Prerequisites:** ARS 300 [Min Grade: C] and ARS 301 [Min Grade: C] and ARS 302 [Min Grade: C]

**ARS 410. Advanced Painting. 3 Hours.**

Advanced studies in the discipline of painting with an emphasis on in-depth individually generated projects. Students will focus on professional development and portfolio preparation.

**Prerequisites:** ARS 310 [Min Grade: C] and ARS 311 [Min Grade: C] and ARS 312 [Min Grade: C]

**ARS 420. Advanced Sculpture. 3 Hours.**

Advanced studies in the discipline of sculpture with an emphasis on in-depth individually generated projects. Students will focus on professional development and portfolio preparation.

**Prerequisites:** ARS 320 [Min Grade: C] and ARS 321 [Min Grade: C] and ARS 322 [Min Grade: C]

**ARS 430. Advanced Ceramic Sculpture. 3 Hours.**

Advanced studies in the discipline of ceramics with an emphasis on in-depth individually generated projects. Students will focus on professional development and portfolio preparation.

**Prerequisites:** ARS 330 [Min Grade: C] and ARS 331 [Min Grade: C] and ARS 332 [Min Grade: C]

**ARS 440. Advanced Printmaking. 3 Hours.**

Advanced studies in the discipline of printmaking with an emphasis on in-depth individually generated projects. Students will focus on professional development and portfolio preparation.

**Prerequisites:** ARS 340 [Min Grade: C] and ARS 341 [Min Grade: C] or ARS 342 [Min Grade: C]

**ARS 450. Advanced Graphic Design. 3 Hours.**

Advanced studies in the discipline of graphic design with an emphasis on in-depth individually generated projects. Students will focus on professional development and portfolio preparation.

**Prerequisites:** ARS 350 [Min Grade: C] and ARS 351 [Min Grade: C] and ARS 352 [Min Grade: C]

**ARS 459. Graphic Design Field Internship. 3 Hours.**

Work in approved graphic design office under guidance of field supervisor and Department of Art and Art History instructor.

**Prerequisites:** ARS 350 [Min Grade: C] and ARS 351 [Min Grade: C]

**ARS 460. Advanced New Media. 3 Hours.**

Advanced studies in the discipline of new media with an emphasis on in-depth individually generated projects. Students will focus on professional development and portfolio preparation.

**Prerequisites:** ARS 360 [Min Grade: C] and ARS 361 [Min Grade: C] and ARS 362 [Min Grade: C]

**ARS 470. Advanced Photography. 3 Hours.**

Advanced studies in the discipline of photography with an emphasis on in-depth individually generated projects. Students will focus on professional development and portfolio preparation.

**Prerequisites:** ARS 370 [Min Grade: C] and ARS 371 [Min Grade: C] and ARS 372 [Min Grade: C]

**ARS 489. Professionalism, Project Management and Entrepreneurship. 3 Hours.**

This capstone professional development course will provide students with knowledge and experience in the intersection of art and business for career in the arts. Students will conduct research, write about art and prepare materials and gain valuable insight into the inner workings of a career in the arts and identify your options and learn how to survive in a continually evolving marketplace. The course aims to familiarize students with ongoing theoretical, methodological and tactical issues involved in art making and scholarship. Offered each fall. Should be taken at the senior level.

**ARS 490. Independent Study in Studio Art. 1-9 Hour.**

Students plan a course of study, meeting times and expectations in cooperation with a faculty member.

**ARS 491. B.F.A. Exhibition. 3 Hours.**

B.F.A. students plan, prepare and present an exhibition of work during final spring semester under the direction of a faculty member of the students choosing. Course meeting times and expectations are developed with the faculty.

**ARS 492. Studio or Gallery Internship. 3 Hours.**

Through active participation in the daily operations of a museum, gallery, studio, or art space, students will acquire direct working knowledge of a cooperating art institution. Students will be required to work at the institution a minimum of 10 supervised hours per week during the term. Junior or Senior standing only. Students must complete required internship forms with faculty and field supervisor prior, during and at the completion of the internship.

**ARS 495. Special Topics-Interdisciplinary. 3 Hours.**

Interdisciplinary and inter-media approaches to art making. Courses offer integrated, multidimensional approach to art-making. Topics vary each semester.

**Prerequisites:** ARS 100 [Min Grade: C] and ARS 101 [Min Grade: C] and ARS 102 [Min Grade: C] and ARS 103 [Min Grade: C] and ARS 104 [Min Grade: C] and ARS 110 [Min Grade: C]

**ARS 498. AEIVA Internship. 3 Hours.**

The AEIVA Intern Team will participate in all phases of daily gallery operations, ranging from curatorial practices, exhibition design, video/photographic documentation and production, technical and analytical writing, graphic design, etc. This team will act as a support staff for the AEIVA curatorial/ administrative staff in a hands-on museum/gallery work environment. May be repeated to a maximum of 6 semester hours.

## Department of Biology

**Chair:** Dr. Steven N. Austad

The Department of Biology has experienced faculty dedicated to research and teaching with interests ranging from the molecular to the ecological level. The broad expertise of our faculty allows diverse emphasis in cellular, molecular, developmental, environmental, and evolutionary biology, genetics and genomics, bioinformatics, healthy aging, marine, and organismal biology. Our faculty have been recognized by the University and by national and international biological organizations for their excellence in research and teaching.

The curriculum in biology provides general and specific courses for non-majors and prepares the major for graduate study in biology; the professional schools of human and veterinary medicine, dentistry, optometry, and allied health sciences. Additionally, the curriculum prepares the non-major and major students with the knowledge required for careers in secondary science education, environmental education, wildlife management in both the public and private sectors, and other careers dependent upon comprehension of biological sciences. The Department of Biology also has a well-established Honors curriculum for those students who excel in academics and wish to participate in biological research. This program allows students to conduct research under the mentorship of faculty in the Department of Biology or the School of Medicine, and to graduate with departmental honors. The department offers the following B.S. degrees in biology as well as a minor in biology:

1. Major in Biology – Integrative Biology Concentration
2. Major in Biology – Marine Science Concentration
3. Major in Biology – Molecular Biology Concentration

## Grade Point Average (Majors and Minors)

A student must have at least a 2.0 average in all biology courses attempted and a 2.0 average in all biology courses taken at UAB. The current UAB course repeat policy will be used in calculating the grade point average.

## Transfer Credit

Biology courses in which a grade of D is earned at another institution cannot be applied toward requirements for the major or minor. Students will not be given more credit (semester hours) toward the major or minor than awarded for equivalent courses at UAB, nor more than 8 semester hours of credit in any introductory sequence or combination of courses. Excess hours in these courses may, however, be applied as electives toward the 120 semester hours necessary to satisfy the general degree requirements.

A minimum of 9 semester hours in the major and 6 semester hours in the minor in biology must be taken at UAB.

## Graduate Programs

The Department of Biology offers graduate study leading to the degrees of Master of Science (Plan I - thesis and Plan II - non-thesis) and Doctor of Philosophy. Further information may be found in the UAB Graduate School Catalog.

### Accelerated Master of Science Programs

### Fifth Year M.S. Program

The Department of Biology offers an opportunity to earn a B.S. and an M.S. degree in a total of five years through programs such as Early Acceptance (EA) and Accelerated Bachelors-to-Masters (ABM). This program offers qualified students mentorship during undergraduate study

and supplements professional degrees such as medicine, veterinary sciences, dentistry, optometry, and physician assistant. The student works closely with a faculty member in an area of intensive research which prepares the student for a Ph.D. degree program in the biological sciences or a future health professions career. It also builds teaching skills for academic careers. Admission to the program requires a minimum 3.25 grade point average; three letters of recommendation; an interview with the admissions committee; and a satisfactory score on the Graduate Record Examination by fall of the senior year. For additional information, please contact Dr. Stephen Watts, Graduate Program Director, at (205) 934-2045 or [sawatts@uab.edu](mailto:sawatts@uab.edu).

## Bachelor of Science with a Major in Biology

Requirements		Hours
<b>Mathematics</b>		
MA 125	Calculus I <sup>1</sup>	4
<b>Chemistry</b>		
CH 115	General Chemistry I	3
or CH 125	General Chemistry I HONORS	
CH 116	General Chemistry I Laboratory	1
or CH 126	General Chemistry I HONORS Laboratory	
CH 117	General Chemistry II	3
or CH 127	General Chemistry II HONORS	
CH 118	General Chemistry II Laboratory	1
or CH 128	General Chemistry II HONORS Laboratory	
CH 235	Organic Chemistry I	3
or CH 245	Organic Chemistry I Honors	
CH 236	Organic Chemistry I Laboratory	1
or CH 246	Organic Chemistry I Laboratory (Honors)	
CH 237	Organic Chemistry II	3
or CH 247	Organic Chemistry II Honors	
CH 238	Organic Chemistry II Laboratory	1
or CH 248	Organic Chemistry II Laboratory (Honors)	
<b>Physics</b>		
Select one of the following:		8
PH 201	College Physics I	
& PH 202	and College Physics II	
PH 221	General Physics I	
& PH 222	and General Physics II	
<b>Biology Requirement</b>		
Biology Majors must complete 40 hours of Biology courses approved for the major. <sup>2</sup>		
<b>Introductory Biology &amp; Freshmen Seminar</b>		
BY 120	Living Biology at UAB and Beyond - Seminar	1
BY 123	Introductory Biology I	4
BY 124	Introductory Biology II	4
<b>Genetics</b>		
BY 210	Genetics	3
or BY 211	Genetics for Honors-HON	
<b>Ecology &amp; Evolution</b>		
Select one of the following:		3-4
BY 407	Microbial Ecology	
BY 429	Evolution	
BY 435	Natural History of Vertebrates	
BY 467	Population Ecology	
BY 468	Ecological Genetics	

BY 470	Ecology	
BY 474	Chemical Ecology	
<b>Organismal</b>		
Select one of the following:		3-4
BY 255	Invertebrate Zoology	
BY 256	Vertebrate Zoology	
BY 271	Biology of Microorganisms	
BY 351	Plant Biology	
BY 442	Experimental Phycology	
<b>Physiology and Development</b>		
Select one of the following:		3-4
BY 314	Embryology	
BY 405	Microbial Physiology	
BY 409	Principles of Human Physiology	
BY 410	Comparative Animal Physiology	
BY 416	Cellular Physiology	
BY 420	General Endocrinology	
BY 436	Biological Processes in Aging	
BY 440	Immunology	
BY 450	Plant Physiology	
BY 475	Comparative Developmental Biology	
<b>Cellular/Molecular</b>		
Select one of the following:		3
BY 215	Introduction to Genomics	
BY 311	Molecular Genetics	
BY 330	Cell Biology	
BY 414	Advanced Cell Biology	
BY 434	Functional Genomics and Systems Biology	
BY 437	Epigenetics	
<b>Capstone Experience</b>		
Select one of the following (only one can count towards major):		4
BY 484	Bio Capstone: Chemical Ecology	
BY 490	Bio Capstone: Human Physiology	
BY 491	Biology Capstone - Evolution	
BY 492	Biology Capstone - Undergraduate Research	
BY 493	Biology Capstone - Honors Research	
<b>Electives</b>		
Select Biology (BY) courses to total the 40 hour Biology Requirement		
Total Hours		56-59

<sup>1</sup> Note: Completion of MA 125 automatically satisfies the Core Curriculum Area III: Math requirement and the Biology Major Requirement

<sup>2</sup> Biology Majors must complete 40 hours in Biology (BY) courses approved for the major, including BY 123 and BY 124 with a C or better (fulfilling Core Curriculum Area III and the courses taken to satisfy the requirements below. Additional courses to total 40 semester hours selected after consultation with an advisor and consideration of interests and career goals. At least 9 hours must be 400-level or higher. No more than 6 total hours of BY 394, BY 397, BY 398, and BY 492 can be applied towards the 40 hours of Biology (BY) courses. Note: BY 101, BY 102, BY 108, BY 109, BY 111, BY 112, BY 116, BY 203 and BY 261 cannot be applied toward the Biology major.

## GPA Requirement & Residency

A student must have at least a 2.0 average in all biology courses attempted and a 2.0 average in all biology courses taken at UAB in

order to graduate. The current UAB course repeat policy will be used in calculating the grade point average. A minimum of nine semester hours in the major must be taken at UAB. Transfer students should be aware of the Department of Biology's policy regarding transfer credit.

## Additional Requirements

### General Electives

Students must take general electives to reach the 120 semester hour requirement.

### Graduating Seniors

Students must take a biology major fields test and a departmental survey.

### Core Curriculum

Students must take a Philosophy course that meets the QEP Ethics and Civic Responsibility Requirement, either PHL 115 or PHL 116.

## Bachelor of Science with a Major in Biology and a Marine Science Concentration

The marine science concentration and the molecular biology track prepare students for careers in marine science or research careers in the basic or medically-related sciences.

Requirements		Hours
<b>Mathematics</b>		
MA 125	Calculus I <sup>1</sup>	4
<b>Chemistry</b>		
CH 115	General Chemistry I	3
or CH 125	General Chemistry I HONORS	
CH 116	General Chemistry I Laboratory	1
or CH 126	General Chemistry I HONORS Laboratory	
CH 117	General Chemistry II	3
or CH 127	General Chemistry II HONORS	
CH 118	General Chemistry II Laboratory	1
or CH 128	General Chemistry II HONORS Laboratory	
CH 235	Organic Chemistry I	3
or CH 245	Organic Chemistry I Honors	
CH 236	Organic Chemistry I Laboratory	1
or CH 246	Organic Chemistry I Laboratory (Honors)	
CH 237	Organic Chemistry II	3
or CH 247	Organic Chemistry II Honors	
CH 238	Organic Chemistry II Laboratory	1
or CH 248	Organic Chemistry II Laboratory (Honors)	
CH 460	Fundamentals of Biochemistry	3
or CH 461	Advanced Biochemistry	
<b>Physics</b>		
Select one of the following:		8
PH 201	College Physics I	
& PH 202	and College Physics II	
PH 221	General Physics I	
& PH 222	and General Physics II	
<b>Marine Science Electives</b>		15
Select at least five Marine Environmental Science (MESC) courses approved by the academic advisor.		
<b>Biology Requirements</b>		

Biology majors must complete 40 hours in Biology (BY) or Marine Environmental Science (MESC) courses approved for the major. <sup>2</sup>		
<b>Introductory Biology and Freshmen Seminar</b>		
BY 120	Living Biology at UAB and Beyond - Seminar	1
BY 123	Introductory Biology I	4
BY 124	Introductory Biology II	4
<b>Genetics</b>		
BY 210	Genetics	3
or BY 211	Genetics for Honors-HON	
<b>Ecology &amp; Evolution</b>		
Select one of the following:		3-4
BY 468	Ecological Genetics	
BY 470	Ecology	
BY 407	Microbial Ecology	
BY 429	Evolution	
BY 474	Chemical Ecology	
BY 435	Natural History of Vertebrates	
BY 467	Population Ecology	
MESC 411	Coastal Wetlands Ecology	
MESC 412	Marine Ecology	
<b>Organismal</b>		
Select one of the following:		3-4
BY 255	Invertebrate Zoology	
BY 256	Vertebrate Zoology	
BY 271	Biology of Microorganisms	
BY 351	Plant Biology	
BY 442	Experimental Phycology	
MESC 402	Marine Vertebrate Zoology	
MESC 407	Marine Botany	
MESC 413	Marine Invertebrate Zoology	
<b>Physiology and Development</b>		
Select one of the following:		3-4
BY 314	Embryology	
BY 409	Principles of Human Physiology	
BY 405	Microbial Physiology	
BY 410	Comparative Animal Physiology	
BY 420	General Endocrinology	
BY 436	Biological Processes in Aging	
BY 440	Immunology	
BY 450	Plant Physiology	
BY 475	Comparative Developmental Biology	
<b>Cellular/Molecular</b>		
Select one of the following:		3
BY 215	Introduction to Genomics	
BY 311	Molecular Genetics	
BY 330	Cell Biology	
BY 434	Functional Genomics and Systems Biology	
BY 414	Advanced Cell Biology	
BY 437	Epigenetics	
<b>Capstone Experience</b>		
Select one of the following (only one capstone course can count toward the major):		4
BY 484	Bio Capstone: Chemical Ecology	
BY 490	Bio Capstone: Human Physiology	
BY 491	Biology Capstone - Evolution	
BY 492	Biology Capstone - Undergraduate Research	
BY 493	Biology Capstone - Honors Research	

Electives	
Electives in Biology to total 40 hours	
Total Hours	74-77
<sup>1</sup>	Note: Completion of MA 125 automatically satisfies the Core Curriculum Area III: Math requirement and the Biology Major Requirement
<sup>2</sup>	These hours include BY 123 and BY 124 with a C or better (fulfilling in Core Curriculum Area III) and the courses taken to satisfy the requirements below. All of the courses listed below are approved for the major; consult your advisor for a list of additional courses. At least 9 hours must be 400-level or higher. No more than 6 total hours of BY 394, BY 397, BY 398, and BY 492 can be applied towards the 40 hours of Biology (BY) courses. Note: BY 101, BY 102, BY 108, BY 109, BY 111, BY 112, BY 116, BY 203 and BY 261 cannot be applied toward the Biology major.

GPA Requirement & Residency

A student must have at least a 2.0 average in all biology courses attempted and a 2.0 average in all biology courses taken at UAB in order to graduate. The current UAB course repeat policy will be used in calculating the grade point average. A minimum of nine semester hours in the major must be taken at UAB. Transfer students should be aware of the Department of Biology’s policy regarding transfer credit.

Additional Requirements

General Electives

Students must take general electives to reach the 120 semester hour requirement.

Graduating Seniors

Students must take a biology major fields test and a departmental survey.

Core Curriculum

Students must take a Philosophy course that meets the QEP Ethics and Civic Responsibility Requirement, either PHL 115 Contemporary Moral Issues or PHL 116 Bioethics.

Bachelor of Science with a Major in Biology and a Molecular Biology Concentration

Requirements		Hours
<b>Mathematics</b>		
MA 125	Calculus I <sup>1</sup>	4
<b>Chemistry</b>		
CH 115	General Chemistry I	3
or CH 125	General Chemistry I HONORS	
CH 116	General Chemistry I Laboratory	1
or CH 126	General Chemistry I HONORS Laboratory	
CH 117	General Chemistry II	3
or CH 127	General Chemistry II HONORS	
CH 118	General Chemistry II Laboratory	1
or CH 128	General Chemistry II HONORS Laboratory	
CH 235	Organic Chemistry I	3
or CH 245	Organic Chemistry I Honors	
CH 236	Organic Chemistry I Laboratory	1
or CH 246	Organic Chemistry I Laboratory (Honors)	

CH 237	Organic Chemistry II	3
or CH 247	Organic Chemistry II Honors	
CH 238	Organic Chemistry II Laboratory	1
or CH 248	Organic Chemistry II Laboratory (Honors)	
CH 460	Fundamentals of Biochemistry	3
or CH 461	Advanced Biochemistry	

**Physics**

Select one of the following:		8
PH 201	College Physics I	
& PH 202	and College Physics II	
PH 221	General Physics I	
& PH 222	and General Physics II	

**Biology Requirements**

Biology Majors must complete 40 hours in Biology courses.

**Introductory Biology & Freshmen Seminar <sup>2</sup>**

BY 120	Living Biology at UAB and Beyond - Seminar	1
BY 123	Introductory Biology I	4
BY 124	Introductory Biology II	4

**Required Molecular Track Courses**

BY 210	Genetics	3
or BY 211	Genetics for Honors-HON	
BY 245	Biological Data Interpretation and Analysis	3
BY 271	Biology of Microorganisms	4
BY 311	Molecular Genetics	3
BY 330	Cell Biology	3

**Molecular Track Elective**

Select four of the following:		12
BY 215	Introduction to Genomics	
BY 412	21st Century Gene Editing	
BY 414	Advanced Cell Biology	
BY 416	Cellular Physiology	
BY 431	Principles of DNA Technology	
BY 433	Advanced Molecular Genetics	
BY 434	Functional Genomics and Systems Biology	
BY 437	Epigenetics	
BY 440	Immunology	
BY 444	Biological Experimental Design and Methods	

**Capstone Experience**

Select one of the following (only one capstone course can count towards major):

BY 484	Bio Capstone: Chemical Ecology	4
BY 490	Bio Capstone: Human Physiology	
BY 491	Biology Capstone - Evolution	
BY 492	Biology Capstone - Undergraduate Research	
BY 493	Biology Capstone - Honors Research	

**Elective Courses**

Electives in Biology to total 40 hours.

Total Hours 72

<sup>1</sup> Note: Completion of MA 125 automatically satisfies the Core Curriculum Area III: Math requirement and the Biology Major Requirement.

<sup>2</sup> Including BY 123 and BY 124 with a C or better (fulfilling Core Curriculum Area III) and the courses taken to satisfy the requirements below. All of the courses listed below are approved for the major; consult your advisor for a list of additional courses. At least 9 hours must be 400-level or higher. No more than 6 total hours of BY 394, BY 397, BY 398, and BY 492 can be applied towards the 40 hours of Biology (BY) courses. Note: [BY 101](#), [BY 102](#), BY 108, BY 109, [BY 111](#), [BY 112](#), [BY 116](#), BY 203 and [BY 261](#) cannot be applied toward the Biology major.

**GPA Requirement & Residency**

A student must have at least a 2.0 average in all biology courses attempted and a 2.0 average in all biology courses taken at UAB in order to graduate. The current UAB course repeat policy will be used in calculating the grade point average. A minimum of nine semester hours in the major must be taken at UAB. Transfer students should be aware of the Department of Biology's policy regarding transfer credit.

**Additional Requirements****General Electives**

Students must take general electives to reach the 120 semester hour requirement.

**Graduating Seniors**

Students must take a biology major fields test and a departmental survey.

**Core Curriculum**

Students must take a Philosophy course that meets the QEP Ethics and Civic Responsibility Requirement, either PHL 115 or PHL 116.

**Proposed Program of Study for a Major in Biology****Freshman**

First Term	Hours	Second Term	Hours
MA 106		3 MA 125	4
CH 115		3 EH 102	3
& 115R			
CH 116		1 BY 123	4
		& 123L	
EH 101		3 CH 117	3
		& 117R	
CAS Freshman Year Experience		1 CH 118	1
Core Curriculum Area II or Area IV	3		
Add BY 120 1 credit to Freshmen Fall	1		
	15		15

**Sophomore**

First Term	Hours	Second Term	Hours
CH 235		3 CH 237	3
& 235R		& 237R	
CH 236		1 CH 238	1
BY 124		4 BY 210 or 211	3
& 124L			
PHL 115 or 116		3 Core Curriculum Area II or Area IV	3

Elective	3 Elective	3
	14	13
<b>Junior</b>		
<b>First Term</b>	<b>Hours</b>	<b>Second Term Hours</b>
Cellular or Molecular Biology	3	Organismal Biology 3-4
PH 201 & 201R & 201L	4	PH 202 & 202R & 202L 4
Core Curriculum Area II or Area IV	6	Core Curriculum Area II or IV 6
Biology Elective	3	Elective 3
	16	16-17
<b>Senior</b>		
<b>First Term</b>	<b>Hours</b>	<b>Second Term Hours</b>
Physiology/Development	4	Biology Elective 3
Ecology/Evolution	4	Biology Electives 6
Biology Elective	3	Electives 6
Core Curriculum Area II or IV	3	
Capstone Experience		
BY 490, 491, or 492	4	
Add BY 484 Bio Capstone: Chemical Ecology		
	18	15

Total credit hours: 122-123

- 1
- Assumes student is placed in MA 106.
- 2
- Assumes student has had one year of high school Chemistry with a grade of C or better.
- 3
- Assumes no Advanced Placement (AP), Dual Enrollment, International Baccalaureate (IB), or College Level Examination Program (CLEP) credit.
- 4
- Must complete either a two History Core IV or two Literature Core II sequence.
- 5
- BY 101, BY 102, BY 111, BY 112, BY 116, and BY 261 **do not count** toward Biology Electives.
- 6
- Must earn a Biology GPA of at least 2.0.
- 7
- See your Biology Advisor once each term.

Proposed Program of Study for a Major in Biology with a Concentration in Marine Science

<b>Freshman</b>		
<b>First Term</b>	<b>Hours</b>	<b>Second Term Hours</b>
MA 106	3	MA 125 4
CH 115 & 115R	3	EH 102 3
CH 116	1	BY 123 & 123L 4
EH 101	3	CH 117 & 117R 3
CAS Freshman Year Experience	1	CH 118 1
Core Curriculum Area II or Area IV	3	
Add BY 120 1 credit to Freshmen Fall	1	
	15	15

<b>Sophomore</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
CH 235 & 235R	3	CH 237 & 237R	3
CH 236	1	CH 238	1
BY 124 & 124L	4	BY 210 or 211	3
PHL 115 or 116	3	Core Curriculum Area II or Area IV	6
Elective	3		
	14		13
<b>Junior</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
BY 330	3	Organismal Biology (if not previously covered)	3-4
PH 201 & 201R & 201L	4	PH 202 & 202R & 202L	4
Biology Elective	3	Core Curriculum Area II or Area IV	6
Core Curriculum Area II or Area IV	6		
	16		13-14
<b>Senior</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
Physiology	3-4	Capstone Experience	
Biology Elective	3	BY 490, 491, or 492	4
Ecology (if not covered with MESC)	3	Add BY 484 Bio Capstone: Chemical Ecology	
Core Curriculum Area II or Area IV	3		
	12-13		4

Total credit hours: 114-128

- 1
- Assumes student is placed in MA 106.
- 2
- Assumes student has had one year of high school Chemistry with a grade of C or better.
- 3
- Assumes no Advanced Placement (AP), Dual Enrollment, International Baccalaureate (IB), or College Level Examination Program (CLEP) credit.
- 4
- Must complete at least one Literature Core II and two History Core IV or two Literature Core II and one History Core IV.
- 5
- BY 101, BY 102, BY 111, BY 112, BY 116, BY 203 and BY 261 **do not count** toward Biology Electives.
- 6
- Must earn Biology GPA of at least 2.0
- 7
- See Biology Advisor once each term.
- 8
- Some Biology (BY) courses rotate every other year or once a year, see advisor.
- 9
- 18 hours Marine Science (MESC) courses (taken summers at sea lab) contribute to 40 hours in Biology.

Proposed Program of Study for a Major in Biology with a Concentration in Molecular Biology

<b>Freshman</b>		
<b>First Term</b>	<b>Hours</b>	<b>Second Term Hours</b>
MA 106	3	MA 125 4
CH 115 & 115R	3	EH 102 3

CH 116	1 BY 123 & 123L	4
EH 101	3 CH 117 & 117R	3
CAS Freshman Year Experience	1 CH 118	1
Core Curriculum Area II or Area IV	3	
Add BY 120 1 credit to Freshmen Fall	1	
	15	15

Sophomore			
First Term	Hour	Second Term	Hours
CH 235 & 235R	3	CH 237 & 237R	3
CH 236	1	CH 238	1
BY 124 & 124L	4	BY 210 or 211	3
PHL 115 or 116	3	BY 330	3
Elective	3	Core Curriculum Area II or IV	3
	14	13	3

Junior			
First Term	Hour	Second Term	Hours
BY 311	3	BY 271 & 271L	4
PH 201 & 201R & 201L	4	PH 202 & 202R & 202L	4
Core Curriculum Area II or Area IV	6	Core Curriculum Area II or Area IV (or BY 245 see note below)	3
Elective	3	Core Curriculum Area II or Area IV	3
		Elective	3
		undefined	
	16	17	

Senior			
First Term	Hour	Second Term	Hours
BY 433 or 414	3	BY 245	3
BY 440 or 436	3	BY 468 or 437	3
CH 460 or 461	3	Capstone Experience	
Biology Elective (see note below)	3-4	BY 490, 491, or 492	4
Elective	3	Add BY 484 Bio	
		Capstone: Chemical Ecology	
		BY Electives	6
	15-16	16	

Total credit hours: 124-125

- <sup>1</sup> Assumes student is placed in MA 106
- <sup>2</sup> Assumes student has had one year of High School Chemistry with a grade of C or better.
- <sup>3</sup> Assumes no Advanced Placement (AP), Dual Enrollment, International Baccalaureate (IB), or College Level Examination Program (CLEP) credit.
- <sup>4</sup> Must complete at least one Literature Core II and two History Core IV or two Literature Core II and one History Core IV.
- <sup>5</sup> BY 101, BY 102, BY 111, BY 112, BY 116 and BY 261 **do not count** toward Biology electives.
- <sup>6</sup> Must earn a Biology GPA of at least 2.0
- <sup>7</sup> See Biology Advisor once each term.

- <sup>8</sup> Some Biology (BY) courses rotate every other year, see advisor.
- <sup>9</sup> Biochemistry - CH 460 is taught summer and fall. CH 461 is only offered in the fall.

## Minor in Biology

Requirements	Hours
<b>Required Biology Courses (must earn a grade of C or better) <sup>3</sup></b>	
<u>BY 123</u> Introductory Biology I <sup>1</sup>	4
<u>BY 124</u> Introductory Biology II <sup>1</sup>	4
<u>BY 210</u> Genetics	3
<b>Biology Electives <sup>2</sup></b>	
Select 6 hours from 200-level or higher Biology (BY) courses.	6
Total Hours	17

- <sup>1</sup> Note: BY 123 and BY 124 may also satisfy the Core Curriculum Area III: Natural Sciences requirement; check the Core Curriculum for your particular major.
- <sup>2</sup> Not more than a total of three hours in BY 397, BY 398, and BY 498 may be counted toward the minor.
- <sup>3</sup> Note: BY 101, BY 102, BY 108, BY 109, BY 111, BY 112, BY 116, and BY 261 cannot be applied toward the Biology minor.

## GPA Requirement & Residency

A student must have at least a 2.0 average in all biology courses attempted and a 2.0 average in all biology courses taken at UAB in order to graduate. The current UAB course repeat policy will be used in calculating the grade point average. A minimum of six semester hours in the minor must be taken at UAB. Transfer students should be aware of the Department of Biology's policy regarding transfer credit.

## Honors Program in Biology

### Purpose

The Biology Honors Program offers motivated students the opportunity to develop research and communication skills in preparation for a graduate or professional career.

### Eligibility

To be accepted into the Biology Honors Program, a student must:

- Have Junior Standing (64 hrs).
- Have earned a 3.5 GPA in biology courses attempted.
- Have earned a 3.0 GPA overall.
- Have completed 18 semester hours in biology courses.
- Have enrolled in BY 398 (Undergraduate Research) for at least one semester hour.
- Have arranged with a faculty sponsor in biology to do a research project.

## Requirements

Students in the Biology Honors Program will be required to have the following:

- Six semester hours in BY 498 (Honors Research) and/or BY 493 (Honors Capstone Research) with each semester hour per term requiring a minimum of four hours of laboratory work per week.

- A formal research proposal, submitted by the end of the first semester of Honors Research, including an introduction, proposed methods, and relevant literature citation.
- A formal written report in the form of a scientific paper.
- An oral or poster presentation at Biology Research Day or the UAB Expo.

In some instances, it will be recommended that Biology Honors students give a formal presentation of their work at a scientific meeting. Funds may be provided to support participation at such a meeting.

## Benefits

In addition to the educational and career benefits of participation in the Biology Honors Program, students who complete the program will be honored at the annual Biology Honors Research Day and will graduate "With Honors in Biology."

## Contact

For more information and/or admission to the Biology Honors Program, contact Dr. Thane Wibbels, Campbell Hall, Room 255A, Birmingham, AL 35294-1170; Telephone (205) 934-4419 or E-mail [twibbels@uab.edu](mailto:twibbels@uab.edu)

## BY-Biology Courses

### BY 101. Topics in Contemporary Biology. 3 Hours.

Selected topics in the current understanding of biological systems, ranging from humans to ecosystems. Particular focus on scientific issues such as human diseases, genetic engineering, emerging infectious diseases, environmental causes of disease, and climate change, as well as analysis of these issues as presented in print and electronic media. NOTE: Not for biology majors or minors (with BY 102). This course, when taken with its corresponding laboratory, meets the Core Curriculum requirements for Area III: Natural Sciences.

### BY 102. Topics Contemporary Biology Laboratory. 1 Hour.

Experiments and demonstrations in contemporary biology with strong emphasis is placed on understanding the systems of the human body. Drawing and writing assignments will focus on the structure and function of the important systems of the human body. Quantitative Literacy is a significant component of this course.

### BY 108. Human Population and the Earth's Environment. 3 Hours.

Influence of human population on Earth's environment. Specific attention will be paid to environmental issues such as population growth, climate change, water and energy resources, pollution, waste disposal, plant and animal extinctions, and food resources. Strong emphasis will be placed on determining solution to the variety of environmental problems facing the earth. Lecture and film. Ethics and Civic Responsibility are significant components of this course.

### BY 109. Laboratory in Environmental Science. 1 Hour.

Experiments on topics essential to study of environment and which reveal complexity of solving environmental problems. Writing, Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** BY 108 [Min Grade: D](Can be taken Concurrently) or BY 108 [Min Grade: P] or ENV 108 [Min Grade: D](Can be taken Concurrently) or ENV 108 [Min Grade: P](Can be taken Concurrently)

### BY 111. Extended Topics in Contemporary Biology. 3 Hours.

Selected topics in contemporary biology of interest to students with minimal background in biology. Topics presented in interactive lecture/discussion format. This course, when taken with its corresponding laboratory, meets the Core Curriculum requirements for Area III: Natural Sciences. NOTE: Only general elective credit for biology major or minor. **Prerequisites:** BY 101 [Min Grade: D]

### BY 112. Ext Topics Contemporary Biology Laboratory. 1 Hour.

Further examination, interpretation, and discussion of topics in BY 111. Independent and group projects. NOTE: Only general elective credit for biology major or minor.

**Prerequisites:** BY 111 [Min Grade: D](Can be taken Concurrently)

### BY 115. Human Anatomy. 4 Hours.

Principles of vertebrate structure with emphasis on gross and microscopic human anatomy. Survey of human embryology and evolution. Lecture and laboratory.

### BY 115L. Human Anatomy Laboratory. 0 Hours.

Human Anatomy Lab required with BY 115 lecture.

### BY 116. Introductory Human Physiology. 4 Hours.

Integrated functions of human cells, tissues, and organ systems. NOTE: Only general elective credit for biology majors or minors. Lecture and laboratory.

**Prerequisites:** BY 115 [Min Grade: C] and (CH 105 [Min Grade: C] and CH 106 [Min Grade: C]) or (CH 115 [Min Grade: C] and CH 116 [Min Grade: C] or CH 114 [Min Grade: C]) or (CH 117 [Min Grade: C] and CH 118 [Min Grade: C] or CH 119 [Min Grade: C]) and BY 116L [Min Grade: C](Can be taken Concurrently)

### BY 116L. Introductory Human Physiology Laboratory. 0 Hours.

Human Physiology Lab required with BY 116 lecture.

**Prerequisites:** BY 116 [Min Grade: C](Can be taken Concurrently)

### BY 120. Living Biology at UAB and Beyond - Seminar. 1 Hour.

Living Biology at UAB and Beyond is a seminar for Biology freshmen students jointly taught by the Biology research faculty members. LivBio has two primary goals: 1) introduce students to the people, projects, and opportunities in the Biology Department at UAB, 2) foster and cultivate student STEM identities and interests to help them succeed in Biology at UAB (and beyond). Students will engage in active research talks from Professors, learn about novel research technologies, read and discuss breaking news in biological discoveries, and more.

### BY 123. Introductory Biology I. 4 Hours.

Basic chemistry, cell structure and function, metabolism, genetics, evolution, bacteria, and protists. For major in biology and related fields. Quantitative Literacy and Writing are significant components of this course. Lecture and laboratory. Enrolled in, or have completed MA 106, MA 107, MA 125, or MA 126. This course meets the Core Curriculum requirements for Area III: Natural Sciences.

**Prerequisites:** MA 106 [Min Grade: C](Can be taken Concurrently) or MA 107 [Min Grade: C](Can be taken Concurrently) or MA 125 [Min Grade: C](Can be taken Concurrently) or MA 225 [Min Grade: C] (Can be taken Concurrently) or MA 126 [Min Grade: C](Can be taken Concurrently) or MA 226 [Min Grade: C](Can be taken Concurrently) or MAC1 17 or MAAD 24 or MTH3 75 or MTH4 75 or MTH5 75 or MPL 61

### BY 123L. Introductory Biology I Laboratory. 0 Hours.

Introductory Biology I Lab required with BY 123 lecture.

**BY 124. Introductory Biology II. 4 Hours.**

The course emphasizes the transition from cell, to tissue, to organs in multicellular systems. Specific attention in the course will be paid to a survey of the various groups of plants, fungi, invertebrates and vertebrates. Strong emphasis will be placed on comparing the anatomy and physiology of the major organ systems in humans with those of other organisms. The course is designed to expand the students understanding of the process of scientific writing. Quantitative Literacy and Writing are significant components of this course. This course meets the Core Curriculum requirements for Area III: Natural Sciences.

**Prerequisites:** BY 123 [Min Grade: C]

**BY 124L. Introductory Biology II Laboratory. 0 Hours.**

Introductory Biology II Lab required with BY 124 lecture.

**BY 170. Biology of Sex. 3 Hours.**

This course will cover the overwhelming diversity generated by sex. We will survey molecular, physiological, ecological, and evolutionary concepts that help us understand what sex is and what it is not. Students will write weekly blog posts and learn how to read the scientific literature. Students will explore scientific methods and learn how to translate scientific literature into lay terms, allowing creativity and enhancing critical thinking and reasoning skills.

**BY 201. Climate Change and the Environment. 3 Hours.**

This introductory course will introduce the science of climate change and is designed for science and non-science majors. We will discuss the empirically driven principles of anthropogenic climate change and why we have high certainty that humans have caused this rapid global change. Next, we will address the ecological consequences of a changing climate. We will cover examples from various environments including polar, terrestrial, and ocean ecosystems and study microbial, plant, and animal interactions. Finally, we will discuss potential solutions to reduce the impact of humans on climate change. This will include local, regional and worldwide strategies. Lecture. 3 credit hours.

**BY 203. Aging: From Cells to Society. 3 Hours.**

Americans born in the 21st century can expect to live 100 years or more. That is what some prominent aging researchers believe. Already, we are living longer than at any time in human history. Does that mean that society can expect to be overwhelmed by Alzheimer's disease and other diseases of later life as the century progresses? Why do we age anyway? What goes wrong inside our body as we grow older? Why does it happen 5 times as fast in a dog? 30 times as fast in a mouse? What are the prospects for an aging "breakthrough" that might allow us to live much, much longer? What would be the societal impact of such a breakthrough? BY 203 is a course directed to non-majors that will address these and other questions, providing a solid background in the biology of aging, and the social implications of this biology in a rapidly changing world.

**BY 210. Genetics. 3 Hours.**

Principles and mechanisms of inheritance; structure, action, and regulation of genes; molecular genetic technology and application to human health and agriculture. Preparation for advanced courses in biology.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C]

**BY 211. Genetics for Honors-HON. 3 Hours.**

Genetics, a study of heredity, refers to the understanding of how DNA and its products participate in diverse biological processes, molecular pathways and signaling cascades in both prokaryotes and eukaryotes. This CURE-based course is designed to increase student engagement and therefore student learning in this complex but very important discipline of biology hands-on training on a variety of topics. Lecture/lab. 3 credit hours.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C]

**BY 212. Genetics for Biomedical Engineers. 3 Hours.**

Principles and mechanisms of inheritance; structure, action, and regulation of genes; molecular genetic technology and application to human health and agriculture. Preparation for advanced courses in biology. Enrollment in BY 212L required with BY 212 lecture.

**Prerequisites:** BY 123 [Min Grade: C]

**BY 212L. Genetics for Biomedical Engineers - Laboratory. 1 Hour.**

Genetics for BME - Laboratory is required with BY 212 lecture.

**Prerequisites:** BY 123 [Min Grade: C]

**BY 215. Introduction to Genomics. 3 Hours.**

This course will feature basic and introductory concepts in -omics, sequencing technologies, applications in prokaryotes and eukaryotes, particularly human genome. Moreover, we will also discuss how the next generation sequencing information can be applicable to human health, agriculture and ecology. Key concepts of computing and data science will also be introduced. This will also include basic bioinformatics and bioinformatics tools in handling and management of genomic data.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C] and (BY 210 [Min Grade: C] or BY 211 [Min Grade: C])

**BY 216. Pathophysiology. 3 Hours.**

A course about human diseases emphasizing mechanisms of injury, altered physiology, disease development and progress, clinical assessments, and treatment strategies. Specific topics include diseases on genetic defects, infections, cancers, stress, altered immune actions, nutritional problems, fluid imbalances, hormone control issues, altered blood flow, and pulmonary inadequacies. The course incorporates historical and current case load relevancy and case study analysis.

**Prerequisites:** BY 116 [Min Grade: C] or BY 409 [Min Grade: C] or BY 124 [Min Grade: C]

**BY 220. CLOne: Chromatin Laboratory 1. 0-4 Hours.**

Students will learn laboratory skills in molecular genetics, with a focuses on generating CRISPR guide RNAs and testing their efficiency in *Drosophila* cells. The students will be introduced to the scope of the project, read relevant literature, and will conclude their research experience by writing a journal-style report on their results.

**Prerequisites:** BY 123 [Min Grade: C]

**BY 245. Biological Data Interpretation and Analysis. 3 Hours.**

The course covers the basics of scientific investigation with an emphasis on understanding what science is, the methods of the scientific process, experimental design, data analysis and interpretation, graphical presentation, and scientific writing. Special emphasis will be placed on the understanding of statistical language and the most common types of data analyses used in biology. Quantitative Literacy is a significant component of this course. Recommend course is taken before junior year.

**Prerequisites:** BY 124 [Min Grade: C]

**BY 255. Invertebrate Zoology. 4 Hours.**

Invertebrate phyla, emphasizing evolutionary relationships, biological principles demonstrated by invertebrates, and significance of invertebrates in total ecology. Lecture and laboratory.

**Prerequisites:** BY 124 [Min Grade: C]

**BY 255L. Invertebrate Zoology Laboratory. 0 Hours.**

Invertebrate Zoology Lab required with BY 255 lecture.

**BY 256. Vertebrate Zoology. 4 Hours.**

Comparative approach to the structure, function, ecology, life history, and conservation of vertebrates. Lecture and laboratory.

**Prerequisites:** BY 124 [Min Grade: C] and CH 115 [Min Grade: C] and (CH 116 [Min Grade: C] or CH 114 [Min Grade: C])

**BY 256L. Vertebrate Zoology Laboratory. 0 Hours.**

Vertebrate Zoology Lab required with BY 256 lecture.

**BY 261. Introduction to Microbiology. 4 Hours.**

Cell structure and function, microbial genetics, viruses, and epidemiology and infectious disease. NOTE: Cannot be applied toward requirements for a biology major. Lecture and laboratory.

**Prerequisites:** BY 123 [Min Grade: C] or (CH 107 [Min Grade: C] and CH 108 [Min Grade: C]) or (CH 237 [Min Grade: C] and CH 238 [Min Grade: C]) or (CH 237 [Min Grade: C] and CH 239 [Min Grade: C]) and BY 116 [Min Grade: C]

**BY 261L. Introduction to Microbiology Laboratory. 0 Hours.**

Introduction to Microbiology Lab required with BY 261 lecture.

**BY 267. Tropical Ecology. 3 Hours.**

Major tropical ecotypes; ecology of terrestrial, aquatic, and marine tropical organisms. Major portion conducted at tropical field station in Caribbean. Lecture and field trips (May session, alternate years). Permission of Instructor required.

**Prerequisites:** BY 124 [Min Grade: C]

**BY 268. Galapagos Ecology. 3 Hours.**

An overview of the ecology of the Galapagos Island, with an emphasis on the ecology of terrestrial and marine organisms. Major portion of course conducted on the Galapagos Islands. Lecture & field trips. Permission of instructor required.

**Prerequisites:** BY 124 [Min Grade: C]

**BY 269. Rain Forest Ecology. 3 Hours.**

Physical and environmental factors that structure rain forest, biodiversity of life, and interactions of its organisms. Prominent biota. Major portion of course taught at tropical field station in Costa Rica. Lecture and field trips (May session, alternate years). Permission of instructor required.

**Prerequisites:** BY 124 [Min Grade: D]

**BY 271. Biology of Microorganisms. 4 Hours.**

Microbiology with emphasis on molecular aspects of microbial cell structure, function, and diversity. Host defense mechanisms, infectious disease, and microbial ecology. Preparation for advanced courses in biology. Lecture and laboratory.

**Prerequisites:** (BY 210 [Min Grade: C] or BY 211 [Min Grade: C]) and CH 117 [Min Grade: C] and (CH 118 [Min Grade: C] or CH 119 [Min Grade: C])

**BY 271L. Biology of Microorganisms Laboratory. 0 Hours.**

Biology of Microorganisms Lab required with BY 271 lecture.

**BY 285. Biology Career Readiness Seminar. 1 Hour.**

This course is designed to prepare biology majors for a career after graduation. In order to develop the skills and habits needed to succeed professionally, we will investigate what it means to be a professional in biology and look at strategies needed for success. Topics covered will be career exploration, networking, personal branding, career planning, strategic career search, interviewing techniques, and professional etiquette. In addition to these topics which are important for all career paths, strategies for applying to graduate and professional school will be surveyed.

**BY 286. Research Skills Seminar. 1 Hour.**

This course will provide an introduction to undergraduate research students joining the UAB Department of Biology. The course will guide the students through the process of joining a research lab and prepare them to begin a mentored undergraduate research experience in the following semester. While this course is open to all biology majors, it particularly focused on reaching transfer students to facilitate their engagement in undergraduate research.

**BY 311. Molecular Genetics. 3 Hours.**

Prokaryotic and eukaryotic gene structure and function.

**Prerequisites:** BY 210 [Min Grade: C] or BY 211 [Min Grade: C]

**BY 314. Embryology. 3 Hours.**

Descriptive and experimental studies of vertebrate development at the molecular, cellular and tissue levels.

**Prerequisites:** CH 117 [Min Grade: C] and CH 118 [Min Grade: C]

**BY 327. Histology. 4 Hours.**

Microscopic anatomy of cells, tissues, and organs of animals; correlation of structure and function. Techniques and methodology. Lecture and laboratory.

**Prerequisites:** BY 115 [Min Grade: C] or BY 124 [Min Grade: C]

**BY 327L. Histology Laboratory. 0 Hours.**

Histology Lab required with BY 327 lecture.

**BY 330. Cell Biology. 3 Hours.**

Structure and function of the cell, cellular components and major cellular processes. Topics include biological molecules and metabolism, energetics, synthesis and regulation of macromolecules, mechanisms for transcription and translation, membranes and organelles, small molecule transport and intracellular trafficking, cytoskeleton and cell movement, cell signaling, cell cycle, and cancer cell biology.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C] and CH 235 [Min Grade: C](Can be taken Concurrently) and CH 234 [Min Grade: C](Can be taken Concurrently) or CH 236 [Min Grade: C](Can be taken Concurrently)

**BY 340. Animal Nutrition. 3 Hours.**

This course is designed for the study of comparative animal nutrition, and is targeted for biology majors with interest in Veterinary and Medical Schools. Topics include: 1. the classification and function of nutrients, 2. the anatomy, physiology and biochemistry of the gastrointestinal system, 3. nutrient procurement, 4. methods of analysis for nutrients and feed, and 5. feed formulation and manufacture.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C] and BY 210 [Min Grade: C]

**BY 351. Plant Biology. 3 Hours.**

This course introduces the student to the basic concepts of plant biology including plant diversity, structure, physiology, metabolism, reproduction, genetics, molecular biology, evolution and ecology. It is targeted to Biology Majors. This class brings together knowledge and methodologies from a number of different disciplines to provide students with an intensive and comprehensive plant curriculum from the molecular to the organismal level. In this course, students will be introduced not only to plant biology, but also to plant-specific concepts and techniques in molecular biology and genetics. Lecture. 3 credit hours.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C] and (BY 210 [Min Grade: C] or BY 211 [Min Grade: C])

**BY 354. Field Phycology. 4 Hours.**

Students will be introduced to freshwater and marine phycology, with an emphasis on evolutionary ecology. A major portion of the course will be based in the field along the Eastern Shore of Virginia and throughout the freshwater habitats of Alabama. Lecture, laboratory, and field trips (May session). Permission of Instructor required.

**Prerequisites:** BY 123 [Min Grade: C] or BY 124 [Min Grade: C] or BY 210 [Min Grade: C]

**BY 362. Neurobiology. 3 Hours.**

This course teaches the biological basis of nervous system function, i.e., how the central nervous system is organized, and how neurons, synapses and neuronal circuits function in order to produce behavior. The course also provides the student with basic concepts in mammalian neuroendocrinology and age-related changes in nervous system structure and function.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C]

**BY 394. Biology Laboratory Teaching. 1-6 Hour.**

Student will assist in instruction of a biology laboratory. Student is required to attend scheduled preparatory sessions each week, assist in teach assigned laboratory section, help develop student assignments such as examinations and/or practicals and assist the laboratory coordinator in other capacities as assigned. Students work under the direction of the course instructor and/or the laboratory coordinator. Student must have completed the course in which the student is assisting with a grade of B or higher. Permission of the instructor is required. May be repeated for credit to a maximum of six semester hours.

**BY 395. Special Topics in Biology. 1-4 Hour.**

This course will consider topics from the various disciplines in the biological sciences and the topic will differ each term. Course requirements may include lecture, laboratory, readings, discussion, reporting, and internships or fieldwork, which may be conducted on- or off-campus. May be taken more than once for credit.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C] and (BY 210 [Min Grade: C] or BY 211 [Min Grade: C])

**BY 397. Advanced Directed Readings. 1-3 Hour.**

Reading and independent study in selected areas under supervision of faculty sponsor. May be repeated for total of three semester hours credit. 12 semester hours of BY with BY GPA of 3.0 and permission of instructor required.

**BY 398. Undergraduate Research. 1-3 Hour.**

Research project under supervision of faculty sponsor. May be repeated for a total of 3 semester hours credit. 12 semester hours of BY with GPA of 3.0 and permission of instructor required.

**BY 405. Microbial Physiology. 3 Hours.**

Microbial structure and function, growth, metabolism, and regulation of cellular activity.

**Prerequisites:** BY 271 [Min Grade: C]

**BY 407. Microbial Ecology. 3 Hours.**

This course examines microorganisms in their natural habitats, with a focus on soil and aquatic ecosystems as well as symbiotic interactions between microbes and animals and plants. Students will learn both theory and practical techniques for studying microbial ecology, including hands-on exposure to modern bioinformatic analysis methods for microbial communities. 3 credit hours.

**Prerequisites:** BY 271 [Min Grade: C]

**BY 409. Principles of Human Physiology. 4 Hours.**

The lecture and laboratory course uses humans as a model system to investigate physiological processes occurring at cell, tissue, organ, and system levels. Additionally the use of experimental examples and laboratory experiments and the interpretation of data will be used to understand all aspects of productivity. The class is designed to improve scientific writing skills related to research experiment. Writing and Quantitative Literacy are significant components of this course. Foundation in anatomy recommended (BY 115 or BY 256).

**Prerequisites:** (BY 210 [Min Grade: C] or BY 211 [Min Grade: C]) and CH 237 [Min Grade: C] and (CH 238 [Min Grade: C] or CH 239 [Min Grade: C])

**BY 409L. Principles of Human Physiology Laboratory. 0 Hours.**

Human Physiology Lab required with BY 408 and BY 409 lecture.

**BY 410. Comparative Animal Physiology. 3 Hours.**

Comparative examples to illustrate general principles of physiology; study of how animals function in their environment.

**Prerequisites:** BY 256 [Min Grade: C]

**BY 411. Advanced Human Anatomy. 4 Hours.**

Regional study of human gross anatomy by dissection of human donor bodies.

**Prerequisites:** BY 115 [Min Grade: C]

**BY 412. 21st Century Gene Editing. 3 Hours.**

The course will cover basic concepts of molecular genetics, including an introduction to the DNA biology (structure and function), the use of model organisms and experimental approaches for molecular genetic analysis and an understanding of human genetic disorders and possible genetic therapies. The first part of the course, while dealing with introductory material through lectures and discussions, will give students a hands-on experience with well-known molecular techniques like DNA isolation and polymerase chain reaction (PCR), and how these techniques are used in the context of gene editing. The participants will also have direct exposure to working with zebrafish (*Danio rerio*) embryos (<3 days old, therefore exempt from detailed IACUC regulations) and roundworms (*C. elegans*) as an alternate model system to use the CRISPR-Cas9 technology. These broadly applicable techniques will be reiterated in the second part of the course with a special emphasis on the CRISPR-Cas9 technology. The activities involved in these two parts will provide an opportunity for rich discussion on fundamental concepts in biology and chemistry, the process of scientific experimentation, and the nature of evidence.

**Prerequisites:** (BY 210 [Min Grade: C] or BY 211 [Min Grade: C]) and CH 235 [Min Grade: C](Can be taken Concurrently) and CH 236 [Min Grade: C](Can be taken Concurrently)

**BY 414. Advanced Cell Biology. 3 Hours.**

This course will focus on understanding cell signaling, function, and dynamics, which is the core of modern cell biology topics. This course is targeted for senior undergraduate students who are interested in current topics of Cell Biology and have successfully completed undergraduate courses in genetics and cell biology. Topics include the cellular organization and function, cell cycle, autophagy, apoptosis, stem cell and cellular signaling pathways. This course also includes reading of primary literature and writing a research proposal.

**Prerequisites:** BY 210 [Min Grade: C] and BY 330 [Min Grade: C]

**BY 416. Cellular Physiology. 3 Hours.**

Biochemical and thermodynamic aspects of cellular energy metabolism. Foundation in physiology recommended (BY 124, BY 116, BY 409 or By 410).

**Prerequisites:** BY 330 [Min Grade: C] and CH 237 [Min Grade: C] (Can be taken Concurrently) and CH 238 [Min Grade: C] (Can be taken Concurrently) or CH 239 [Min Grade: C]

**BY 420. General Endocrinology. 3 Hours.**

The central theme of this course is the role of hormone chemical messengers in the regulation of physiological processes. Topics include structure of endocrine cells and glands, hormone synthesis and chemistry, physiological effects of hormones, and mechanisms of hormone action. Emphasis is placed on vertebrate systems, but instructive invertebrate systems are also considered.

**Prerequisites:** BY 256 [Min Grade: C]

**BY 426. Evolutionary Medicine. 3 Hours.**

An evolutionary approach to issues relating to human health and disease.

**Prerequisites:** (BY 116 [Min Grade: C] or BY 409 [Min Grade: C]) and BY 330 [Min Grade: C]

**BY 429. Evolution. 3 Hours.**

The course includes the history of evolutionary thought and modern evolutionary theory. Discussions cover (but are not limited to) the history of life, mechanisms of evolutionary change, sexual selection, adaptation, speciation, and molecular evolution. Students will also be introduced to historical and contemporary studies of evolution on a wide variety of topics and organisms.

**Prerequisites:** BY 210 [Min Grade: C] or BY 211 [Min Grade: C]

**BY 431. Principles of DNA Technology. 3 Hours.**

Manipulation of genes and their regulation; techniques used in recombinant DNA technology. Lecture.

**Prerequisites:** (BY 210 [Min Grade: C] or BY 211 [Min Grade: C]) and BY 311 [Min Grade: C]

**BY 433. Advanced Molecular Genetics. 3 Hours.**

Molecular genetics of eukaryotic organisms, including analysis of the features and nature of eukaryotic genomes, genes, nucleosomes, and chromosomes; processes involved, such as transcription, splicing, transposition, and signal transduction. The role of molecular biology in cell growth and cancer. Lecture.

**Prerequisites:** BY 311 [Min Grade: C]

**BY 434. Functional Genomics and Systems Biology. 3 Hours.**

Systems biology is an inter-disciplinary study underlying complex biological processes as integrated systems of many interacting components. This course will give students a foundation in understanding complex biological interactions at the molecular, network and genomic level. This course will cover state-of-the-art high throughput established and novel approaches used in genome sequencing, transcriptomics, proteomics and metabolomics to obtain, integrate and analyze complex data. The students will also get familiar with knowledge on experimental perturbation of genomes, gene regulatory networks, comparative genomics and evolution, basic bioinformatics. This course will be a combination of text based lectures and discussions of the current literature relevant to Functional Genomics and Systems Biology.

**Prerequisites:** BY 210 [Min Grade: C] or BY 211 [Min Grade: C]

**BY 435. Natural History of Vertebrates. 4 Hours.**

Lecture and field study of adaptations of vertebrate classes for survival in particular environments. Survey and classification of local vertebrates. Lecture and laboratory.

**Prerequisites:** BY 256 [Min Grade: C]

**BY 435L. Natural History of Vertebrates Laboratory. 0 Hours.**

Natural History of the Vertebrates Lab required with BY 435 lecture.

**BY 436. Biological Processes in Aging. 3 Hours.**

The #1 threat to human health – far greater than cancer, heart disease, and Alzheimer's disease combined – is aging. Aging is also a fascinating biological puzzle. Why do we, and virtually every other species, age in the first place? Why can't nature simply maintain the body it built? This course will introduce you to the fascinating process of biological aging, its impact on human and animal life, how it evolved, and the manner in which its biology is investigated, the cellular and molecular process that underlie aging, and how efforts to slow human aging are progressing. We will cover the history of exceptionally long human and animal lives and also delve into current and historical approaches to alter the rate of aging in humans with an emphasis on current promising research areas. In covering this material we will also encounter some of the many colorful scientists who have worked on the problem of aging as well as the past and current frauds and charlatans who are just trying to make a buck off of people's fear of death and disability.

**Prerequisites:** BY 123 [Min Grade: C] and BY 210 [Min Grade: C]

**BY 437. Epigenetics. 3 Hours.**

This course provides a survey of the field of epigenetics, introducing the student to the diverse areas of epigenetic research in a variety of eukaryotic systems. The course combines lectures with discussion of primary literature and research talks from invited faculty speakers working in epigenetics. In addition to providing an overview of the field of epigenetics, this course emphasizes working with primary scientific literature and the development of critical reading skills. Recommended that Molecular Genetics be completed prior to enrollment.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C] and (BY 210 [Min Grade: C] or BY 211 [Min Grade: C])

**BY 440. Immunology. 3 Hours.**

Immune system and functions of host humoral and cellular immune responses. Mechanisms of antigen and antibody reactions and basic immunological methods.

**Prerequisites:** BY 271 [Min Grade: C] and BY 330 [Min Grade: C]

**BY 442. Experimental Phycology. 4 Hours.**

The course uses Algae as a model system to investigate various experimental approaches to assessing productivity with specific emphasis placed on classification, respiration, photosynthesis, growth and nutrient limitation. Additionally the use of experimental examples and laboratory experiments and the interpretation of data will be used to understand all aspects of productivity. Designed to improve scientific writing skills related to research experiments. Quantitative Literacy is a significant component of this course.

**Prerequisites:** BY 124 [Min Grade: C] and CH 117 [Min Grade: C] and (CH 118 [Min Grade: C] or CH 119 [Min Grade: C])

**BY 442L. Experimental Phycology Laboratory. 0 Hours.**

Experimental Phycology Lab required with BY 442 lecture.

**Prerequisites:** BY 124 [Min Grade: C] and CH 117 [Min Grade: C] and (CH 118 [Min Grade: C] or CH 119 [Min Grade: C])

**BY 444. Biological Experimental Design and Methods. 3 Hours.**

This course focuses on modern experimental design and its use in biological research. Specifically, we will discuss principles of open science and their implications for data management as they apply to commonly used methods in biological research. We will discuss experimental design, the use of appropriate controls, and the interpretations of the results obtained. Methods covered in detail will include for example PCR, DNA sequencing (Sanger and NGS), fluorescent microscopy, and bioinformatics.

**Prerequisites:** (BY 210 [Min Grade: C] or BY 211 [Min Grade: C]) and BY 245 [Min Grade: C]

**BY 450. Plant Physiology. 3 Hours.**

Metabolic activities and growth processes of plants, with emphasis on photosynthesis, respiration, germination, dormancy, and hormones; physiological phenomena associated with phases of development. Lecture.

**Prerequisites:** CH 210 [Min Grade: C]

**BY 454. Bio Capstone: Field Phycology. 4 Hours.**

Students will be introduced to freshwater and marine phycology, with an emphasis on evolutionary ecology. A major portion of the course will be based in the field along the Eastern Shore of Virginia and throughout the freshwater habitats of Alabama. Lecture, laboratory, and field trips (May session). Permission of Instructor required. Students who enroll in this class as their capstone experience are expected to do writing and ethics assignments to fulfill their capstone requirements.

**Prerequisites:** BY 123 [Min Grade: C] or BY 124 [Min Grade: C] or BY 210 [Min Grade: C]

**BY 456. Comparative Vertebrate Anatomy. 4 Hours.**

Study of the anatomical systems of vertebrates in an evolutionary and functional context. Covers form, function, development and phylogeny of vertebrates, with overviews of organ systems, and the major adaptive events of vertebrate evolution. Labs complement lectures with dissections of representative species, and surveys of specializations in other forms. Lecture and laboratory.

**Prerequisites:** BY 124 [Min Grade: C]

**BY 456L. Comparative Vertebrate Anatomy Lab. 0 Hours.**

Comparative Vertebrate Anatomy Lab required with BY 456 lecture.

**Prerequisites:** BY 124 [Min Grade: C]

**BY 460. Advanced Invertebrate Zoology. 3 Hours.**

This course takes an in-depth look at aspects of the biology of the Echinodermata and Crustacea. The course format includes lectures, guest lectures, and student critiques of papers from the scientific literature. There is a field trip to Blunt Springs to search for echinoderm fossils. Lecture and student projects.

**Prerequisites:** BY 255 [Min Grade: C]

**BY 467. Population Ecology. 3 Hours.**

The course covers the structure and dynamics of populations with an emphasis on understanding how reproduction, mortality and dispersal interact to control fluctuations in population size and structure. Special emphasis will be placed on the use of computer models and interpretation of data to address specific applications in conservation biology and natural resource management. Quantitative Literacy is a significant component of this course.

**Prerequisites:** BY 124 [Min Grade: C]

**BY 468. Ecological Genetics. 3 Hours.**

This intensive course will introduce students to the genetic tools of modern population biology – which ones are available, practical, and useful for particular questions – and how these genetic analyses have been applied to a wide variety of ecological topics, including: dispersal, life histories, recruitment, habitat and mate choice, local selection, genetic differentiation, the conservation of biodiversity, and speciation. Importantly, this course is an opportunity to become proficient at applying molecular tools to bolster ecological studies. Time will be spent in lectures and learning practical coding and data analyses.

**Prerequisites:** BY 210 [Min Grade: C]

**BY 470. Ecology. 3 Hours.**

The study of interactions between organisms and their environment. An introduction to ecological processes at individual, population, community, and ecosystem levels and their relevance to current environmental problems. Lecture.

**Prerequisites:** BY 255 [Min Grade: C] or BY 256 [Min Grade: C] or BY 260 [Min Grade: C] or BY 271 [Min Grade: C]

**BY 474. Chemical Ecology. 3 Hours.**

Study of chemical interactions between organisms or between organisms and their environment. Topics include chemical signaling between organisms, sensing of the chemical environment, and chemical defenses against predators, pathogens, biofoulers, or competitors. Students will be introduced to these topics in a wide variety of terrestrial and aquatic habitats.

**Prerequisites:** BY 124 [Min Grade: C] and CH 235 [Min Grade: C]

**BY 475. Comparative Developmental Biology. 3 Hours.**

Mechanisms of development with emphasis on comparative biology.

**Prerequisites:** BY 210 [Min Grade: C] or BY 211 [Min Grade: C]

**BY 480. Emergency Medicine Internship. 3 Hours.**

This semester-long internship is designed to provide undergraduate students with an authentic hands-on medical research experience. The course will allow students the opportunity to assist faculty members and residents of the UAB Department of Emergency Medicine in their clinical research studies. Specifically, students will be involved in patient recruitment for the study, determine patient eligibility, reading information about the studies to patients, and collecting data regarding patient history. Students will also have the methodology associated with clinical research. Junior or senior standing, minimum GPA of 3.5, completed application and acceptance into the internship program required.

**BY 484. Bio Capstone: Chemical Ecology. 4 Hours.**

Study of chemical interactions between organisms or between organisms and their environment. Topics include chemical signaling between organisms, sensing of the chemical environment, and chemical defenses against predators, pathogens, biofoulers, or competitors. Students will be introduced to these topics in a wide variety of terrestrial and aquatic habitats. Students who enroll in this class as their capstone experience are expected to do writing and ethics assignments to fulfill their capstone requirement.

**Prerequisites:** BY 124 [Min Grade: C] and CH 235 [Min Grade: C]

**BY 485. Special Topics in Biology. 0-4 Hours.**

This course will consider topics from the various disciplines in the biological sciences and the topic will differ each term. Course requirements may include lecture, laboratory, readings, discussion, reporting, and internships or fieldwork, which may be conducted on- or off-campus. May be taken more than once for credit.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C] and (BY 210 [Min Grade: C] or BY 211 [Min Grade: C])

**BY 487. Biology Senior Experience. 0 Hours.**

Graduating Seniors in the Undergraduate Biology Major will submit documents and complete assessments required for graduation.

**BY 488. Instructional Teaching Practicum. 1-3 Hour.**

This course is specially designed to introduce students to the learning and teaching of biology in the college classroom. We will begin our discussions with exploring current issues in biology education and the need for a reform in the light of different teaching methodologies. It will then be followed upon by easily implementable strategies for your respective weekly group discussions. These sessions will be in the form of a series of four/five workshops followed by monthly check-in dates. Honors section will include semester projects.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C]

**BY 489. Chromatin Biology Research Lab. 0-3 Hours.**

This Classroom Undergraduate Research Experience is designed for students transferring to UAB and introduces them to original research in a classroom setting. The students will learn laboratory skills in molecular genetics by producing the reagents such as plasmid constructs or recombinant proteins. The students will be introduced to the scope of the project, read relevant literature, and will conclude their research experience by writing a journal-style report on their results. Thus, this course promotes proficiency in laboratory skills, writing of laboratory reports, and scientific literacy.

**BY 490. Bio Capstone: Human Physiology. 4 Hours.**

Physiological processes occurring at cell, tissue, organ, and system levels in mammals with emphasis on humans. Students that enroll in this capstone experience will be expected to do additional work to fulfill their biology capstone requirement. Lecture and Laboratory. Foundation in anatomy recommended (Human Anatomy or Vertebrate Zoology).

**Prerequisites:** (BY 210 [Min Grade: C] or BY 211 [Min Grade: C]) and CH 237 [Min Grade: C] and (CH 238 [Min Grade: C] or CH 239 [Min Grade: C])

**BY 491. Biology Capstone - Evolution. 4 Hours.**

The course introduces the history of evolutionary thought and modern evolutionary theory. Discussions cover (but are not limited to) the history of life, mechanisms of evolutionary change, sexual selection, adaptation, speciation, and molecular evolution. Students will be introduced to historical and contemporary studies of evolution on a wide variety of topics and organisms. Students that enroll in this class as their capstone experience are expected to do writing and ethics assignments to fulfill their capstone requirement.

**BY 492. Biology Capstone - Undergraduate Research. 4 Hours.**

Research project under supervision of faculty sponsor. Student must enroll for 4 credit hours and must have senior standing. Students who enroll in this course as their capstone experience will be required to do additional work to fulfill their biology capstone requirement.

**BY 493. Biology Capstone - Honors Research. 4 Hours.**

Research project under supervision of faculty sponsor. You must enroll in 4 credit hours and you must have senior standing. Students that identify this course as their capstone experience will be required to do additional work to fulfill their biology capstone requirement.

**BY 495. Special Topics in Biology. 0-4 Hours.**

This course will consider topics from the various disciplines in the biological sciences and the topic will differ each term. Course requirements may include lecture, laboratory, readings, discussion, reporting, and internships or fieldwork, which may be conducted on- or off-campus. May be taken more than once for credit.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C] and (BY 210 [Min Grade: C] or BY 211 [Min Grade: C])

**BY 496. Fundamentals of Clinical Research. 3 Hours.**

Issues relevant to the conduct of clinical research: ethics, hypothesis testing, study design, and data collection and management. Lecture and clinical interaction with patients. Prerequisites: Junior or Senior level biology majors; 15 hours of biology credit with a 3.5 GPA in biology courses, and permission of instructor.

**BY 498. Honors Research. 1-6 Hour.**

Research project for students admitted to Honors Research Program. Two or three terms required during which minimum of 6 semester hours must be earned. Grade assigned at completion of program. 18 hours of biology with minimum GPA of 3.5 in biology classes and admission to Honors Research Program required.

**BY 499. Biology Seminar. 1 Hour.**

Student presentations and discussions. Subject matter varies by term. See current class schedule for topic. Senior standing and permission of instructor required.

**MESC-Marine Environmental Sci Courses****MESC 106. Introduction to Oceanography. 4 Hours.**

General introduction to the physics, chemistry, geology, and biology of the ocean. Lecture, laboratory, and field trips. Course is taught at Dauphin Island Sea Lab.

**MESC 128. Ocean Science. 4 Hours.**

Marine environment and relation of ocean to man. Lecture, laboratory, and field work. For non-science majors. Does not count towards the biology major or minor. General elective credit only. Course is taught at Dauphin Island Sea Lab.

**MESC 201. Oceanology of the Gulf of Mexico. 2 Hours.**

Descriptive study of the oceanology of the Gulf of Mexico and adjacent waters, including coastal zone, continental shelf, and deep ocean. Course is taught at Dauphin Island Sea Lab.

**MESC 204. Coastal Geomorphology. 2 Hours.**

Shape and land forms along coast; factors determining formation. Lecture and lab. Course is taught at Dauphin Island Sea Lab.

**MESC 206. Marine Biology. 4 Hours.**

Invertebrates, vertebrates, and marine plants. Lecture, laboratory, and field work. Permission of instructor required. Course is taught at Dauphin Island Sea Lab.

**Prerequisites:** BY 124 [Min Grade: D]

**MESC 207. Commercial Marine Fisheries of Alabama. 2 Hours.**

Biology, harvest techniques, processing, and economic value of local commercial species. Course is taught at Dauphin Island Sea Lab.

**MESC 208. Biology and Conservation of Marine Turtles. 2 Hours.**

Overview of the biology and conservation of marine turtles. Lecture and laboratory. Course is taught at Dauphin Island Sea Lab.

**Prerequisites:** BY 124 [Min Grade: D]

**MESC 209. Hurricanes of the Gulf of Mexico. 2 Hours.**

Survey of hurricane formation and impacts with emphasis on hurricanes in the Gulf of Mexico. Does not count towards the biology major or minor. General elective credit only. Course is taught at Dauphin Island Sea Lab.

**MESC 213. Shark & Ray Biology. 2 Hours.**

Introduction to the biology of sharks and rays, with emphasis on regional shark and ray fauna. Lecture and laboratory. Course is taught at Dauphin Island Sea Lab.

**Prerequisites:** BY 124 [Min Grade: C]

**MESC 216. Shark and Ray Biology. 2 Hours.**

Introduction to the biology of sharks and rays, with emphasis on regional shark and ray fauna. Lecture and laboratory. Course is taught at Dauphin Island Sea Lab.

**Prerequisites:** BY 124 [Min Grade: C]

**MESC 220. Marine Aquaculture. 2 Hours.**

This course will introduce students to techniques in marine shellfish aquaculture (both commercial and research production) with an emphasis on production techniques, water quality, nutrition, reproduction, and economics of commercially important species. This course is also designed to assist students with problem solving and communication skills.

**MESC 230. The Ecology of Florida Everglades. 2 Hours.**

This course will examine the natural history and ecology of one of the world's rarest and most endangered wilderness areas. The Everglades is the only area of our planet to be designated as a National Park, an International Biosphere Reserve, and a World Heritage Park. This two-week course will consist of a week of intensive lectures and discussions, focusing on the natural history, geology, hydrology, and biota of this system, and then a week of intense field time to examine the Everglades and associated systems. The field portion of the course will consist of day-long excursions and hikes, as well as tent camping in several of Florida's state parks. As such, participants should bring appropriate gear and be prepared to actively and cheerfully participate. Special fees apply and will be determined by the number of participants in the course.

**Prerequisites:** (BY 123 [Min Grade: C] and BY 124 [Min Grade: C]) or BY 260 [Min Grade: C] or BY 256 [Min Grade: C] or BY 255 [Min Grade: C]

**MESC 302. Coastal Zone Management. 2 Hours.**

Ecological features and set of physical management policies for coastal communities, with description of relevant federal and state programs. Course is taught at Dauphin Island Sea Lab.

**MESC 303. Coastal Climatology. 2 Hours.**

Physical factors resulting in climatic conditions of coastal regions, with emphasis on northern Gulf of Mexico. Does not count towards the biology major or minor. General elective credit only. Course is taught at Dauphin Island Sea Lab.

**MESC 304. Marine Geology. 4 Hours.**

Geology of ocean basins, with emphasis on continental shelves, sediments, and sedimentary processes. Course is taught at Dauphin Island Sea Lab.

**Prerequisites:** ES 101 [Min Grade: D] and ES 102 [Min Grade: D]

**MESC 305. Dolphins and Whales. 2 Hours.**

Classification, anatomy, and ecology of cetaceans. Lecture and laboratory. Course is taught at Dauphin Island Sea Lab.

**Prerequisites:** BY 124 [Min Grade: D]

**MESC 330. Marine Conservation Biology. 4 Hours.**

This course will explore the major threats to marine biodiversity as well as the pros and cons of the potential solutions to these threats. In addition, students will participate in field trips that support topics covered in lecture, and will demonstrate the application of current principles in marine conservation.

**MESC 402. Marine Vertebrate Zoology. 4 Hours.**

Marine fishes, reptiles, and mammals (systematics, zoogeography, and ecology). Lecture, laboratory, and field work. 12 semester hours in biology required. Course is taught at Dauphin Island Sea Lab.

**MESC 407. Marine Botany. 4 Hours.**

Marine algae and vascular and non-vascular plants (distribution, identification, structure, ecology, and reproduction). Lecture, laboratory, and field work. 12 semester hours in biology required. Course is taught at Dauphin Island Sea Lab.

**MESC 411. Coastal Wetlands Ecology. 4 Hours.**

Habitat analysis, natural history studies, and population dynamics of selected organisms. Lecture, laboratory, and field work. Course is taught at Dauphin Island Sea Lab.

**Prerequisites:** MESC 412 [Min Grade: D] or BY 470 [Min Grade: D]

**MESC 412. Marine Ecology. 4 Hours.**

Bioenergetics, community structure, population dynamics, predation, competition, and speciation in marine ecosystems. Lecture, laboratory and field work. Course is taught at Dauphin Island Sea Lab.

**Prerequisites:** BY 255 [Min Grade: D] or BY 256 [Min Grade: D]

**MESC 413. Marine Invertebrate Zoology. 4 Hours.**

Natural history, systematics, and morphology of marine invertebrates. Lecture, laboratory and field work. Course is taught at Dauphin Island Sea Lab.

**Prerequisites:** BY 124 [Min Grade: D]

**MESC 415. Coastal Ornithology. 2 Hours.**

Coastal and pelagic birds, with emphasis on ecology, taxonomy, and distribution. Lecture, laboratory, and field work. Course is taught at Dauphin Island Sea Lab.

**Prerequisites:** BY 124 [Min Grade: D]

**MESC 417. Marine Technical Methods. 2 Hours.**

Hardware of marine science, sampling procedures, processing station location, and field equipment maintenance and operation. Prerequisite: 12 semester hours in a science discipline. Course is taught at Dauphin Island Sea Lab.

**MESC 428. Oceanography. 4 Hours.**

Physics, chemistry, biology, and geology of oceans. Course is taught at Dauphin Island Sea Lab.

**Prerequisites:** CH 117 [Min Grade: D] and CH 118 [Min Grade: D] and PH 202 [Min Grade: D] and MA 106 [Min Grade: D]

**MESC 472. Marine Aquaculture. 2 Hours.**

Science, techniques, and economics of marine aquaculture. Lecture and laboratory. BY 255 is a recommended prerequisite. Course is taught at Dauphin Island Sea Lab.

**Prerequisites:** BY 256 [Min Grade: D] or BY 435 [Min Grade: D]

**MESC 473. Marine Fish Diseases. 4 Hours.**

Introduction to aquatic animal diseases, specifically for fish and shellfish. Course is taught at Dauphin Island Sea Lab.

**Prerequisites:** BY 271 [Min Grade: D] and (BY 255 [Min Grade: D] or BY 256 [Min Grade: D])

**MESC 475. Marine Behavioral Ecology. 4 Hours.**

Behavior of marine organisms as it relates to survival in their environment. Lecture, laboratory and field trips. Course is taught at Dauphin Island Sea Lab.

**Prerequisites:** BY 255 [Min Grade: D] or BY 256 [Min Grade: D]

**MESC 478. Advanced Anatomy and Evolution of Marine Fishes. 3 Hours.**

Anatomical studies of marine fishes with emphasis on function and structure; evolutionary and taxonomic relationships. Course is taught at Dauphin Island Sea Lab.

**Prerequisites:** BY 256 [Min Grade: D]

**MESC 479. Marine Toxicology. 4 Hours.**

Selected topics of toxicology as related to the coastal environment and marine organisms. Course is taught at Dauphin Island Sea Lab.

**Prerequisites:** BY 330 [Min Grade: D] and (CH 235 [Min Grade: D] or CH 237 [Min Grade: D])

**MESC 491. Research on Special Topics. 1-6 Hour.**

Enrollment by special arrangement in any subject listed. Permission of MESC representative, Department of Biology required. Course is taught at Dauphin Island Sea Lab.

**MESC 492. Special Topics: Lecture. 2-4 Hours.**

Lectures on selected marine-related topics. Course content varies. Course is taught at Dauphin Island Sea Lab.

## Department of Chemistry

**Chair:** Dr. Richard Dluhy

The Department of Chemistry provides several undergraduate degree programs for chemistry majors and general course offerings for non-majors. All B.S. chemistry degrees are designed to comply with American Chemical Society (ACS) standards and provide a strong foundation in chemistry that prepares students to be highly qualified to work as professional chemists, pursue advanced studies leading to the Ph.D. degree in chemistry or biochemistry, or gain admission to professional schools in medicine, dentistry, optometry, pharmacy, work as forensic chemists in regional, state, and federal forensic laboratories, work as professional chemists in industrial or government laboratories, or pursue certification to be chemistry educators. Students must accumulate 400 hours of pre-approved laboratory experiences beyond general chemistry in order for their degree to qualify for an ACS certificate.

The department offers the following ACS-approved B.S. degrees in chemistry as well as a minor in chemistry:

1. Major in Chemistry
2. Major in Chemistry with a Biochemistry Track
3. Major in Chemistry with a Chemical Education Track
4. Major in Chemistry with a Forensic Chemistry Track
5. Major in Chemistry with a Polymer Chemistry Track

The B.S. degree in chemistry with a biochemistry track, or a B.S. degree in chemistry, with biology as a minor, is recommended for students with career interests in medicine, dentistry, optometry, pharmacy, or other health-related fields. Students whose interests include careers in federal,

state, or local forensic laboratories are encouraged to obtain a degree in chemistry with the forensic chemistry track.

The required curricula associated with the B.S. degree in chemistry with available options, and a suggested program of study, are available from the Department of Chemistry Advising Office and on the Department of Chemistry website ([www.uab.edu/chemistry](http://www.uab.edu/chemistry)).

An exciting feature of the Department of Chemistry's B.S. degree is the opportunities for undergraduate chemistry majors to participate in world-class research programs. Students are encouraged to become involved in research early in their undergraduate careers. Students are engaged in all aspects of meaningful and significant research programs that cover a variety of projects and encompass every area of chemistry, and biochemistry, and extend into interdisciplinary programs within the UAB biomedical research complex. Students demonstrating success in their research projects are encouraged to present their work at regional and national scientific meetings and are supported by departmental travel scholarships.

All students majoring in chemistry are required to meet with the Undergraduate Advisor (Mr. James Grimes) each term prior to registration. The advisor's contact information is [chemadvise@uab.edu](mailto:chemadvise@uab.edu) or 205-934-7529.

## Grade Point Average

At least a 2.0 average for all required chemistry courses and a 2.0 average for all required chemistry courses taken at UAB are compulsory for either a major or minor in chemistry. The current UAB course repeat policy and course forgiveness policy will be used in calculating the grade point average. Courses taken on a pass/fail basis do not count toward a CH minor.

## Transfer Credit / Residency

All chemistry minors must take at least two of the following courses (with laboratories) at UAB, and at least one of these courses with laboratory must be at the 200 level or higher: CH 235/CH 236, CH 237/CH 238, CH 325, CH 345, CH 333, CH 355/CH 355L, CH 426, CH 440, CH 444, CH 450, CH 460, CH 480/CH 480L, or CH 481/CH 481L. Chemistry majors must also take CH 493 or CH 495 at UAB, and at least two of these courses at UAB (if not already satisfied by the residency requirement mentioned above): CH 333, CH 426, CH 440, CH 444, CH 450, CH 463 or CH 464, CH 480/CH 480L, CH 481/CH 481L, or CH 497 (which can only count once, for three credit hours, toward this requirement). Students will not be given more semester-hours credit toward the major or minor than awarded for equivalent courses at UAB. Chemistry credit from another institution cannot be applied toward requirements for a chemistry major or minor at UAB if the grade is W, WP, WF, D, or F. Courses taken through the Cooperative Exchange Program must be approved in advance and in writing by the chemistry department chair in order for courses to apply toward requirements for a chemistry major or minor.

## Core Curriculum for Chemistry

[Refer to Core Curriculum](#)

## Graduate Programs

The Department of Chemistry offers graduate study leading to the degrees of Doctor of Philosophy and Master of Science. Further information may be obtained from the Graduate Program Director of the

Department of Chemistry, the UAB Graduate School Catalog, or the departmental web site (<http://www.uab.edu/chemistry>).

## 5<sup>th</sup> year master's degree in biochemistry

This is a research intensive degree program and to be eligible for admission in the senior year, students must start their undergraduate research experience as early as possible, preferably in their sophomore year.

Admission Requirements:

- achieved status of Senior chemistry major
- GPA of 3.0 or higher
- enrolled in CHEM 497 (Introduction to Undergraduate Research) by the Fall semester of the Junior year

- selection of faculty research mentor (in the Department of Chemistry or Department of Biochemistry & Molecular Genetics) by Spring semester of the Junior year and enroll in CHEM 497 (Undergraduate Research) by Spring semester of the Junior year

Admission to the 5<sup>th</sup>-year MS program will additionally require:

- satisfactory performance on Graduate Record Exam (GRE) taken in the Senior year (first term)
- strong letter of nomination for admission to the program from their undergraduate research mentor

The 5<sup>th</sup>-year M.S. Chemistry/Biochemistry Oversight Committee, composed of two faculty members from the Department of Chemistry (including the Department of Chemistry Graduate Program Director) and two faculty members from the Department of Biochemistry (GBS-BSSB theme including the GBS-BSSB Graduate Program Director) will review applicants and approve admission to the program.

## Bachelor of Science with a Major in Chemistry

Required Courses in Core Curriculum

Students, in consultation with their academic advisor, must sequence requirements to meet any stated prerequisite requirements for specific courses in their curriculum, including UAB Core Curriculum requirements stated in this catalog. These courses are required for this major and can also fulfill core curriculum requirements:

Area III Sciences: CH 115, CH 116, CH 117, CH 118, or CH 125, CH 126, CH 127, CH 128

Area III Mathematics: MA 125, or MA 225

Requirements	Hours
<b>Mathematics Requirement</b>	<b>4</b>
MA 126/226 Calculus II	
<b>Physics</b>	
Select one of the following:	<b>8</b>
PH 201 College Physics I & PH 202 and College Physics II	
PH 221 General Physics I & PH 222 and General Physics II <sup>1</sup>	

### Chemistry Requirements

<b>Organic Chemistry</b>	<b>8</b>
CH 235/245 Organic Chemistry I	
CH 236/246 Organic Chemistry I Laboratory	
CH 237/247 Organic Chemistry II	
CH 238/248 Organic Chemistry II Laboratory	
<b>Analytical / Inorganic / Physical Chemistry</b>	<b>12</b>
CH 325 Physical Chemistry I with Calculus: Thermodynamics and Chemical Kinetics	
CH 333 Synthetic and Physical Laboratory Methods	
CH 345 Inorganic Chemistry: Principles and Applications of Chemical Periodicity	
CH 355 Quantitative Analysis & 355L and Quantitative Analysis Laboratory	
<b>Physical/Transition Metal/Instrumental Chemistry</b>	
Select upper division lab:	<b>2</b>
CH 444 Spectroscopic and Separations Laboratory Methods	
Select one of the following:	<b>3</b>
CH 426 Physical Chemistry II: Structure/Bonding and Molecular Spectroscopy <sup>2</sup>	
CH 440 Transition Metal Chemistry <sup>2</sup>	
CH 450 Instrumental Analysis <sup>2</sup>	
<b>Biochemistry</b>	<b>3</b>
CH 460 Fundamentals of Biochemistry	
<b>Chemistry Electives</b>	
Select one of the following:	<b>3-6</b>
CH 426 Physical Chemistry II: Structure/Bonding and Molecular Spectroscopy <sup>2</sup>	
CH 430 Physical Organic Chemistry	
CH 440 Transition Metal Chemistry <sup>2</sup>	
CH 450 Instrumental Analysis <sup>2</sup>	
CH 451 Chemometrics	
CH 461 Advanced Biochemistry	
CH 463 Biochemistry Laboratory	
CH 464 Physical Biochemistry Laboratory	
CH 471 Medicinal Chemistry and Drug Discovery	
CH 472 Chemistry of Natural Products	
CH 480 Polymer Chemistry I. Basic Principles	
CH 481 Polymer Chemistry II. Fundamental Properties	
CH 497 Undergraduate Research (two terms strongly recommended)	
<b>Capstone Requirement</b>	
Select one of the following:	<b>3-4</b>
CH 493 Chemistry in Culture & Ethics or CH 495 Ethics in Chemical Research & CH 497 and Undergraduate Research	
Total Hours	<b>46-50</b>

<sup>1</sup> The calculus-based PH 221 - PH 222 sequence is strongly recommended.

<sup>2</sup> Each of these courses can only count once toward the chemistry major.

## GPA Requirement

- At least a 2.0 average in all required chemistry courses and a 2.0 average in all required chemistry courses taken at UAB are mandatory for a major in chemistry.

- The current UAB course forgiveness policy will be used in calculating the grade point average.

## Additional Requirements

Requirements	Hours
<b>General Electives</b>	<b>15-19</b>
Students must take general electives (and the FYE/FLC requirement, if applicable) to reach the 120 semester hour requirement.	
Total Hours	15-19

## Bachelor of Science with a Major in Chemistry and a Biochemistry Track

### Required Courses in Core Curriculum

Students, in consultation with their academic advisor, must sequence requirements to meet any stated prerequisite requirements for specific courses in their curriculum, including UAB Core Curriculum requirements stated in this catalog. **These courses are required for this major and can also fulfill core curriculum requirements:**

Area III Sciences: CH 115, CH 116, CH 117, CH 118, or CH 125, CH 126, CH 127, CH 128

Area III Mathematics: MA 125, or MA 225

Requirements	Hours
<b>Mathematics Requirements</b>	<b>4</b>
MA 126/226 Calculus II	
<b>Biology</b>	<b>8</b>
BY 123 Introductory Biology I	
BY 124 Introductory Biology II	
<b>Biology</b>	
Select one of the following:	3-4
BY 210 Genetics	
BY 271 Biology of Microorganisms	
BY 330 Cell Biology	
<b>Physics</b>	
Select one of the following:	8
PH 201 College Physics I & PH 202 and College Physics II	
PH 221 General Physics I & PH 222 and General Physics II <sup>1</sup>	
<b>Organic Chemistry</b>	<b>8</b>
CH 235/245 Organic Chemistry I	
CH 236/246 Organic Chemistry I Laboratory	
CH 237/247 Organic Chemistry II	
CH 238/248 Organic Chemistry II Laboratory	
<b>Analytical / Inorganic / Physical Chemistry</b>	<b>12</b>
CH 325 Physical Chemistry I with Calculus: Thermodynamics and Chemical Kinetics	
CH 345 Inorganic Chemistry: Principles and Applications of Chemical Periodicity	
CH 333 Synthetic and Physical Laboratory Methods	
CH 355 Quantitative Analysis & 355L and Quantitative Analysis Laboratory	
<b>Physical/Transition Metal/Instrumental Chemistry</b>	
Select upper division lab:	2
CH 444 Spectroscopic and Separations Laboratory Methods	
Select one of the following:	3

CH 426	Physical Chemistry II: Structure/Bonding and Molecular Spectroscopy	
CH 440	Transition Metal Chemistry	
CH 450	Instrumental Analysis	
<b>Biochemistry</b>		<b>3</b>
CH 460	Fundamentals of Biochemistry	
CH 461	Advanced Biochemistry	
<b>Biochemistry Elective</b>		
Select one of the following:		3
CH 463	Biochemistry Laboratory	
CH 464	Physical Biochemistry Laboratory	
<b>Capstone Requirement</b>		
Select one of the following:		3-4
CH 493	Chemistry in Culture & Ethics or CH 495 Ethics in Chemical Research & CH 497 and Undergraduate Research	
Total Hours		57-59

<sup>1</sup> The calculus based PH 221 & PH 222 is strongly recommended.

## GPA Requirement

- At least a 2.0 average in all required chemistry courses and a 2.0 average in all required chemistry courses taken at UAB are mandatory for a major in chemistry.
- The current UAB course forgiveness policy will be used in calculating the grade point average.

## Additional Requirements

Requirements	Hours
General Electives	
Students must take general electives (and the FYE/FLC requirement, if applicable) to reach the 120 semester hour requirement.	15-19
Total Hours	15-19

## Bachelor of Science with a Major in Chemistry and a Forensic Chemistry Track

### Required Courses in Core Curriculum

Students, in consultation with their academic advisor, must sequence requirements to meet any stated prerequisite requirements for specific courses in their curriculum, including UAB Core Curriculum requirements stated in this catalog. **These courses are required for this major and can also fulfill core curriculum requirements:**

Area II (non-Literature option)<sup>1</sup>: CMST 101

Area III Sciences: CH 115, CH 116, CH 117, CH 118, or CH 125, CH 126, CH 127, CH 128

Area III Mathematics: MA 125, or MA 225

Requirements	Hours
<b>Mathematics Requirements</b>	<b>4</b>
MA 126/225 Calculus II	
<b>Biology <sup>2</sup></b>	<b>17</b>
BY 123 Introductory Biology I	
BY 124 Introductory Biology II	
BY 210 Genetics	

BY 311	Molecular Genetics	
BY 429	Evolution	
	or BY 431 Principles of DNA Technology	
<b>Physics</b>		
Select one of the following:		8
PH 201 & PH 202	College Physics I and College Physics II	
PH 221 & PH 222	General Physics I and General Physics II <sup>3</sup>	
<b>Organic Chemistry</b>		8
CH 235/245	Organic Chemistry I	
CH 236/246	Organic Chemistry I Laboratory <sup>1</sup>	
CH 237/247	Organic Chemistry II	
CH 238/248	Organic Chemistry II Laboratory	
<b>Analytical/Inorganic/Physical Chemistry</b>		20
CH 325	Physical Chemistry I with Calculus: Thermodynamics and Chemical Kinetics	
CH 333	Synthetic and Physical Laboratory Methods	
CH 345	Inorganic Chemistry: Principles and Applications of Chemical Periodicity	
CH 355 & 355L	Quantitative Analysis and Quantitative Analysis Laboratory	
CH 426	Physical Chemistry II: Structure/Bonding and Molecular Spectroscopy	
CH 444	Spectroscopic and Separations Laboratory Methods	
CH 450	Instrumental Analysis	
<b>Biochemistry</b>		6
CH 460	Fundamentals of Biochemistry	
CH 463	Biochemistry Laboratory	
	or CH 464 Physical Biochemistry Laboratory	
<b>Justice Science</b>		15
CJ 110	Introduction to Forensic Science	
CJ 302	Introduction to Statistics	
CJ 250	Criminalistics: An Overview	
CJ 352	Forensic Science Lab	
FS 567	Forensic Toxicology	
<b>Research</b>		2-3
CH 497	Undergraduate Research	
<b>Capstone Requirement</b>		
Select one of the following:		1-3
CH 493	Chemistry in Culture & Ethics	
	or CH 495 Ethics in Chemical Research	
Total Hours		81-84

<sup>1</sup> Completion automatically satisfies three semester hours of Core Curriculum Area II: Fine Art & Humanities.

<sup>2</sup> These courses may constitute a biology minor; please see biology department advisor or GPS if interested in this minor.

<sup>3</sup> The calculus based sequence PH 221 & PH 222 is strongly recommended.

## GPA Requirement

- At least a 2.0 average in all required chemistry courses and a 2.0 average in all required chemistry courses taken at UAB are mandatory for a major in chemistry.
- The current UAB course forgiveness policy will be used in calculating the grade point average.

## Additional Requirements

### FYE/FLC Requirement

Students must also fulfill the FYC/FLC Requirement, if applicable.

## Bachelor of Science with a Major in Chemistry and a Chemical Education Track

### Required Courses in Core Curriculum

Students, in consultation with their academic advisor, must sequence requirements to meet any stated prerequisite requirements for specific courses in their curriculum, including UAB Core Curriculum requirements stated in this catalog. **These courses are required for this major and can also fulfill core curriculum requirements:**

Area III Sciences: CH 115, CH 116, CH 117, CH 118, or CH 125, CH 126, CH 127, CH 128

Area III Mathematics: MA 125, or MA 225

Requirements	Hours
<b>Mathematics Requirement</b>	4
MA 126/225 Calculus II	
<b>Physics</b>	
Select one of the following:	8
PH 201 & PH 202	College Physics I and College Physics II
PH 221 & PH 222	General Physics I and General Physics II <sup>1</sup>
<b>Organic Chemistry</b>	8
CH 235/245	Organic Chemistry I
CH 236/246	Organic Chemistry I Laboratory
CH 237/247	Organic Chemistry II
CH 238/248	Organic Chemistry II Laboratory
<b>Analytical/Inorganic Chemistry</b>	7
CH 345	Inorganic Chemistry: Principles and Applications of Chemical Periodicity
CH 355 & 355L	Quantitative Analysis and Quantitative Analysis Laboratory
<b>Physical Chemistry</b>	
Select one of the following:	2
CH 333	Synthetic and Physical Laboratory Methods
CH 444	Spectroscopic and Separations Laboratory Methods
Select one of the following:	3
CH 325	Physical Chemistry I with Calculus: Thermodynamics and Chemical Kinetics <sup>2</sup>
CH 426	Physical Chemistry II: Structure/Bonding and Molecular Spectroscopy <sup>2</sup>
<b>Biochemistry</b>	3
CH 460	Fundamentals of Biochemistry
<b>Chemistry Electives</b>	
Select one of the following:	3-6
CH 325	Physical Chemistry I with Calculus: Thermodynamics and Chemical Kinetics <sup>2</sup>
CH 426	Physical Chemistry II: Structure/Bonding and Molecular Spectroscopy <sup>2</sup>
CH 440	Transition Metal Chemistry <sup>2</sup>
CH 450	Instrumental Analysis

CH 451	Chemometrics	
CH 459	Special Topics in Analytical Chemistry	
CH 461	Advanced Biochemistry	
CH 463	Biochemistry Laboratory	
CH 464	Physical Biochemistry Laboratory	
CH 471	Medicinal Chemistry and Drug Discovery	
CH 472	Chemistry of Natural Products	
CH 480	Polymer Chemistry I. Basic Principles	
CH 481	Polymer Chemistry II. Fundamental Properties	
CH 497	Undergraduate Research (two terms strongly recommended)	
<b>Chemistry Teaching Methods</b>		<b>3</b>
CH 498	Chemistry Teaching Methods	
<b>Capstone Requirement</b>		
Select one of the following:		3-4
CH 493	Chemistry in Culture & Ethics or CH 495 Ethics in Chemical Research & CH 497 and Undergraduate Research	
Total Hours		44-48

- <sup>1</sup> The calculus based PH 221-PH 222 sequence is strongly recommended.
- <sup>2</sup> Each of these courses can only count once toward the chemistry major.

***This program alone DOES NOT lead to certification to teach chemistry. Advising in the School of Education is **STRONGLY** recommended.***

## GPA Requirement

- At least a 2.0 average in all required chemistry courses and a 2.0 average in all required chemistry courses taken at UAB are mandatory for a major in chemistry.
- The current UAB course forgiveness policy will be used in calculating the grade point average.

## Additional Requirements

Requirements	Hours
<b>General Electives</b>	
Students must take general electives (and the FYE/FLC requirement, if applicable) to reach the 120 semester hour requirement.	29-35
Total Hours	29-35

## Bachelor of Science with a Major in Chemistry and a Polymer Chemistry Track

### Required Courses in Core Curriculum

Students, in consultation with their academic advisor, must sequence requirements to meet any stated prerequisite requirements for specific courses in their curriculum, including UAB Core Curriculum requirements stated in this catalog. **These courses are required for this major and can also fulfill core curriculum requirements:**

Area III Sciences: CH 115, CH 116, CH 117, CH 118, or CH 125, CH 126, CH 127, CH 128

Area III Mathematics: MA 125, or MA 225

Requirements	Hours
<b>Mathematics Requirement</b>	<b>4</b>
MA 126/226 Calculus II	
<b>Physics</b>	
Select one of the following: <sup>1</sup>	8
PH 201 College Physics I & PH 202 and College Physics II	
PH 221 General Physics I & PH 222 and General Physics II	
<b>Organic Chemistry</b>	<b>8</b>
CH 235/245 Organic Chemistry I	
CH 236/246 Organic Chemistry I Laboratory	
CH 237/247 Organic Chemistry II	
CH 238 Organic Chemistry II Laboratory or CH 248 Organic Chemistry II Laboratory (Honors)	
<b>Analytical/Inorganic/Physical Chemistry</b>	<b>12</b>
CH 325 Physical Chemistry I with Calculus: Thermodynamics and Chemical Kinetics	
CH 333 Synthetic and Physical Laboratory Methods	
CH 345 Inorganic Chemistry: Principles and Applications of Chemical Periodicity	
CH 355 Quantitative Analysis & 355L and Quantitative Analysis Laboratory	
<b>Physical/Transition Metal/Instrumental Chemistry</b>	
Select upper division lab:	2
CH 444 Spectroscopic and Separations Laboratory Methods	
Select one of the following:	3
CH 426 Physical Chemistry II: Structure/Bonding and Molecular Spectroscopy	
CH 440 Transition Metal Chemistry	
CH 450 Instrumental Analysis	
<b>Biochemistry</b>	<b>3</b>
CH 460 Fundamentals of Biochemistry	
<b>Polymer</b>	<b>8</b>
CH 480 Polymer Chemistry I. Basic Principles & 480L and Polymer Chemistry I Laboratory	
CH 481 Polymer Chemistry II. Fundamental Properties & 481L and Polymer Chemistry II Laboratory	
<b>Materials Science and Engineering</b>	<b>6</b>
MSE 280 Engineering Materials	
MSE 430 Polymeric Materials <sup>2</sup>	
<b>Capstone Requirement</b>	
Select one of the following:	3-4
CH 493 Chemistry in Culture & Ethics or CH 495 Ethics in Chemical Research & CH 497 and Undergraduate Research	
Total Hours	57-58

- <sup>1</sup> The calculus based PH 221-PH 222 sequence is strongly recommended.
- <sup>2</sup> MSE 281 may be a required prerequisite. Check with the course instructor.

## GPA Requirement

- At least a 2.0 average in all required chemistry courses and a 2.0 average in all required chemistry courses taken at UAB are mandatory for a major in chemistry.

- The current UAB course forgiveness policy will be used in calculating the grade point average.
- Courses taken on a pass/fail basis do not count toward the CH major.

## Additional Requirements

Requirements	Hours
<b>General Electives</b>	
Students must take general electives (and the FYE/FLC requirement, if applicable) to reach the 120 semester hour requirement.	13-19
Total Hours	13-19

## Sample Program of Study for a Major in Chemistry

### ACS Approved

Freshman			
First Term	Hours	Second Term	Hours
CH 115 or 125		3 CH 117 or 127	3
CH 116 or 126		1 CH 118 or 128	1
EH 101		3 EH 102	3
MA 125 or 225		4 MA 126 or 226	4
Core Curriculum (e.g. HY 101) <sup>1</sup>		3 Core Curriculum (e.g. CMST 101) <sup>1</sup>	3
FYE (credit hours may vary)	1		
	15		14

Sophomore			
First Term	Hours	Second Term	Hours
CH 235 or 245		3 CH 237 or 247	3
CH 236 or 246		1 CH 238 or 248	1
PH 221 <sup>2</sup>		4 PH 222	4
PH 221L		PH 222L	
PH 221R		PH 222R	
Core Curriculum (e.g. EH 213) <sup>1</sup>		3 Core Curriculum (e.g. PY 101) <sup>1</sup>	3
Core Curriculum (e.g. SOC 100) <sup>1</sup>		3 Core Curriculum (e.g. HY 102) <sup>1</sup>	3
		Electives	2
	14		16

Junior			
First Term	Hours	Second Term	Hours
CH 345		3 CH 355 & 355L	4
CH Elective (400 level) <sup>1</sup>		3 Core Curriculum (e.g., PHL 116) <sup>1</sup>	3
Core Curriculum (e.g., THR 100) <sup>1</sup>		3 Electives	7
Electives	7		
	16		14

Senior			
First Term	Hours	Second Term	Hours
CH 325		3 CH 426 or 440 <sup>3</sup>	3
CH 333		2 CH 444	2
CH 460		3 CH 493	3
Electives		7 Electives	8
	15		16

Total credit hours: 120

- <sup>1</sup> See GPS for list of courses that can satisfy core and/or major requirements.
- <sup>2</sup> The calculus based physics sequence PH 221 & PH 222 is strongly recommended instead of the PH 201 & PH 202 sequence.
- <sup>3</sup> CH 450 can substitute for CH 426 or CH 440.

## Sample Program of Study for a Major in Chemistry with a Biochemistry Track

### ACS Approved

Freshman			
First Term	Hours	Second Term	Hours
FYE Course (hours may vary)		1 CH 117 or 127	3
CH 115 or 125		3 CH 118 or 128	1
CH 116 or 126		1 BY 123	4
MA 125 or 225		4 BY 123L	
EH 101		3 MA 126 or 226	4
Core Curriculum (e.g., PY 101) <sup>1</sup>		3 EH 102	3
	15		15

Sophomore			
First Term	Hours	Second Term	Hours
CH 235 or 245		3 CH 237 or 245	3
CH 236 or 246		1 CH 238 or 248	1
BY 124		4 PH 221 <sup>2</sup>	4
BY 124L		PH 221L	
Core Curriculum (e.g. EH 213) <sup>1</sup>		3 PH 221R	
Core Curriculum (e.g. THR 100) <sup>1</sup>		3 Core Curriculum (e.g. PHL 116) <sup>1</sup>	3
Core Curriculum (e.g., HY 101) <sup>1</sup>		3 Core Curriculum (e.g. HY 102) <sup>1</sup>	3
		Elective	1
	17		15

Junior			
First Term	Hours	Second Term	Hours
CH 345		3 CH 355 & 355L	4
CH 460		3 CH 461 <sup>5</sup>	3
PH 222 <sup>2</sup>		4 CH 464	3
PH 222L		BY 210 <sup>3</sup>	3
PH 222R		Core Curriculum (e.g. SOC 100) <sup>1</sup>	3
Electives	5		
	15		16

Senior			
First Term	Hours	Second Term	Hours
CH 325		3 CH 426 or 440 <sup>4</sup>	3
CH 333		2 CH 444	2
Core Curriculum (e.g. CMST 101) <sup>1</sup>		3 CH 493	3
Electives		7 Electives	4
	15		12

Total credit hours: 120

- <sup>1</sup> See GPS for list of courses that can satisfy core and/or major requirements.

<sup>2</sup> The calculus-based physics sequence, PH 221 & PH 222, is strongly recommended, instead of the PH 201 & PH 202 sequence.

<sup>3</sup> May also choose BY 330 or BY 271/BY 271L.

<sup>4</sup> CH 450 may substitute for CH 426 or CH 440.

<sup>5</sup> CH 463 may substitute for CH 464

## Sample Program of Study for a Major in Chemistry with a Chemical Education Track

### ACS Approved

#### Freshman

First Term	Hours	Second Term	Hours
CH 115 or 125		3 CH 117 or 127	3
CH 116 or 126		1 CH 118 or 128	1
MA 125 or 225		4 MA 126 or 226	4
EH 101		3 EH 102	3
FYE (Credit hours may vary)		1 Core Curriculum (e.g. PHL 115) <sup>1</sup>	3
Core Curriculum (e.g. HY 101) <sup>1</sup>	3		
	15		14

#### Sophomore

First Term	Hours	Second Term	Hours
CH 235 or 245		3 CH 237 or 247	3
CH 236 or 246		1 CH 238 or 248	1
PH 221 & 221R & 221L <sup>2</sup>		4 PH 222 & 222R & 222L <sup>2</sup>	4
Core Curriculum (e.g. EH 213) <sup>1</sup>		3 Core Curriculum (e.g. CMST 101) <sup>1</sup>	3
Core Curriculum (e.g. THR 100) <sup>1</sup>		3 Elective	4
Elective	3		
	17		15

#### Junior

First Term	Hours	Second Term	Hours
CH 345		3 CH 355 & 355L	4
CH 460		3 Chemistry Elective (400 level) <sup>1</sup>	3
Core Curriculum (e.g. HY 102) <sup>1</sup>		3 Core Curriculum (e.g. PY 101) <sup>1</sup>	3
Core Curriculum (e.g. ANTH 101) <sup>1</sup>		3 Electives	4
Elective	2		
	14		14

#### Senior

First Term	Hours	Second Term	Hours
CH 325 <sup>3</sup>		3 CH 498	3
CH 333		2 CH 493	3
Electives	11	Electives	9
	16		15

Total credit hours: 120

This program alone **DOES NOT** lead to certification to teach chemistry. Advising in the School of Education is **STRONGLY** recommended.

<sup>1</sup> See GPS for list of courses that can satisfy core and/or major requirements.

<sup>2</sup> The calculus-based physics sequence, PH 221 and PH 222, is strongly recommended, instead of the PH 201 and PH 202 sequence.

<sup>3</sup> CH 426/440 can substitute for CH 325/333

## Sample Program of Study for a Major in Chemistry with a Forensic Chemistry Track

### ACS Approved

#### Freshman

First Term	Hours	Second Term	Hours
CH 115 or 125		3 CH 117 or 127	3
CH 116 or 126		1 CH 118 or 128	1
MA 125 or 225		4 MA 126 or 226	4
EH 101		3 EH 102	3
CJ 110		3 BY 123	4
FYE (Credit hours may vary)	1	BY 123L	
	15		15

#### Sophomore

First Term	Hours	Second Term	Hours
CH 235 or 245		3 CH 237 or 247	3
CH 236 or 246		1 CH 238 or 248	1
CJ 302		3 BY 210	3
BY 124		4 CJ 250 or 350	3
BY 124L		Core Curriculum (e.g. PHL 116) <sup>1</sup>	3
Core Curriculum (e.g. EH 213) <sup>1</sup>		3 Core Curriculum (e.g. HY 101) <sup>1</sup>	3
Core Curriculum (e.g. SOC 100) <sup>1</sup>	3		
	17		16

#### Junior

First Term	Hours	Second Term	Hours
CH 345		3 CH 355 & 355L	4
CH 460		3 CJ 352	3
BY 311		3 CH 464 <sup>3</sup>	3
PH 221 & 221R & 221L <sup>2</sup>		4 BY 429 or 431	3
Core Curriculum (e.g. HY 102) <sup>1</sup>		3 PH 222 & 222R & 222L <sup>2</sup>	4
	16		17

#### Senior

First Term	Hours	Second Term	Hours
CH 325		3 CH 426 or 440	3
CH 333		2 CH 444	2
CH 450		3 CH 495	1
CH 497		2-3 Core Curriculum (e.g. CMST 101) <sup>1</sup>	3
FS 567 or 677		3 Core Curriculum (e.g., THR 100) <sup>1</sup>	3

Core Curriculum (e.g. PY 101) <sup>1</sup>	3
13-14	15
Total credit hours: 124-125	

<sup>1</sup> See GPS for list of courses that can satisfy core and/or major requirements.

<sup>2</sup> The calculus-based physics sequence, PH 221 and PH 222, is strongly recommended, instead of the PH 201 and PH 202 sequence.

<sup>3</sup> CH 463 can substitute for CH 464.

## Sample Program of Study for a Major in Chemistry with a Polymer Chemistry Track

### ACS Approved

#### Freshman

First Term	Hours	Second Term	Hours
CH 115 or 125		3 CH 117 or 127	3
CH 116 or 126		1 CH 118 or 128	1
MA 125 or 225		4 MA 126 or 226	4
EH 101		3 EH 102	3
FYE (Credit hours vary.)		1 Core Curriculum (e.g. HY 101) <sup>1</sup>	3
Elective		2 Elective	1
	14		15

#### Sophomore

First Term	Hours	Second Term	Hours
CH 235 or 245		3 CH 237 or 247	3
CH 236 or 246		1 CH 238 or 248	1
MSE 280		3 Core Curriculum (e.g. CMST 101) <sup>1</sup>	3
Core Curriculum (e.g. EH 213) <sup>1</sup>		3 Core Curriculum (e.g. HY 102) <sup>1</sup>	3
Core Curriculum (e.g. PHL 115) <sup>1</sup>		3 Core Curriculum (e.g. ANTH 101) <sup>1</sup>	3
Core Curriculum (e.g. THR 100) <sup>1</sup>		3 Elective (MSE 281)	3
	16		16

#### Junior

First Term	Hours	Second Term	Hours
CH 345		3 CH 355 & 355L	4
PH 221 & 221R & 221L <sup>2</sup>		4 PH 222 & 222R & 222L <sup>2</sup>	4
Core Curriculum (e.g. PY 101) <sup>1</sup>		3 MSE 430	3
Elective		4 Electives	3
	14		14

#### Senior

First Term	Hours	Second Term	Hours
CH 325		3 CH 426 or 440 <sup>3</sup>	3
CH 333		2 CH 444 <sup>3</sup>	2
CH 460		3 CH 481 & 481L	4

CH 480 & 480L	4 CH 493	3
Elective	3 Elective	4
	15	16

Total credit hours: 120

<sup>1</sup> See GPS for list of courses that can satisfy core and/or major requirements.

<sup>2</sup> The calculus-based physics sequence, PH 221 & PH 222, is strongly recommended, instead of the PH 201 & PH 202 sequence.

<sup>3</sup> CH 450 can substitute for CH 426 or 440.

## Minor in Chemistry

Requirements	Hours
<b>Required Chemistry Courses</b>	
CH 115 General Chemistry I <sup>1</sup>	3
CH 116 General Chemistry I Laboratory	1
CH 117 General Chemistry II <sup>1</sup>	3
CH 118 General Chemistry II Laboratory <sup>1</sup>	1
CH 235 Organic Chemistry I	3
CH 236 Organic Chemistry I Laboratory	1
CH 237 Organic Chemistry II	3
CH 238 Organic Chemistry II Laboratory	1
<b>Chemistry Elective</b>	
Select one of the following:	3-4
CH 325 Physical Chemistry I with Calculus: Thermodynamics and Chemical Kinetics	
CH 345 Inorganic Chemistry: Principles and Applications of Chemical Periodicity	
CH 355 Quantitative Analysis	
CH 426 Physical Chemistry II: Structure/Bonding and Molecular Spectroscopy	
CH 440 Transition Metal Chemistry	
CH 450 Instrumental Analysis	
CH 451 Chemometrics	
CH 459 Special Topics in Analytical Chemistry	
CH 460 Fundamentals of Biochemistry	
CH 461 Advanced Biochemistry	
CH 463 Biochemistry Laboratory	
CH 464 Physical Biochemistry Laboratory	
CH 471 Medicinal Chemistry and Drug Discovery	
CH 472 Chemistry of Natural Products	
CH 480 Polymer Chemistry I. Basic Principles	
CH 481 Polymer Chemistry II. Fundamental Properties	
Total Hours	19-20

<sup>1</sup> May also satisfy the Core Curriculum Area III: Natural Sciences requirement.

## GPA and Residency Requirement

- At least a 2.0 average in required chemistry courses and a 2.0 average in required chemistry courses taken at UAB are mandatory for a minor in chemistry.
- The current UAB course forgiveness policy will be used in calculating the grade point average.

- **Chemistry courses in which a grade of W, WP, WF, D or F is earned at another institution cannot be applied toward requirements for the chemistry major or minor.**
- Students will not be given more semester-hours credit toward the major or minor than awarded for equivalent courses at UAB.
- **All chemistry minors must take at least two of the following courses (at least one with its accompanying laboratory) at UAB: CH 235 /CH 236 , CH 237/CH 238, CH 325 /[CH 333], CH 345/[CH 333], CH 355/CH 355L, CH 426/[CH 444] or CH 440, CH 450/[CH 444], CH 460, CH 480 CH 480 /CH 480L, or CH 481 /CH 481L.**
- Courses taken on a pass/fail basis do not count toward a CH minor.

## Honors Program in Chemistry

### Purpose

The Chemistry Honors Program is aimed toward outstanding chemistry majors and is designed to enhance the students' problem solving, critical thinking, and communication skills. The program provides an excellent preparation for graduate school or professional careers.

### Eligibility

Acceptance into the Chemistry Honors Program requires the student to:

- Have earned a 3.25 GPA in required chemistry courses attempted;
- Have earned a 3.0 GPA overall;
- Have completed the following courses:

Requirements	Hours
CH 115 General Chemistry I or CH 125 General Chemistry I HONORS	3
CH 116 General Chemistry I Laboratory or CH 126 General Chemistry I HONORS Laboratory	1
CH 117 General Chemistry II or CH 127 General Chemistry II HONORS	3
CH 118 General Chemistry II Laboratory or CH 128 General Chemistry II HONORS Laboratory	1
CH 235 Organic Chemistry I or CH 245 Organic Chemistry I Honors	3
CH 236 Organic Chemistry I Laboratory or CH 246 Organic Chemistry I Laboratory (Honors)	1
CH 237 Organic Chemistry II or CH 247 Organic Chemistry II Honors	3
CH 238 Organic Chemistry II Laboratory or CH 248 Organic Chemistry II Laboratory (Honors)	1

- Have arranged with a faculty mentor to do a research project in chemistry; and
- Have submitted the honors program application form and a one-page honors research proposal to the Chemistry Honors Director.

### Requirements

- Prior approval of the Chemistry Honors Director.
- Prior completion of 6 semester hours of undergraduate research CH 497.
- Enrollment in Honors Thesis, CH 499, requiring a senior thesis written in ACS format for a scientific paper.
- An oral presentation and defense of the thesis before the student's Honors Research Committee.

Where appropriate, the Honors Committee may recommend that chemistry honors students make a formal presentation of their work at the annual meeting of the Alabama Academy of Science or a regional or national meeting of the American Chemical Society.

### Benefits

In addition to the benefits associated with a mentoring program that fosters a spirit of inquiry, independence, and initiative and integrates the student's prior course work into a working knowledge of chemistry in the laboratory, the student who completes the program will graduate "With Honors in Chemistry."

### Contact

For more information and/or admission to the Chemistry Honors Program, contact

Director of the Department of Chemistry Honors Program  
Chemistry Building  
Birmingham, AL 35294-1240

### Courses

#### CH 100. Chemical Problem Solving. 3 Hours.

Development of quantitative skills and introduction to basic chemical concepts to prepare students for CH 115. Successful completion of MA 098 or more advanced math, or placement in a more advanced math, is strongly recommended prior to taking this course.

**Prerequisites:** MAAD 15 or MA 098 [Min Grade: P] or MA 098 [Min Grade: C] or MA 102 [Min Grade: D](Can be taken Concurrently) or MA 105 [Min Grade: D](Can be taken Concurrently) or MA 106 [Min Grade: D](Can be taken Concurrently) or MA 107 [Min Grade: D](Can be taken Concurrently) or MA 110 [Min Grade: D](Can be taken Concurrently) or MA 125 [Min Grade: D](Can be taken Concurrently) or MA 225 [Min Grade: D](Can be taken Concurrently) or MTH1 75 or MTH2 75 or MTH3 75 or MTH4 75 or MTH5 75 or MA1 75 or MA2 75 or MA3 75 or MA4 75 or MA5 75 or MPL 30

#### CH 105. Introductory Chemistry I. 3 Hours.

Fundamental facts, principles, theory, and applications of chemistry. Qualitative in nature; for non-science majors and nursing students with no previous background in chemistry. Writing assignments structured to build on scientific reasoning. Not applicable to a major or minor in chemistry. Quantitative Literacy is a significant component of this course. This course, when taken with its corresponding laboratory, meets the Core Curriculum requirements for Area III: Natural Sciences. Concurrent enrollment in CH 105R Introductory Chemistry I Recitation required.

**Prerequisites:** MA 098 [Min Grade: P] or MA 098 [Min Grade: C] or MA 102 [Min Grade: D](Can be taken Concurrently) or MA 105 [Min Grade: D](Can be taken Concurrently) or MA 106 [Min Grade: D](Can be taken Concurrently) or MA 107 [Min Grade: D](Can be taken Concurrently) or MA 110 [Min Grade: D](Can be taken Concurrently) or MA 125 [Min Grade: D](Can be taken Concurrently) or MA 225 [Min Grade: D](Can be taken Concurrently) or MAAD 15 or MTH1 75 or MTH2 75 or MTH3 75 or MTH4 75 or MTH5 75 or MA1 75 or MA2 75 or MA3 75 or MA4 75 or MA5 75 or MPL 30 or EMA E

#### CH 105R. Introductory Chemistry I Recitation. 0 Hours.

Introductory Chemistry I recitation is used to build problem-solving skills in a study-group environment. Included in these sections are homework, quizzes, lecture related problems, and exams. Concurrent enrollment in CH 105 Introductory Chemistry I required.

**CH 106. Introductory Chemistry I Laboratory. 1 Hour.**

Emphasizes development of lab skills and demonstration of chemical principles covered in CH 105. Writing assignments structured to build on scientific reasoning. Not applicable to a major or minor in chemistry. Quantitative Literacy is a significant component of this course. Concurrent enrollment in or prior completion of CH 105 strongly recommended.

**CH 107. Introductory Chemistry II. 3 Hours.**

Fundamental organic and biochemistry. The second part of the chemistry sequence for non-science majors and nursing students. Covers concepts of organic chemistry and biochemistry. Emphasis on molecules involved in life processes. Writing assignments structured to build on scientific reasoning. Not applicable to a major or minor in chemistry. Quantitative Literacy is a significant component of this course. This course, when taken with its corresponding laboratory, meets the Core Curriculum requirements for Area III: Natural Sciences. Concurrent enrollment in CH 107R Introductory Chemistry II Recitation is required.

**Prerequisites:** CH 105 [Min Grade: C] or CH 115 [Min Grade: C]

**CH 107R. Introductory Chemistry II Recitation. 0 Hours.**

Introductory Chemistry II recitation is used to build problem-solving skills in a study-group environment. Included in these sections are homework, quizzes, lecture related problems, and exams. Concurrent enrollment in CH 107 Introductory Chemistry II required.

**CH 108. Introductory Chemistry II Laboratory. 1 Hour.**

Emphasizes development of lab skills and demonstration of phenomena covered in CH 107. Not applicable to a major or minor in chemistry. Writing assignments structured to build on scientific reasoning. Quantitative Literacy is a significant component of this course. Concurrent enrollment in or prior completion of CH 107 strongly recommended.

**CH 115. General Chemistry I. 3 Hours.**

Stoichiometry, quantum theory, atomic structure, chemical bonding, acids-bases, colligative properties and periodicity. Laboratory emphasizes quantitative analysis. Writing assignments structured to build on scientific reasoning. Concurrent enrollment in CH 115R General Chemistry I Recitation required. Quantitative Literacy is a significant component of this course. This course, when taken with its corresponding laboratory, meets the Core Curriculum requirements for Area III: Natural Sciences.

**Prerequisites:** MA 102 [Min Grade: B] or (MA 105 [Min Grade: C] or MA 105 [Min Grade: P]) or MA 106 [Min Grade: C](Can be taken Concurrently) or MA 107 [Min Grade: C](Can be taken Concurrently) or MA 109 [Min Grade: C](Can be taken Concurrently) or MA 225 [Min Grade: C](Can be taken Concurrently) or MA 125 [Min Grade: C](Can be taken Concurrently) or MA 125 [Min Grade: P] or MAC1 17 or MAAD 21 or MTH2 75 or MTH3 75 or MTH4 75 or MTH5 75 or (A02 23 and HSCG 3.50) or (A02 24 and HSCG 3.00) or (A02 25 and HSCG 2.50) or A02 26 or (S02 540 and HSCG 3.50) or (S02 560 and HSCG 3.00) or (S02 580 and HSCG 2.50) or (SAT2 580 and HSCG 3.50) or (SAT2 600 and HSCG 3.00) or (SAT2 620 and HSCG 2.50) or SAT2 640 or S02 600 or MPL 61

**CH 115R. General Chemistry I Recitation. 0 Hours.**

General Chemistry I recitation is used to build problem-solving skills in a study-group environment. Included in these sections are homework, quizzes, lecture related problems, and exams. Concurrent enrollment in CH 115 General Chemistry I required.

**CH 116. General Chemistry I Laboratory. 1 Hour.**

Emphasizes development of laboratory skills and quantitative analyses related to CH 115. Writing assignments structured to build on scientific reasoning. Concurrent enrollment or prior completion of CH 115 General Chemistry I recommended. Quantitative Literacy is a significant component of this course.

**CH 117. General Chemistry II. 3 Hours.**

Solutions, chemical kinetics, chemical thermodynamics, chemical equilibrium and special topics (organic, biochemistry, descriptive chemistry) Writing assignments structured to build on scientific reasoning. Concurrent enrollment in CH 117R General Chemistry II Recitation required. Quantitative Literacy is a significant component of this course. This course, when taken with its corresponding laboratory, meets the Core Curriculum requirements for Area III: Natural Sciences.

**Prerequisites:** CH 115 [Min Grade: C] or CH 125 [Min Grade: C]

**CH 117R. General Chemistry II Recitation. 0 Hours.**

General Chemistry II Recitation is used to build problem-solving skills in a study-group environment. Included in these sections are homework, quizzes, lecture related problems, and exams. Concurrent enrollment in CH 117 General Chemistry II required.

**CH 118. General Chemistry II Laboratory. 1 Hour.**

Emphasizes development of laboratory skills and quantitative analyses related to CH 117. Writing assignments structured to build on scientific reasoning. Concurrent enrollment or prior completion of CH 117 General Chemistry II recommended. Quantitative Literacy is a significant component of this course.

**CH 125. General Chemistry I HONORS. 3 Hours.**

Stoichiometry, quantum theory, atomic structure, chemical bonding, acids-bases, colligative properties and periodicity using an atoms-first approach. Writing assignments structured to build on scientific reasoning. Students should already have completed a college-level general chemistry course such as AP chemistry or a similar equivalent before taking CH 125. The honors course provides less time covering basic concepts so as to allow time to cover concepts not discussed in the CH 115 course, such as solid state structures and molecular orbital theory. The class size is limited to 60 students. Concurrent enrollment in CH 125R General Chemistry I Recitation required. Quantitative Literacy is a significant component of this course. This course, when taken with its corresponding laboratory, meets the Core Curriculum requirements for Area III: Natural Sciences.

**Prerequisites:** MA 102 [Min Grade: B] or MA 105 [Min Grade: C] or MA 105 [Min Grade: P] or MA 106 [Min Grade: C](Can be taken Concurrently) or MA 107 [Min Grade: C](Can be taken Concurrently) or MA 109 [Min Grade: C](Can be taken Concurrently) or MA 125 [Min Grade: C] (Can be taken Concurrently) or MA 225 [Min Grade: C](Can be taken Concurrently) or MA 125 [Min Grade: P] or MAC1 17 or MAAD 21 or MTH2 75 or MTH3 75 or MTH4 75 or MTH5 75 or MPL 61 or (A02 23 and HSCG 3.5) or (A02 24 and HSCG 3.0) or (A02 25 and HSCG 2.5) or (S02 540 and HSCG 3.5) or (S02 560 and HSCG 3.0) or (S02 580 and HSCG 2.5) or (SAT2 580 and HSCG 3.5) or (SAT2 600 and HSCG 3.0) or (SAT2 620 and HSCG 2.5) or SAT2 640 or S02 600

**CH 125R. General Chemistry I HONORS Recitation. 0 Hours.**

General Chemistry I recitation is used to build problem-solving skills in a study-group environment. Included in these sections are homework, quizzes, lecture related problems, and exams. Concurrent enrollment in CH 125 General Chemistry I required.

**CH 126. General Chemistry I HONORS Laboratory. 1 Hour.**

Emphasizes development of laboratory skills and quantitative analyses related to CH 125. Writing assignments structured to build on scientific reasoning. (Core Area III) Quantitative Literacy is a significant Component of this course. Permission of instructor or enrollment in Honors College or Chemistry Scholars program required. Concurrent enrollment or prior completion of CH 125 strongly recommended.

**CH 127. General Chemistry II HONORS. 3 Hours.**

Solutions, chemical kinetics, chemical thermodynamics, chemical equilibrium and special topics (organic, biochemistry, descriptive chemistry) Writing assignments structured to build on scientific reasoning. The honors course provides less time covering basic concepts so as to allow time to cover concepts not discussed in the CH 117 course, such as nuclear chemistry. The class size is limited to 60 students. Concurrent enrollment in CH 127R General Chemistry II Recitation required. Quantitative Literacy is a significant component of this course. This course, when taken with its corresponding laboratory, meets the Core Curriculum requirements for Area III: Natural Sciences.

**Prerequisites:** CH 115 [Min Grade: A] or CH 125 [Min Grade: B]

**CH 127R. General Chemistry II HONORS Recitation. 0 Hours.**

General Chemistry II Recitation is used to build problem-solving skills in a study-group environment. Included in these sections are homework, quizzes, lecture related problems, and exams. Concurrent enrollment in CH 127 General Chemistry II required.

**CH 128. General Chemistry II HONORS Laboratory. 1 Hour.**

Emphasizes development of laboratory skills and quantitative analyses related to CH 127. Writing assignments structured to build on scientific reasoning. (Core Area III) Quantitative Literacy is a significant component of this course. Permission of instructor or enrollment in Honors College or Chemistry Scholars program required. Concurrent enrollment or prior completion of CH 127 strongly recommended.

**Prerequisites:** CH 115 [Min Grade: A] or CH 125 [Min Grade: B] and CH 116 [Min Grade: A] or CH 126 [Min Grade: B]

**CH 199. Bridge Between General and Organic Chemistry. 1 Hour.**

This is a one credit hour, pass-fail, 6-week, on-line class designed to prepare general chemistry students for success in the organic chemistry sequence. The course will reinforce topics from general chemistry and introduce basic concepts that will be encountered in organic chemistry. Recommended for transfer students or for students who earned a grade of C in General Chemistry II.

**Prerequisites:** CH 117 [Min Grade: C] or CH 127 [Min Grade: C]

**CH 201. Research Methods in Chemistry. 3 Hours.**

Comprehensive approach for developing research skills used in chemistry and biochemistry research laboratories. Permission of instructor required.

**Prerequisites:** CH 115 [Min Grade: C](Can be taken Concurrently) or CH 125 [Min Grade: C](Can be taken Concurrently)

**CH 235. Organic Chemistry I. 3 Hours.**

Structure, nomenclature, properties, and reactivity of compounds with various organic functional groups: alkanes, alkenes, alkynes, alkyl halides and alcohols. Emphasis on the mechanisms of organic reactions and problem solving. Concurrent enrollment in CH 235R Organic I Recitation required.

**Prerequisites:** CH 117 [Min Grade: C] or CH 127 [Min Grade: C]

**CH 235R. Organic Chemistry I Recitation. 0 Hours.**

Organic Chemistry I recitation is used to build problem-solving skills in study-group environments. Concurrent enrollment in CH 235 Organic I required.

**CH 236. Organic Chemistry I Laboratory. 1 Hour.**

Techniques of organic chemistry. Synthesis, purification, and characterization of organic compounds. Concurrent enrollment or prior completion of CH 235 strongly recommended.

**Prerequisites:** (CH 117 [Min Grade: C] or CH 127 [Min Grade: C]) and (CH 118 [Min Grade: C] or CH 119 [Min Grade: C] or CH 128 [Min Grade: C])

**CH 237. Organic Chemistry II. 3 Hours.**

Reactions of aromatic compounds and carbonyl containing functional groups: aldehydes, ketones, acids, esters and amides. Molecules of biological interest, such as proteins and carbohydrates. Concurrent enrollment in CH 237R Organic II Recitation required.

**Prerequisites:** CH 235 [Min Grade: C] or CH 245 [Min Grade: C]

**CH 237R. Organic Chemistry II Recitation. 0 Hours.**

Organic Chemistry II recitation is used to build problem-solving skills in study-group environments. Concurrent enrollment in CH 237 Organic Chemistry II required.

**CH 238. Organic Chemistry II Laboratory. 1 Hour.**

Synthesis, purification, and characterization of organic compounds using instrumental analysis and identification of unknowns. Concurrent enrollment or prior completion of CH 237 strongly recommended.

**Prerequisites:** (CH 235 [Min Grade: C] or CH 245 [Min Grade: C]) and (CH 234 [Min Grade: C] or CH 236 [Min Grade: C] or CH 246 [Min Grade: C])

**CH 245. Organic Chemistry I Honors. 3 Hours.**

Structure, nomenclature, properties, and reactivity of compounds with various organic functional groups: alkanes, alkenes, alkynes, alkyl halides and alcohols. Emphasis on the mechanisms of organic reactions and problem solving. This honors course moves at a slightly faster pace than CH 235, and is taught in a slightly nontraditional way. There is less lecture, more class discussion, and more problem-solving. Concurrent enrollment in CH 245R Organic I HONORS Recitation required. Open to Honors College students, Chemistry Scholars, or Permission of Instructor.

**Prerequisites:** CH 117 [Min Grade: C] or CH 127 [Min Grade: C]

**CH 245R. Organic Chemistry I Honors Recitation. 0 Hours.**

Organic Chemistry I recitation is used to build problem-solving skills in study-group environments. Concurrent enrollment in CH 245 Organic Chemistry I HONORS required.

**CH 246. Organic Chemistry I Laboratory (Honors). 1 Hour.**

Emphasis placed on development of techniques used in organic research laboratories and scientific writing. Permission of instructor or enrollment in Honors College or Chemistry Scholars program required.

**Prerequisites:** CH 245 [Min Grade: C](Can be taken Concurrently)

**CH 247. Organic Chemistry II Honors. 3 Hours.**

Reactions of aromatic compounds and carbonyl containing functional groups: aldehydes, ketones, acids, esters and amides. Molecules of biological interest, such as proteins and carbohydrates. This Honors course moves at a slightly faster pace than CH 237, and is taught in a slightly nontraditional way with a greater focus on organic synthesis. There is less lecture, more class discussion, and more problem-solving. Concurrent enrollment in CH 247R Organic II HONORS Recitation required.

**Prerequisites:** CH 235 [Min Grade: A] or CH 245 [Min Grade: C]

**CH 247R. Organic Chemistry II Honors Recitation. 0 Hours.**

Organic Chemistry II recitation is used to build problem-solving skills in study-group environments. Concurrent enrollment in CH 247 Organic Chemistry II HONORS required.

**CH 248. Organic Chemistry II Laboratory (Honors). 1 Hour.**

Synthesis, purification, and characterization of organic compounds using instrumental analysis, molecular modeling, scientific writing, and oral presentation. Permission of instructor, or enrollment in Honors College or Chemistry Scholars program required.

**Prerequisites:** CH 247 [Min Grade: C](Can be taken Concurrently)

**CH 325. Physical Chemistry I with Calculus: Thermodynamics and Chemical Kinetics. 3 Hours.**

Thermodynamics, chemical equilibria, and chemical kinetics. Lecture and laboratory. Prior completion of PH 221 and CH 355 strongly recommended. Prior completion of, or concurrent enrollment in, MA 227 strongly recommended. Concurrent enrollment in, or prior completion of, CH 325L Physical Chemistry I Lab required.

**Prerequisites:** (CH 117 [Min Grade: C] or CH 117 [Min Grade: P] or CH 127 [Min Grade: C]) and (MA 126 [Min Grade: C] or MA 226 [Min Grade: C] or MA 126 [Min Grade: P]) and (PH 201 [Min Grade: C] or PH 201 [Min Grade: P] or PH 221 [Min Grade: C] or PH 221 [Min Grade: P])

**CH 333. Synthetic and Physical Laboratory Methods. 2 Hours.**

Fundamental concepts including chemical equilibrium, kinetics, and electronic interactions are explored through synthetic design, advanced spectroscopic methods, and data analysis. Techniques from organic chemistry are further developed and scientific writing is emphasized.

**Prerequisites:** (CH 237 [Min Grade: C] or CH 247 [Min Grade: C]) and (CH 238 [Min Grade: C] or CH 239 [Min Grade: C]) and CH 355 [Min Grade: C](Can be taken Concurrently) and CH 355L [Min Grade: C](Can be taken Concurrently)

**CH 345. Inorganic Chemistry: Principles and Applications of Chemical Periodicity. 3 Hours.**

Systematic coverage of descriptive chemistry. Chemical reactivity using structural and electronic parameters. Development of chemical understanding and intuition of elements and their compounds, as well as industrial and environmental applications.

**Prerequisites:** (CH 237 [Min Grade: C] or CH 247 [Min Grade: C]) and (CH 238 [Min Grade: C] or CH 239 [Min Grade: C])

**CH 355. Quantitative Analysis. 3 Hours.**

Principles of analytical measurements, statistical and volumetric techniques, spectrophotometric analysis, and chromatography, with emphasis on equilibrium and applications. Concurrent enrollment, or prior completion of, CH 355L Quantitative Analysis Lab required.

**Prerequisites:** CH 117 [Min Grade: C] or CH 127 [Min Grade: C]

**CH 355L. Quantitative Analysis Laboratory. 1 Hour.**

Quantitative analysis laboratory. Concurrent enrollment or prior completion of CH 355 Quantitative Analysis required.

**Prerequisites:** CH 355 [Min Grade: C](Can be taken Concurrently)

**CH 391. Cooperative Education in Chemistry. 2-3 Hours.**

Analysis of the concepts and models of chemistry with emphasis on computational skills for chemistry and science teachers. Appropriate for students seeking certification as chemistry or science teachers. Junior or senior standing and minimum GPA of 2.5 or above required. Requires permission of and evaluation by appropriate faculty advisor.

**CH 416. Chemical Demonstrations I. 3 Hours.**

Demonstration and analysis of safe, practical and effective experiments suitable for middle/high school students. At least 50 demonstrations will be performed. Not applicable to a major or minor in chemistry. Requires permission of instructor.

**CH 417. Chemical Demonstrations II. 3 Hours.**

Demonstration and analysis of safe, practical and effective experiments suitable for middle/high school students. At least 50 demonstrations will be performed. Not applicable to a major or minor in chemistry. Requires permission of instructor.

**CH 426. Physical Chemistry II: Structure/Bonding and Molecular Spectroscopy. 3 Hours.**

Quantum mechanics, chemical bonding, and molecular spectroscopy. Prior completion of CH 325 and MA 227 strongly recommended.

**Prerequisites:** (CH 117 [Min Grade: C] or CH 127 [Min Grade: C] or CH 117 [Min Grade: P]) and (MA 126 [Min Grade: C] or MA 126 [Min Grade: P] or MA 226 [Min Grade: C]) and (PH 202 [Min Grade: C] or PH 202 [Min Grade: P] or PH 222 [Min Grade: C] or PH 222 [Min Grade: P])

**CH 429. Special Topics in Physical Chemistry. 1-3 Hour.**

Special Topics in selected areas of physical chemistry under the supervision of faculty sponsor. Requires permission of instructor.

**CH 430. Physical Organic Chemistry. 3 Hours.**

The course will focus on basic concepts, molecular orbital theory, and organic reaction mechanisms, built on the foundation of organic chemistry I and II. The goal is to provide students a deeper understanding of the general principles, especially structure, mechanism, and their relationships.

**Prerequisites:** CH 237 [Min Grade: C] or CH 247 [Min Grade: C]

**CH 439. Special Topics in Organic Chemistry. 1-3 Hour.**

Special Topics in selected areas of organic chemistry under the supervision of faculty sponsor. Requires permission of instructor.

**CH 440. Transition Metal Chemistry. 3 Hours.**

Relationship between bonding, structure, and properties of compounds including reactions, mechanisms, and catalysis of organometallic and bioinorganic chemistry. Concurrent enrollment in, or prior completion of, CH 427 Molecular Structure and Spectroscopy Laboratory required.

**Prerequisites:** CH 345 [Min Grade: C]

**CH 444. Spectroscopic and Separations Laboratory Methods. 2 Hours.**

Fundamental concepts including electronic and vibrational transitions, nuclear magnetic resonance, and molecular orbital theory are explored through the use of commonly-accessible laboratory instruments.

Chromatographic theory and quantitative analysis are applied to the identification and quantitation of analytical standards and unknowns using industry-standard instrumentation. The second half of the course reinforces quantitative methods with hands-on practical training.

**Prerequisites:** (CH 237 [Min Grade: C] or CH 247 [Min Grade: C]) and (CH 238 [Min Grade: C] or CH 239 [Min Grade: C]) and CH 355 [Min Grade: C]

**CH 449. Special Topics in Inorganic Chemistry. 1-3 Hour.**

Special Topics in selected areas of inorganic chemistry under the supervision of faculty sponsor. Requires permission of instructor.

**CH 450. Instrumental Analysis. 3 Hours.**

Focus on modern analytical chemistry instrumentation including chemical separations, spectroscopies (atomic absorption, infrared, UV-visible, fluorescence), mass spectroscopy, and thermal analysis.

**Prerequisites:** (CH 117 [Min Grade: C] or CH 127 [Min Grade: C])

**CH 451. Chemometrics. 3 Hours.**

Introduction to basic data analysis techniques that include testing hypotheses, establishing tendencies and correlations, experimental design, etc. The course is designed to provide a support to a research chemist in effectively solving everyday problems associated with production and interpretation of experimental data.

**CH 459. Special Topics in Analytical Chemistry. 1-3 Hour.**

Special Topics in selected areas of analytical chemistry under the supervision of faculty sponsor. Requires permission of instructor.

**Prerequisites:** (CH 235 [Min Grade: C] and CH 236 [Min Grade: C]) and (CH 237 [Min Grade: C] and CH 238 [Min Grade: C]) and CH 355 [Min Grade: C]

**CH 460. Fundamentals of Biochemistry. 3 Hours.**

Overview of biochemical principles; chemistry of aqueous solutions, biochemical building blocks including amino acids, carbohydrates, lipids, and nucleotides; examination of metabolic pathways and enzymes that mediate catabolic and anabolic metabolism of carbohydrates, lipids, amino acids, and nucleic acids. Application of clinical correlations of metabolism to human nutrition and disease. This course is designed for Chemistry majors as well as students interested in medicine, dentistry, optometry, or pharmacy.

**Prerequisites:** CH 237 [Min Grade: C] or CH 247 [Min Grade: C]

**CH 461. Advanced Biochemistry. 3 Hours.**

Protein structure and function, enzymology, DNA structure, prokaryotic replication, transcription, and protein synthesis. Membrane structure and function, carbohydrate structure and function. Methods for isolating and characterizing macromolecule structure and function including chromatography, gel electrophoresis, CD, UV, and fluorescence spectroscopy, mass spectroscopy, X-ray crystallography and nuclear magnetic resonance spectroscopy.

**Prerequisites:** CH 460 [Min Grade: C]

**CH 463. Biochemistry Laboratory. 3 Hours.**

Introduction to modern bioanalytical techniques used for the expression, isolation, and characterization of proteins and other biological macromolecules. Space is limited. Students with a Chemistry Major with either the Biochemistry or Forensic Tracks have priority.

**Prerequisites:** CH 355 [Min Grade: C] and CH 460 [Min Grade: C]

**CH 464. Physical Biochemistry Laboratory. 3 Hours.**

Physical/analytical approaches (including mass spectroscopy and NMR) toward determination of macromolecular structures, ligand binding, and enzymology. Space is limited. Students with the Chemistry Major with the Biochemistry Track have priority. Concurrent or prior enrollment in CH 461 is recommended.

**Prerequisites:** CH 450 [Min Grade: C] or CH 460 [Min Grade: C] or CH 461 [Min Grade: C]

**CH 469. Special Topics in Biochemistry. 1-3 Hour.**

Special topics in selected areas of biochemistry, biophysical chemistry, or structural biochemistry under supervision of faculty sponsor. Requires permission of instructor.

**Prerequisites:** CH 462 [Min Grade: C]

**CH 471. Medicinal Chemistry and Drug Discovery. 3 Hours.**

Emphasis on structure-based design strategies for small organic molecule drugs using common macromolecular drug targets. Examples of successful design for experimental and clinically used drugs will be presented.

**Prerequisites:** CH 237 [Min Grade: C] and CH 460 [Min Grade: C]

**CH 472. Chemistry of Natural Products. 3 Hours.**

The principal focus of this course will be the introduction of synthesis and medicinal chemistry of natural products. Drug discovery using natural products, with specific examples in the areas of antibacterial, anticancer, and analgesic drugs will be introduced. An overview of structural classes, biosynthetic pathways and application of asymmetric synthesis in the synthesis of specific examples from each class will be discussed. This course is intended for undergraduate students at the senior level. Prior completion of prerequisite courses with a grade of B or better strongly recommended.

**Prerequisites:** (CH 235 [Min Grade: C] or CH 245 [Min Grade: C]) and CH 236 [Min Grade: C] and (CH 237 [Min Grade: C] or CH 247 [Min Grade: C]) and CH 238 [Min Grade: C]

**CH 477. Radiochemistry for the Life Sciences. 3 Hours.**

This course is intended to act as an introduction to radiochemistry. It will cover production, instrumentation, and radiochemistry techniques to make use of radiotracers in the life sciences from basic biological and environmental applications to medical imaging and therapy.

**CH 480. Polymer Chemistry I. Basic Principles. 3 Hours.**

Basic chemical principles of polymers with the focus on synthesis, characterization, and applications of synthetic and biological macromolecules. Prior completion of CH 237, CH 325, and CH 355 (and MSE 350 for MSE students) recommended. Concurrent enrollment in, or prior completion of, CH 480L Polymer Chemistry I Lab is required.

**Prerequisites:** (CH 117 [Min Grade: C] or CH 127 [Min Grade: C])

**CH 480L. Polymer Chemistry I Laboratory. 1 Hour.**

Polymer Chemistry I Laboratory. Concurrent enrollment in CH 480 Polymer Chemistry I required.

**CH 481. Polymer Chemistry II. Fundamental Properties. 3 Hours.**

Fundamentals of chemical, physical and molecular properties of polymers in bulk and solution. Concurrent enrollment in CH 481L Polymer Chemistry II Laboratory required. Prior completion of CH 237, CH 325, and CH 355 (and MSE 350 for MSE students) recommended. Concurrent enrollment in, or prior completion of, CH 481L Polymer Chemistry II Laboratory is required.

**Prerequisites:** (CH 117 [Min Grade: C] or CH 127 [Min Grade: C])

**CH 481L. Polymer Chemistry II Laboratory. 1 Hour.**

Polymer Chemistry II Laboratory. Concurrent enrollment in CH 481 Polymer Chemistry II required.

**CH 489. Special Topics in Polymer Chemistry. 1-3 Hour.**

Special topics in selected areas of polymer chemistry under supervision of faculty sponsor. Requires permission of instructor.

**CH 492. Research Methods. 1-3 Hour.**

This course is required in the UABTEACH program and is specially designed to meet the needs of future teachers. Students meet two hours per week for non-traditional, interactive lectures and two hours per week for lab. The course is cross-listed (Physics, Chemistry, and Biology). It provides students with the tools that scientists use to solve scientific problems; gives students the opportunity to use these tools in a laboratory setting; makes students aware of how scientists communicate with each other through peer-reviewed scientific literature; and enables students to understand how scientists develop new knowledge and insights. The course requires a substantial amount of writing.

**CH 493. Chemistry in Culture & Ethics. 3 Hours.**

Designed to explore the impact of chemical innovations on society; challenges students to consider ethical use of chemical innovations and broader impacts of chemistry in society. Writing assignments are structured to build on scientific reasoning. Capstone course intended for graduating senior Chemistry majors.

**Prerequisites:** (CH 237 [Min Grade: C] or CH 247 [Min Grade: C]) and CH 325 [Min Grade: D]

**CH 495. Ethics in Chemical Research. 1 Hour.**

Designed to explore the impact of chemical innovations on society; challenges students to consider ethical use of chemical innovations and broader impacts of chemistry in society. Writing assignments are structured to build on scientific reasoning. Capstone course intended for graduating senior Chemistry majors.

**Prerequisites:** (CH 237 [Min Grade: C] or CH 247 [Min Grade: C]) and CH 497 [Min Grade: C](Can be taken Concurrently) and CH 325 [Min Grade: C]

**CH 497. Undergraduate Research. 2-3 Hours.**

Research project conducted under the supervision of a faculty mentor. Two semesters are highly recommended for minimum accumulation of 6 semester hours. A progress report is required each semester and a comprehensive written report in ACS format is required at the completion of the project. Permission of faculty mentor and instructor required; GPA 2.5 or greater overall; GPA 3.0 or greater in required chemistry courses.

**CH 498. Chemistry Teaching Methods. 3 Hours.**

This course provides chemistry majors who will be future chemistry teachers with insights into the fundamental principles of chemistry in a way that can be transported to the classroom. The course will cover all aspects of teaching, measurements of effectiveness, and outcomes. Permission of instructor required.

**Prerequisites:** CH 235 [Min Grade: C]

**CH 499. Honors Research and Thesis. 0-3 Hours.**

Research project conducted under the supervision of faculty mentor. Prior completion of 6 hours of CH 497. Admission to the Chemistry Honors Program is required; a research proposal must be on file with and approved by Chemistry Honors Director. The course concludes with a written honors thesis and oral presentation and defense. Chemistry GPA 3.25 or greater; overall GPA 3.0 or greater required.

**Prerequisites:** CH 497 [Min Grade: C]

## Department of Communication Studies

**Chair:** Dr. Timothy Levine

The Department of Communication Studies is concerned with human interaction and communication in all of its forms. The department offers concentrations in Communication Management, Sports Communication, and Mass Communication.

Students interested in studying communication should consult the department chair or college advisor as well as the requirements set by the College of Arts and Sciences.

### Major in Communication Studies with Communication Management Concentration

The Communication Management concentration is designed for students interested in the general principles and applications of communication from interpersonal relationships to organizational and health settings,

to the theory and practice of public dialogue. A minor is available in Communication Management for non-majors.

### Major in Communication Studies with Sports Communication Concentration

The Sports Communication Concentration is designed to prepare students for careers in the fastest growing area within the field of communication. Sports communications includes sports information, sports media relations, sports administration, and sports management.

### Major in Communication Studies with a Mass Communication Concentration

The Mass Communication concentration allows students to specialize in journalism, broadcasting, or public relations. Minors are available in Mass Communication. A Minor is required for a degree in Mass Communication.

### Specializations

Students interested in developing a concentration in mass communication may select from one of three specializations available in the department: journalism, broadcasting, or public relations. Students specializing in one of the mass communication specializations may also major or minor in communication management.

#### Journalism

The curriculum in journalism is designed to prepare students for work with newspapers, magazines and company publications. In addition to courses in writing, reporting, and editing, the journalism program frequently offers special courses aimed at meeting the media demands of Birmingham, its people, and its publications.

#### Broadcasting

Students in broadcasting prepare for professional careers in digital media, television production, news operations, or management. In addition to skills courses, students are given a strong theoretical foundation designed for both the media professional and the potential graduate student in mass communication.

#### Public Relations

Public relations is a pre-professional program designed to acquaint students with the theoretical knowledge and the practical skills necessary to master all aspects of the public relations process.

The program stresses writing, oral and analytical skills, ethical reasoning, problem solving, strategic thinking, media selection, and identification of publics. Students receive hands-on experience in developing client representation skills as well as strengthening essential team-building, networking and leadership skills. Students also participate in the internship program which gives them actual on-the-job experience.

### Accelerated Learning Opportunities

The Department of Communication Studies offers a Communication Management Master's (ABM) option for high-achieving undergraduate students. All CM Graduate classes may be used for undergraduate BA in Communication Studies through the ABM, excluding: CM 618, CM 675, CM 698, CM 699.

Communication Management Master's (ABM)

## Bachelor of Arts with a Major in Communication Studies and a Concentration in Communication Management

Requirements	Hours
<b>Required Courses</b> <sup>1</sup>	
<u>CMST 105</u> Introduction to Human Communication	3
<u>CMST 110</u> Introduction to Interpersonal Communication and Relationships	3
<u>CMST 494</u> Communication Research Methods	3
<b>Communication Management Electives</b>	<b>30</b>
Select 30 credit hours from the following courses. At least 6 hours must be taken at the 400 level.:	
<u>CMST 103</u> History of Mass Media (Required Courses)	
<u>CMST 255</u> Introduction to Political Campaign Communication	
<u>CMST 300</u> Human Communication in Everyday Life	
<u>CMST 301</u> Classical Theories of Social Influence	
<u>CMST 305</u> Applied Communication Theory	
<u>CMST 309</u> Interviewing	
<u>CMST 310</u> Communications and Teamwork	
<u>CMST 311</u> Organizational Communication	
<u>CMST 315</u> Ethics and Leadership	
<u>CMST 321</u> Persuasion Communication	
<u>CMST 322</u> Argumentation Theory	
<u>CMST 324</u> Gender, Sex Similarities and Differences in Communication	
<u>CMST 339</u> Introduction to Public Relations	
<u>CMST 356</u> Propaganda and Public Persuasion	
<u>CMST 380</u> Health Communication	
<u>CMST 382</u> Health Communication Campaigns	
<u>CMST 400</u> Professional Presentations	
<u>CMST 401</u> Instructional Communication	
<u>CMST 403</u> Pragmatics and Human Interaction	
<u>CMST 405</u> Contemporary Philosophies of Communication	
<u>CMST 411</u> Organizational Communication Project	
<u>CMST 413</u> Nonverbal Communication	
<u>CMST 414</u> Language and Thought	
<u>CMST 415</u> Intercultural & International Communication	
<u>CMST 417</u> Cyborg Communication	
<u>CMST 425</u> Communication in Social and Personal Relationships	
<u>CMST 455</u> Seminar in Political Communication	
<u>CMST 458</u> Media Criticism	
<u>CMST 460</u> Communication and Social Movements in America	
<u>CMST 480</u> Seminar in Health and Medical Communication	
<u>CMST 491</u> Internship	
<u>CMST 492</u> Independent Study	
<u>CMST 493</u> Special Topics in Communication Studies	
Total Hours	39

Students must make a C or better in their requirements for the major.

## Bachelor of Arts with a Major in Communication Studies and a Concentration in Mass Communication - Broadcasting

Requirements	Hours
<b>Required Courses</b> <sup>1, 2</sup>	
<u>CMST 103</u> History of Mass Media	3
<u>CMST 105</u> Introduction to Human Communication	3
<u>CMST 210</u> Media Writing	3
<u>CMST 283</u> Visual Media Production I	3
<u>CMST 315</u> Ethics and Leadership	3
<u>CMST 370</u> Introduction to Broadcast Media	3
<u>CMST 383</u> Visual Media Production II	3
<u>CMST 402</u> Mass Communication Law	3
<b>Mass Media Internship</b>	
Select two internship hours:	2
<u>CMST 491</u> Internship	
<b>Writing</b>	
Select one of the following:	3
<u>CMST 308</u> Media Writing II	
<u>CMST 360</u> Feature Writing	
<u>CMST 371</u> Copywriting for Broadcast Media	
<b>Media and Design</b>	
Select one of the following:	3
<u>CMST 330</u> Audio Production	
<u>CMST 365</u> Social Media Strategy and Management	
<u>CMST 366</u> Digital Design and Animation	
<u>CMST 483</u> Live Studio Production	
<b>Major Electives</b>	
Select three hours from the following:	3
(not previously taken)	
<u>CMST 306</u> Investigative Reporting	
<u>CMST 308</u> Media Writing II	
<u>CMST 309</u> Interviewing	
<u>CMST 310</u> Communications and Teamwork	
<u>CMST 320</u> Introduction to Advertising	
<u>CMST 321</u> Persuasion Communication	
<u>CMST 326</u> Sports in the Mass Media	
<u>CMST 330</u> Audio Production	
<u>CMST 335</u> Communication and Sports	
<u>CMST 339</u> Introduction to Public Relations	
<u>CMST 353</u> Sports and Media Relations	
<u>CMST 356</u> Propaganda and Public Persuasion	
<u>CMST 360</u> Feature Writing	
<u>CMST 365</u> Social Media Strategy and Management	
<u>CMST 366</u> Digital Design and Animation	
<u>CMST 371</u> Copywriting for Broadcast Media	
Select six hours from the following:	6
(not previously taken)	
<u>CMST 400</u> Professional Presentations	
<u>CMST 413</u> Nonverbal Communication	
<u>CMST 415</u> Intercultural & International Communication	
<u>CMST 416</u> Issues in Global Communication	
<u>CMST 455</u> Seminar in Political Communication	
<u>CMST 483</u> Live Studio Production	

<a href="#">CMST 491</a>	Internship
<a href="#">CMST 492</a>	Independent Study
<a href="#">CMST 493</a>	Special Topics in Communication Studies
<a href="#">CMST 494</a>	Communication Research Methods
<a href="#">CMST 495</a>	Mass Media and Society
<hr/>	
Total Hours	41

- <sup>1</sup> Completion of [CMST 105](#) automatically satisfies the Core Curriculum Area IV Speech requirement.
- <sup>2</sup> Students must make C or better in their requirements for the major.

## Bachelor of Arts with a Major in Communication Studies and a Concentration in Mass Communication - Journalism

Requirements	Hours
<b>Required Courses</b> <sup>1, 2</sup>	
<a href="#">CMST 103</a> History of Mass Media	3
<a href="#">CMST 105</a> Introduction to Human Communication	3
<a href="#">CMST 210</a> Media Writing	3
<a href="#">CMST 306</a> Investigative Reporting	3
<a href="#">CMST 308</a> Media Writing II	3
<a href="#">CMST 350</a> Publication Editing and Design	3
<a href="#">CMST 360</a> Feature Writing	3
<a href="#">CMST 402</a> Mass Communication Law	3
<a href="#">CMST 494</a> Communication Research Methods	3
<a href="#">CMST 495</a> Mass Media and Society	3
<b>Mass Media Internship</b>	
Take at least two hours in the following:	2
<a href="#">CMST 491</a> Internship	
<b>Major Electives</b>	
Select nine credit hours from the following:	9
<a href="#">CMST 110</a> Introduction to Interpersonal Communication and Relationships	
<a href="#">CMST 255</a> Introduction to Political Campaign Communication	
<a href="#">CMST 301</a> Classical Theories of Social Influence	
<a href="#">CMST 305</a> Applied Communication Theory	
<a href="#">CMST 309</a> Interviewing	
<a href="#">CMST 315</a> Ethics and Leadership	
<a href="#">CMST 320</a> Introduction to Advertising	
<a href="#">CMST 321</a> Persuasion Communication	
<a href="#">CMST 322</a> Argumentation Theory	
<a href="#">CMST 326</a> Sports in the Mass Media	
<a href="#">CMST 335</a> Communication and Sports	
<a href="#">CMST 339</a> Introduction to Public Relations	
<a href="#">CMST 353</a> Sports and Media Relations	
<a href="#">CMST 356</a> Propaganda and Public Persuasion	
<a href="#">CMST 364</a> Crisis Management	
<a href="#">CMST 365</a> Social Media Strategy and Management	
<a href="#">CMST 366</a> Digital Design and Animation	
<a href="#">CMST 391</a> Sports Communication Practicum	
<a href="#">CMST 416</a> Issues in Global Communication	
<a href="#">CMST 455</a> Seminar in Political Communication	
<a href="#">CMST 491</a> Internship	
<a href="#">CMST 492</a> Independent Study	

<a href="#">CMST 493</a> Special Topics in Communication Studies	
Total Hours	41

- <sup>1</sup> Completion of [CMST 105](#) automatically satisfies the Core Curriculum Area IV Speech requirement.
- <sup>2</sup> Students must make C or better in their requirements for the major.

## Bachelor of Arts with a Major in Communication Studies and a Concentration in Mass Communication - Public Relations

Requirements	Hours
<b>Required Courses</b> <sup>1, 3</sup>	
<a href="#">CMST 103</a> History of Mass Media	3
<a href="#">CMST 105</a> Introduction to Human Communication	3
<a href="#">CMST 210</a> Media Writing	3
<a href="#">CMST 315</a> Ethics and Leadership	3
<a href="#">CMST 339</a> Introduction to Public Relations	3
<a href="#">CMST 340</a> Public Relations Principles	3
<a href="#">CMST 402</a> Mass Communication Law	3
<a href="#">CMST 440</a> Public Relations Methods I	3
<a href="#">CMST 442</a> Conducting Public Relations Campaigns	3
<b>Mass Media Internship</b>	
Take at least two hours in the following:	2
<a href="#">CMST 491</a> Internship	
<b>Writing</b>	
Select one of the following:	3
<a href="#">CMST 308</a> Media Writing II	
<a href="#">CMST 320</a> Introduction to Advertising	
<a href="#">CMST 360</a> Feature Writing	
<a href="#">CMST 400</a> Professional Presentations	
<b>Major Electives</b>	
Select two courses not previously taken	6
<a href="#">CMST 110</a> Introduction to Interpersonal Communication and Relationships	
<a href="#">CMST 311</a> Organizational Communication	
<a href="#">CMST 315</a> Ethics and Leadership	
<a href="#">CMST 320</a> Introduction to Advertising	
<a href="#">CMST 321</a> Persuasion Communication	
<a href="#">CMST 322</a> Argumentation Theory	
<a href="#">CMST 343</a> Public Relations Methods II	
<a href="#">CMST 353</a> Sports and Media Relations	
<a href="#">CMST 356</a> Propaganda and Public Persuasion	
<a href="#">CMST 364</a> Crisis Management	
<a href="#">CMST 365</a> Social Media Strategy and Management	
<a href="#">CMST 366</a> Digital Design and Animation	
<a href="#">CMST 380</a> Health Communication	
<a href="#">CMST 413</a> Nonverbal Communication	
<a href="#">CMST 425</a> Communication in Social and Personal Relationships	
<a href="#">CMST 455</a> Seminar in Political Communication	
<a href="#">CMST 491</a> Internship	
<a href="#">CMST 494</a> Communication Research Methods	
<a href="#">CMST 493</a> Special Topics in Communication Studies	
<a href="#">CMST 495</a> Mass Media and Society	
Total Hours	38

<sup>1</sup> Completion of CMST 105 automatically satisfies the Core Curriculum Area IV Speech requirement.

<sup>2</sup> Students can minor in Communication Management

<sup>3</sup> Students must make C or better in their requirements for the major.

## Additional Requirements

### Minor

Completion of a minor is not required for this degree.

## Bachelor of Arts with a Major in Communication Studies and a Concentration in Sports Communication

Requirements	Hours
<u>CMST 103</u> History of Mass Media	3
<u>CMST 105</u> Introduction to Human Communication	3
<u>CMST 494</u> Communication Research Methods	3
<b>Sports Communication Concentration Courses:</b>	<b>24</b>
<u>CMST 210</u> Newswriting and Reporting I	
<u>CMST 283</u> Visual Media Production I	
<u>CMST 310</u> Communications and Teamwork	
<u>CMST 335</u> Communication and Sports	
<u>CMST 326</u> Sports in the Mass Media	
<u>CMST 339</u> Introduction to Public Relations	
<u>CMST 391</u> Sports Communication Practicum	
<u>CMST 491</u> Internship	
<b>Major Electives</b> <sup>1</sup>	
Select 6 hours from the following:	6
<u>CMST 300</u> Human Communication in Everyday Life	
<u>CMST 311</u> Organizational Communication	
<u>CMST 321</u> Persuasion Communication	
<u>CMST 353</u> Sports and Media Relations	
<u>CMST 400</u> Professional Presentations	
<u>CMST 458</u> Media Criticism	
<u>CMST 495</u> Mass Media and Society	
<u>PY 330</u> Sport Psychology	
<u>SOC 336</u> Sport and Society	
Total Hours	39

<sup>1</sup> At least one elective must be at the 400 level

<sup>2</sup> Completion of CMST 105 automatically satisfies the Core Curriculum Area IV Speech requirement.

<sup>3</sup> Students must make C or better in their requirements for the major

<sup>4</sup> Students can minor in Communication Management

## Proposed Program of Study for a Major in Communication Management

Freshman	Hours	Second Term	Hours
<b>First Term</b>			
CMST 101	3	CMST 110	3
CMST 105	3		
	6		3

### Sophomore

First Term	Hours	Second Term	Hours
Communication Management Electives I <sup>3</sup>	6	Communication Management Elective II <sup>4</sup>	6
	6		6

### Junior

First Term	Hours	Second Term	Hours
CMST 494	3	Communication Management Electives IV <sup>6</sup>	6
Communication Management Electives III <sup>5</sup>	6		
	9		6

### Senior

First Term	Hours	Second Term	Hours
Other Communication Management Elective	3	Other Communication Management Elective	3
	3		3

Total credit hours: 42

<sup>1</sup> Public Speaking is highly recommended as a core choice for Communication Studies majors and minors.

<sup>2</sup> Ideally, at the end of the first year, the student would have completed the university composition requirement (6 hours), 6 hours of humanities, 9 hours of social science, and 3 hours of science and mathematics.

<sup>3</sup> Select two courses from CMST 103, CMST 255, CMST 310, CMST 311, CMST 315, CMST 339 or CMST 356.

<sup>4</sup> Select two courses from CMST 103, CMST 255 CMST 300, CMST 301, CMST 309 or CMST 310.

<sup>5</sup> Select two courses from CMST 401, CMST 413, CMST 414, CMST 416, CMST 455 or CMST 492

<sup>6</sup> Select two courses from CMST 400, CMST 411, CMST 415, CMST 416 or CMST 492.

## Proposed Program of Study for a Major in Mass Communication with a Broadcasting Specialization

### Freshman

First Term	Hours	Second Term	Hours
CMST 101	3	CMST 105	3
CMST 103	3		
	6		3

### Sophomore

First Term	Hours	Second Term	Hours
CMST 210	3	CMST 283	3
CMST 370	3	CMST 371	3
	6		6

### Junior

First Term	Hours	Second Term	Hours
CMST 383	3	CMST 402	3
CMST 494	3	CMST 495	3
	6		6

**Senior**

First Term	Hours	Second Term	Hours
CMST 491	1-3	CMST 493	3
	1-3		3

Total credit hours: 37-39

<sup>1</sup> Ideally, at the end of the first year, the student would have completed the university composition requirement (6 hours), 6 hours of humanities and fine arts, 9 hours of social science, and 4 hours of science and mathematics.

<sup>2</sup> Public Speaking is highly recommended as a core choice for Communication Studies majors and minors; however, other options exist.

## Proposed Program of Study for a Major in Mass Communication with a Journalism Specialization

**Freshman**

First Term	Hours	Second Term	Hours
EH 101 <sup>1</sup>	3	EH 102 <sup>1</sup>	3
CMST 101	3	CMST 103	3
CMST 105	3		
	9		6

**Sophomore**

First Term	Hours	Second Term	Hours
CMST 210	3	CMST 310	3
MC/CM Elective (300 level or above)	3	CMST 402	3
	6		6

**Junior**

First Term	Hours	Second Term	Hours
CMST 306	3	CMST 360	3
CMST 350	3	CMST 495	3
CMST 494	3	MC/CM Elective (300 level or above)	3
	9		9

**Senior**

First Term	Hours	Second Term	Hours
CMST 491	1-3	MC/CM Elective (300 level or above)	3
	1-3		3

Total credit hours: 49-51

<sup>1</sup> EH 101 and EH 102 are listed because they are prerequisites for CMST 210, which is required for these specializations (Public Relations and Journalism). Additionally, at the end of the first year, the student would have completed the university composition requirement (6 hours), 6 hours of humanities and fine arts, 9 hours of social science, and 4 hours of science and mathematics.

<sup>2</sup> Ideally, at the end of the first year, the student would have completed the university composition requirement (6 hours), 6 hours of humanities and fine arts, 9 hours of social science, and 4 hours of science and mathematics.

<sup>3</sup> Public Speaking is highly recommended as a core choice for Communication Studies majors and minors; however, other options exist.

## Proposed Program of Study for a Major in Mass Communication with a Public Relations Specialization

**Freshman**

First Term	Hours	Second Term	Hours
EH 101 <sup>1</sup>	3	EH 102 <sup>1</sup>	3
CMST 101	3	CMST 105	3
CMST 103	3		
	9		6

**Sophomore**

First Term	Hours	Second Term	Hours
CMST 210	3	CMST 402	3
CMST 495	3	CMST 494	3
	6		6

**Junior**

First Term	Hours	Second Term	Hours
CMST 339	3	CMST 310	3
CMST 356	3	CMST 340	3
	6		6

**Senior**

First Term	Hours	Second Term	Hours
CMST 440	3	CMST 442	3
CMST 311	3	CMST 491	1-3
	6		4-6

Total credit hours: 49-51

<sup>1</sup> EH 101 and EH 102 are listed because they are prerequisites for CMST 210, which is required for these specializations (Public Relations and Journalism.) Additionally, at the end of the first year, the student would have completed the university composition requirement (6 hours), 6 hours of humanities and fine arts, 9 hours of social science, and 4 hours of science and mathematics.

<sup>2</sup> Public Speaking is highly recommended as a core choice for Communication Studies majors and minors; however, other options exist.

## Minor in Communication Management

A minor for non-majors consists of the following:

Requirements	Hours
CMST 105 Introduction to Human Communication	3
CMST 311 Organizational Communication	3
CMST 413 Nonverbal Communication	3
Three additional courses, approved by departmental advisor or chair.	9
Total Hours	18

A grade of C or better is required for courses applying to this minor.

## Minor in Mass Communication

Requirements	Hours
<b>Required Courses</b>	
CMST 103 History of Mass Media	3
CMST 210 Newswriting and Reporting I	3
<b>Communication Studies Electives</b>	

Under advisement by the Program Director of Broadcasting, Journalism or Public Relations, select four 300-level or 400-level Mass Communication courses.

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Broadcasting	
<a href="#">CMST 283</a>	Visual Media Production I
<a href="#">CMST 320</a>	Introduction to Advertising
<a href="#">CMST 365</a>	Social Media Strategy and Management
<a href="#">CMST 366</a>	Digital Design and Animation
<a href="#">CMST 370</a>	Introduction to Broadcast Media
<a href="#">CMST 383</a>	Visual Media Production II
<a href="#">CMST 483</a>	Visual Media Production III
Journalism	
<a href="#">CMST 305</a>	Applied Communication Theory
<a href="#">CMST 309</a>	Interviewing
<a href="#">CMST 339</a>	Introduction to Public Relations
<a href="#">CMST 356</a>	Propaganda and Public Persuasion
<a href="#">CMST 413</a>	Nonverbal Communication
<a href="#">CMST 490</a>	Media Citizenship
Public Relations	
<a href="#">CMST 339</a>	Introduction to Public Relations
<a href="#">CMST 340</a>	Public Relations Principles
<a href="#">CMST 365</a>	Social Media Strategy and Management
<a href="#">CMST 440</a>	Public Relations Methods I
<a href="#">CMST 442</a>	Conducting Public Relations Campaigns
Total Hours	21

A grade of C or better is required for courses applying to this minor.

## Honors in Communication Studies

The Honors Program in Communication Studies offers an enhanced and challenging academic experience for exceptional and highly motivated undergraduate students, especially those considering graduate school. Students who complete the program will graduate "With Honors in Communication Studies."

## Eligibility and Application Process

To be eligible, a student must be a declared Communication Studies major and must have a cumulative, institutional, and Communication Studies GPA of 3.5 or above.

## Requirements

1. Fulfill the normal requirements for the Communication Management major or Mass Media concentrations.
2. Submit a completed Communication Studies Honors Program application form to the Director of Departmental Honors for approval. Students must secure permission of the Director and their mentor in order to enter the Communication Studies Honors Program.
3. Maintain and graduate with a cumulative, institutional, and Communication Studies GPA of 3.5 or above.
4. Successfully complete and defend (no later than four weeks before graduation) an Undergraduate Honors Thesis conducted under the supervision of a faculty member in the department.

## Contact

1. For more information and/or admission to the Communication Studies Honors Program, please contact the Chair of the Department.

## Courses

### CMST 100. Media & Society. 3 Hours.

Examines the impact of mediated messages on society. What theories help to shape perception and understanding of the interplay between media, society, and human behavior.

### CMST 101. Public Speaking. 3 Hours.

Effective public speaking. Analysis, research, organization, delivery, to enhance speaking performance. This course meets the Core Curriculum requirements for Area II: Humanities.

### CMST 103. History of Mass Media. 3 Hours.

The history of newspapers, books, magazines, radio, television, cinema, recording industry, and the internet, focusing on current events, civic responsibilities and the role, value of diversity when appropriate. Ethics and Civic Responsibility are significant components of this course.

### CMST 105. Introduction to Human Communication. 3 Hours.

Communication and persuasion as ideas in Western thought, ranging from Greek to contemporary period. This course meets the Core Curriculum requirements for Area IV: Social and Behavioral Sciences.

### CMST 110. Introduction to Interpersonal Communication and Relationships. 3 Hours.

This class introduces students to interpersonal communication theory and research. We focus on the foundations of interpersonal communication (self, perception, and emotion) and how they influence our relationships with friends, family, romantic partners, and professional coworkers. We explore relationship challenges, conflict, and maintenance; and examine the practical skills and critical self-reflection associated with competent communication.

### CMST 210. Media Writing. 3 Hours.

Recognizing story, gathering information and media writing. Emphasis on writing skills including grammar, punctuation, word choice, conciseness and accuracy. This is a foundational course for all mass communication majors and minors.

**Prerequisites:** EH 102 [Min Grade: C](Can be taken Concurrently) or EH 107 [Min Grade: C]

### CMST 255. Introduction to Political Campaign Communication. 3 Hours.

A discussion of current theories and practices related to political campaign communication. This will include relevant media theories, campaign strategies, campaign financing, speech writing, and other topics as they relates to political campaigning.

### CMST 283. Visual Media Production I. 3 Hours.

An introduction to digital video production. The course covers the full production process from planning to recording to editing visual media, with instruction in composition, storytelling, camera and audio operations, and editing software.

### CMST 300. Human Communication in Everyday Life. 3 Hours.

Learning to express what we mean and to understand others is the foundation of this course. Human communication will review the following basic concepts: Components of human communication, interpersonal relationships, perceptions, and relational concerns.

### CMST 301. Classical Theories of Social Influence. 3 Hours.

Classical systems of rhetoric applied to contemporary theory building in communication. Works selected from among Sophists, as well as Plato and Aristotle.

**CMST 305. Applied Communication Theory. 3 Hours.**

Major theoretical approaches to issues involved in human communication. Various psychological and sociological conceptualizations of communication process.

**CMST 306. Investigative Reporting. 3 Hours.**

Gathering and writing in-depth news; covering courts, police, schools, and county and city governments.

**Prerequisites:** MC 210 [Min Grade: C] or CMST 210 [Min Grade: C] or MC 106 [Min Grade: C]

**CMST 308. Media Writing II. 3 Hours.**

Practice in gathering and writing news, with experience in writing under pressure of deadlines and covering beats.

**Prerequisites:** CMST 210 [Min Grade: C] or MC 210 [Min Grade: C] or MC 106 [Min Grade: C]

**CMST 309. Interviewing. 3 Hours.**

Theory and practice in various types of interviews, such as employment, counseling, research, and journalistic.

**CMST 310. Communications and Teamwork. 3 Hours.**

Theories of small group communication and practice in decision making in various group formats as part of organizational structure.

**CMST 311. Organizational Communication. 3 Hours.**

Theories and models of communication in organizational settings. Analysis and diagnosis of communicative patterns and consideration of methods for implementing appropriate communication models in organizations.

**CMST 315. Ethics and Leadership. 3 Hours.**

Theory and research on ethics, leadership and communication management. Specific attention to contexts in which leaders and managers function.

**CMST 320. Introduction to Advertising. 3 Hours.**

Survey of history, methods, techniques, and strategy involved in creating an advertising campaign.

**CMST 321. Persuasion Communication. 3 Hours.**

An introduction to the study and practice of persuasive discourse using both the rhetorical and behavioral science traditions.

**CMST 322. Argumentation Theory. 3 Hours.**

Bases of argument and nature of issues in controversy. Evidence, logic, refutation, and argumentative formats. Recommended for pre-law as well as general students.

**CMST 323. Deception. 3 Hours.**

This course examines theory and research on the topic of human deception from the perspective of Truth Default Theory. Topics include verbal and nonverbal aspects of deception, prevalence of deception, deception motives, information manipulation, truth-bias, and improving accuracy.

**CMST 324. Gender, Sex Similarities and Differences in Communication. 3 Hours.**

This class introduces students to gender and how it influences communication and relationships in a variety of personal and professional contexts. Theory, research, and historical perspectives are reviewed and applied to interpersonal, family, romantic, educational, health, and organizational contexts.

**CMST 326. Sports in the Mass Media. 3 Hours.**

An introduction to the study of communication as it relates to sports. Topics include discussions of athlete-coach interactions, fan behaviors, and media coverage of sporting events.

**CMST 330. Audio Production. 3 Hours.**

Basics of recording and mixing audio for multimedia projects with applications for film, television, radio, and digital media.

**CMST 335. Communication and Sports. 3 Hours.**

An introduction to the study of communication as it relates to sports. Topics include discussions of athlete-coach interactions, fan behaviors, and media coverage of sporting events.

**CMST 339. Introduction to Public Relations. 3 Hours.**

Survey of public relations in the United States. Relationships among marketing, advertising and public relations.

**CMST 340. Public Relations Principles. 3 Hours.**

Relationship of business, industrial, educational, health, and service institutions to audiences. Public relations as management function in areas of communication analysis, counseling, and public information activities.

**Prerequisites:** (CMST 210 [Min Grade: C] or MC 210 [Min Grade: C]) and (CMST 339 [Min Grade: C] or CM 339 [Min Grade: C] or MC 339 [Min Grade: C])

**CMST 343. Public Relations Methods II. 3 Hours.**

Graphics, brochure and newsletter design, slide shows, broadcast PSAs, and multimedia presentations.

**Prerequisites:** CMST 340 [Min Grade: C] or MC 340 [Min Grade: C]

**CMST 350. Publication Editing and Design. 3 Hours.**

News selection, copy editing, picture editing, and headline writing.

**Prerequisites:** CMST 210 [Min Grade: C] or CM 210 [Min Grade: C] or MC 106 [Min Grade: C]

**CMST 353. Sports and Media Relations. 3 Hours.**

An examination of the role of media relations in the sports communication environment. Students will acquire multiple competencies, including writing press releases, putting together media kits and media guides, preparing press conferences, and arranging interviews for sports personalities.

**CMST 356. Propaganda and Public Persuasion. 3 Hours.**

Theory and practice of propaganda with emphasis on mass media as tools of propagandist. Nazi, Soviet, and U.S. propaganda analyzed and critiqued in context of communication theory and ethics.

**CMST 360. Feature Writing. 3 Hours.**

Finding subjects, collecting information, interviewing, writing, and marketing magazine and newspaper features.

**Prerequisites:** CMST 210 [Min Grade: C] or MC 210 [Min Grade: C] or MC 106 [Min Grade: C]

**CMST 364. Crisis Management. 3 Hours.**

The course will provide sufficient knowledge about crisis management in order to perform professional duties with all available information in how to anticipate and respond to a crisis—both negative and positive. Historical and traditional responses to crises will be examined, and particular instances of response by corporations, politicians, and government to disasters and catastrophic events analyzed. A crisis environment and preparation of a response will be simulated.

**Prerequisites:** EH 101 [Min Grade: D] or CMST 210 [Min Grade: D]

**CMST 365. Social Media Strategy and Management. 3 Hours.**

Basics of strategic design and management for social media.

**CMST 366. Digital Design and Animation. 3 Hours.**

Basics of design for digital media, including web and motion graphics.

**CMST 370. Introduction to Broadcast Media. 3 Hours.**

Broadcasting and digital technology, history of radio and television, economics of broadcasting, government regulation of industry, and assessment of media in society.

**CMST 371. Copywriting for Broadcast Media. 3 Hours.**

Copywriting for freelance, in-station, agency, corporate in-house, and institutional settings.

**Prerequisites:** CMST 103 [Min Grade: C] or MC 101 [Min Grade: C]

**CMST 380. Health Communication. 3 Hours.**

This class introduces students to the theory, research, and practice of health communication. Emphasis upon patient and caregiver perspectives; communication contexts, relationships, and campaigns.

**CMST 382. Health Communication Campaigns. 3 Hours.**

A project-based course in the current methods of communicating health information. Students will research the foundations of communication strategies in health care and plan a program of health information to be tested with an actual population. Email, telephone health, are just two areas of study for students. Students should plan for some time to be devoted to a community project.

**CMST 383. Visual Media Production II. 3 Hours.**

Advanced digital video production for media applications on the web, television and film.

**Prerequisites:** CMST 283 [Min Grade: C] or MC 283 [Min Grade: C]

**CMST 391. Sports Communication Practicum. 3 Hours.**

The student will gain practical experience by working in a sports environment on a regular basis. The experience will be directed by a communication studies faculty member, while the day-to-day experiences of the student will be directed by a supervisor in the work environment.

**CMST 400. Professional Presentations. 3 Hours.**

Advanced speaking and delivery techniques in professional settings. Audience analysis, professional delivery, research, and application of theories of persuasion.

**Prerequisites:** CMST 210 [Min Grade: C] and CMST 339 [Min Grade: C] and CMST 340 [Min Grade: C] and CMST 101 [Min Grade: C]

**CMST 401. Instructional Communication. 3 Hours.**

Communication problems in the classroom. Translation of data into lecture discussion. Empirical research on verbal and nonverbal elements of effective presentation.

**CMST 402. Mass Communication Law. 3 Hours.**

Legal limitations and privileges affecting publishing and broadcasting. Major court decisions. Fair comment, libel, right of privacy, fairness doctrine, and license renewal.

**CMST 403. Pragmatics and Human Interaction. 3 Hours.**

This class examines how people use language to create meanings within conversations; with a focus on the nature of language, speech act theory, conversation analysis, face and face maintenance, sexism in language, conversation implicature, honesty, and deception.

**CMST 405. Contemporary Philosophies of Communication. 3 Hours.**

Twentieth-century systems of Western rhetoric. Concepts selected from among works of Burke, Weaver, Toulmin, Perelman, Richards, and McLuhan.

**CMST 411. Organizational Communication Project. 3 Hours.**

Theory and research in communication audits of organizations.

**Prerequisites:** CMST 311 [Min Grade: C] or CM 311 [Min Grade: C]

**CMST 413. Nonverbal Communication. 3 Hours.**

Elements of nonverbal behavior (physical appearance, gestures, space, voice) which affect communication in person-to-person situations.

**CMST 414. Language and Thought. 3 Hours.**

Semiotics and communication. Definition of sign and sign process. Cognitive processes and communication processes. Signs in communicative action.

**CMST 415. Intercultural & International Communication. 3 Hours.**

Communication problems in intercultural and multicultural contexts. Interpretations and otherness. Ethnocentricity and culture. Analysis of one culture interpreting another, with emphasis on modern societies.

**CMST 416. Issues in Global Communication. 3 Hours.**

Changes in technology and communication; from narrowcasting to networking. The global village is transformed, from Marshall McLuhan to the internet. Narrowcasting and broadcasting. How did the internet change communication? Circuit switching and packet switching. Cultural changes in global communication.

**CMST 417. Cyborg Communication. 3 Hours.**

The study of how people use online communities to mirror, extend, idealize and fantasize their everyday lives. Exploration of how online communities are formed, maintained and dissolved will be made.

**CMST 425. Communication in Social and Personal Relationships. 3 Hours.**

The course offers an in-depth examination of the role of communication in the initiation, development, maintenance, and termination of social, professional, and personal relationships.

**CMST 440. Public Relations Methods I. 3 Hours.**

Planning and executing ongoing programs and campaigns to improve organizational and institutional relations with publics. Preparing and distributing news releases, reports, letters, pamphlets, position papers, public statements, speeches, and backgrounders.

**Prerequisites:** CMST 340 [Min Grade: C] or MC 340 [Min Grade: C]

**CMST 442. Conducting Public Relations Campaigns. 3 Hours.**

National and local programs that illustrate good and bad practices. Student teams research, plan, and design public relations campaign for client.

**Prerequisites:** CMST 210 [Min Grade: C] and CMST 339 [Min Grade: C] and CMST 340 [Min Grade: C] and CMST 440 [Min Grade: C]

**CMST 455. Seminar in Political Communication. 3 Hours.**

Emerging cross-disciplinary field of political communication. Literature and propositions surrounding key approaches, methods, and substantive areas of inquiry in political communication.

**CMST 458. Media Criticism. 3 Hours.**

Rhetorical systems for appraising persuasive messages and campaigns in twenty-first century.

**CMST 460. Communication and Social Movements in America. 3 Hours.**

Exploration of role of public communication in political, religious, social, and economic evolution of America. Movements include war and peace, revolution, slavery, feminist concerns, and industrial change.

**CMST 461. Media Economics. 3 Hours.**

Basic economic principles in the theories of Adam Smith, Davis Richardo and Karl Marx. Economy and communication as part of a social life. What's the value? Value in linguistics and economics. F. von Hayeck and the idea of pricing as a means of signaling. Pricing and consumption of goods in Industrial Society. Understanding media from the viewpoint of economic concepts and procedures.

**CMST 480. Seminar in Health and Medical Communication. 3 Hours.**

This course introduces students to the theory, research, and practice of health communication campaigns. Emphasis is placed on interpersonal communication, relationships, and persuasive campaigns. This is a project-based course with a service learning component.

**CMST 481. Communication and Aging. 3 Hours.**

Biological, neurological, and socio-psychological effects of aging on communication process. Communication with elderly in various health and medical contexts.

**CMST 483. Live Studio Production. 3 Hours.**

Applied advanced digital video production. Students work as a team to produce a live, studio-based TV show, complete with commercials.

**Prerequisites:** CMST 283 [Min Grade: C] or MC 283 [Min Grade: C]

**CMST 491. Internship. 1-3 Hour.**

Students who meet eligibility requirements may take three hours of academic credit per semester for participating in an advisor approved internship experience. All internships require a minimum of 70 hours of work per academic credit per semester.

**CMST 492. Independent Study. 1-3 Hour.**

The purpose of this class is to provide the student with an opportunity to conduct significant research under the direct supervision of a Communication Studies faculty member. This research is to be an extension of an existing class or classes that you have already taken. It is not to be used to replace existing classes or fulfill requirements that existing classes already fill.

**CMST 493. Special Topics in Communication Studies. 3 Hours.**

Topics selected by faculty.

**CMST 494. Communication Research Methods. 3 Hours.**

Research questions, design, methodology, data gathering, and analysis. Practice in conducting, interpreting, and communicating research findings to public. Ethical considerations of conducting research with human subjects. Ethics and Civic Responsibility are significant components of this course. Junior standing required.

**CMST 495. Mass Media and Society. 3 Hours.**

Mass communication research from 1940s to present. Transactional model of communication and symbolic-interactionist perspective used among other approaches to evaluate role of mass media in twenty-first century America.

## Department of Computer Science

**Chair:** Dr. Yuliang Zheng

The Department of Computer Science (CS) offers a BA degree in CS, a BS degree in CS, a BS degree in Bioinformatics (offered jointly with the School of Medicine and the Department of Biology), a BS degree in Digital Forensics (offered jointly with the Department of Criminal Justice), and a minor in CS. The BS degree in CS is accredited by the Computing Accreditation Commission of ABET, [abet.org](http://abet.org), and is designed for students desiring a more in-depth exploration of computer science, giving students a broad background in the design of software, the structure and theory of information and computation, and the hardware and software of computer and computer-based systems. The BA degree in CS is designed for students wishing to apply the tools and techniques of computer science to solving interdisciplinary problems in science, arts, humanities, business, and other areas, equipped with T-shaped knowledge and skill sets. The BS in Bioinformatics trains students in basic concepts and skills to perform computational analysis of biological data — including the human genome. Finally, the BS in Digital Forensics

is an interdisciplinary degree that prepares graduates for a professional career in the field of digital forensics and cyber security. Minors are available for students who are not CS majors but who expect to use the computer in the application area of their major field. For more information, see the CS department web site at [cs.uab.edu](http://cs.uab.edu).

## Requirements for students transferring to a CS major from other programs within UAB

Students admitted to an undergraduate program at UAB may transfer to CS provided they have earned a UAB GPA of 2.0 or better. The Bioinformatics degree has more stringent requirements: please see its catalog page.

## Requirements for students transferring to a CS major from other institutions

Transfer students from other institutions may transfer to the CS program provided they have earned a GPA of 2.0 or better. If this requirement is not met, transfer students must transfer as a Liberal Arts major in the College of Arts and Sciences, meet the GPA requirement, and then apply to become a CS major. The Bioinformatics degree has more stringent requirements: please see its catalog page.

## Grade point average

For both the major and minor, a grade of C or better is required in each of the computer science courses. If a student receives a grade D or F in any CS course, then the student will only be allowed one chance to retake that course and pass it (grade C or better).

CS courses taken at another institution for which a grade of D was received may not be counted toward the CS major or the CS minor.

All CS majors must maintain a GPA of 2.2 or better in all CS courses taken. If the CS GPA falls below 2.2, then the student will be put on probation and student must raise his or her CS GPA to 2.2 or above within a year after being placed on probation. At the end of the probation term, if the CS GPA is not at or above 2.2, then the student will be dismissed from the major, and be reclassified as an undeclared major in the College of Arts and Sciences. Note that this requirement is in addition to the minimum UAB GPA of 2.0 or better required to be in good standing. A student who is dismissed from the CS major as described here may reapply to be CS major provided the student has raised his or her CS GPA to 2.2 or higher and also has a UAB GPA to 2.0 or better.

## 300 and 400-level courses

In the Bachelor of Science in Computer Science major, at least 12 semester hours of CS courses at the 300 level or above must be taken at UAB. In the Bachelor of Arts in Computer Science major, at least 12 semester hours of CS courses at the 200 level or above must be taken at UAB. Any CS course at the 300 level or above can be taken to satisfy the 12 semester hour CS elective credit. A maximum of 3 semester hours may be obtained in Directed Readings.

CS courses at the 400-level and above are normally restricted to CS Majors. Non-majors may register for such courses only with the specific permission of the specific course Instructor.

## Accelerated Learning Opportunities

Computer Science offers both Accelerated Bachelors/Masters (ABM) and Fast-Track options for high-achieving undergraduate students pursuing an undergraduate degree in computer science or a BS degree in Physics at UAB. Please see the [Graduate School website](#) for details.

## Graduate Programs

The Department of Computer Science offers graduate study leading to the Master of Science in Computer Science, the Master of Science in Data Science, and the Doctor of Philosophy in Computer Science. We also offer, jointly with Criminal Justice, a Master of Science degree in Cyber Security. Further information may be obtained from the department or the UAB Graduate School Catalog.

### UABTeach

The CS Department participates in [UABTeach](#). For more information, see the [UABTeach website](#) at <https://www.uab.edu/uabteach/>

## Bachelor of Arts with a Major in Computer Science

Requirements	Hours
A grade of C or better is required in all of the following courses. At least 12 hours of CS courses at the 200-level or above must be taken at UAB	
<b>Mathematics Requirement</b>	
<a href="#">MA 125</a> Calculus I	4
<b>Required CS Courses</b>	
<a href="#">CS 103</a> Introduction to Computer Science in Python & <a href="#">103L</a> and Introduction to Computer Science in Python Lab	4
<a href="#">CS 203</a> Object-Oriented Programming & <a href="#">203L</a> and Object-Oriented Programming Lab	4
<a href="#">CS 250</a> Discrete Structures	3
<a href="#">CS 303</a> Algorithms and Data Structures	3
<a href="#">CS 330</a> Computer Organization and Assembly Language Programming	3
<a href="#">CS 420</a> Software Engineering	3
<a href="#">CSA 499</a> Senior BA Capstone	3
<b>CS Electives</b> <sup>1</sup>	12
Select four courses in Computer Science (CS), each course at the 200-level or above, and each course at least 3 hours. One of these 4 courses must be at the 400-level or above.	
<b>A minor is required</b>	
Since the intent of the minor is to add breadth in a non-computing area to complement the CS degree, the following minors are not allowed: Information Systems (Business), Electrical Engineering (Engineering), and Software Engineering (Engineering). If a student completes a double major, the minor requirement is waived.	
Total Hours	39

<sup>1</sup> Students may take a maximum of 3 hours combined of the following independent study courses: [CS 398](#) [CS 399](#), [CS 496](#).

## Bachelor of Science with a Major in Computer Science

Requirements	Hours
<b>Mathematics Requirements</b> <sup>1,2</sup>	
<a href="#">MA 125</a> Calculus I	4
<a href="#">MA 126</a> Calculus II	4

<a href="#">MA 260</a> Introduction to Linear Algebra	3
or <a href="#">MA 434</a> Algebra I: Linear	
Select one of the following:	3-4
<a href="#">MA 227</a> Calculus III	
<a href="#">MA 252</a> Introduction to Differential Equations	
<a href="#">MA 360</a> Scientific Programming	
<a href="#">MA 361</a> Mathematical Modeling	
<a href="#">MA 440</a> Advanced Calculus I	
<a href="#">MA 444</a> Vector Analysis	
<a href="#">MA 445</a> Complex Analysis	
<a href="#">MA 470</a> Differential Geometry	
<a href="#">MA 472</a> Geometry I	
<a href="#">MA 485</a> Probability	
<a href="#">EGR 265</a> Math Tools for Engineering Problem Solving	

### Natural Sciences Requirement<sup>1</sup>

A two-course sequence in a lab-based natural science is required. These 8 hours must be chosen from one of the following two-course sequences (or 4-course sequence in the case of Chemistry, since labs are treated as separate courses):

<a href="#">BY 123</a> Introductory Biology I & <a href="#">BY 124</a> and Introductory Biology II	
<a href="#">CH 115</a> General Chemistry I & <a href="#">CH 116</a> and General Chemistry I Laboratory & <a href="#">CH 117</a> and General Chemistry II & <a href="#">CH 118</a> and General Chemistry II Laboratory	
<a href="#">PH 221</a> General Physics I & <a href="#">PH 222</a> and General Physics II	

### Required Computer Science Courses<sup>1</sup>

<a href="#">CS 103</a> Introduction to Computer Science in Python	4
<a href="#">CS 203</a> Object-Oriented Programming	4
<a href="#">CS 250</a> Discrete Structures	3
<a href="#">CS 303</a> Algorithms and Data Structures & <a href="#">303L</a> and Algorithms and Data Structures Laboratory	3
<a href="#">CS 330</a> Computer Organization and Assembly Language Programming	3
<a href="#">CS 332</a> Systems Programming	3
<a href="#">CS 350</a> Automata and Formal Languages	3
<a href="#">CS 355</a> Probability and Statistics in Computer Science	3
<a href="#">CS 401</a> Programming Languages	3
<a href="#">CS 410</a> Database Application Development	3
<a href="#">CS 420</a> Software Engineering	3
<a href="#">CS 436</a> Computer Security	3
<a href="#">CS 499</a> Senior BS Capstone	3

### Electives<sup>1</sup>

Complete nine hours in Computer Science courses; three of these hours must be at the 400-level and the remaining six hours must be at the 300-level or above. A maximum of 3 hours combined of the following independent courses may be taken: [CS398](#), [CS399](#), [CS496](#). The following course may also be used as an elective:

<a href="#">EE 337</a> Introduction to Microprocessors	
If taking the Computer Networking specialization, the nine hours in electives must be chosen from the following list:	
<a href="#">CS 334</a> Networking	
<a href="#">CS 423</a> Network Security	
<a href="#">CS 431</a> Distributed Systems	
<a href="#">CS 435</a> Network Programming	
<a href="#">CS 443</a> Cloud Security	

Total Hours

72-73

<sup>1</sup> A grade of "C" or better must be earned in each course.

<sup>2</sup> Completion of MA 125 or MA 126 automatically satisfies the Area III: Mathematics Requirement.

## Additional Requirements

### General Electives

Students must take general electives to reach the 120 semester hour requirement. These must include [CMST 101](#) Public Speaking and [PHL 115](#) Contemporary Moral Issues.

## Bachelor of Science in Bioinformatics (p. 187)

## Bachelor of Science in Digital Forensics (p. 192)

## Proposed Program of Study for a Major in Computer Science

### Freshman

First Term	Hours	Second Term	Hours
CS 103	4	CS 203	4
MA 125	4	CS 250	3
Laboratory Science I	4	MA 126	4
EH 101 (Area I)	3	EH 102 (Area I)	3
CAS 112	1		
	16		14

### Sophomore

First Term	Hours	Second Term	Hours
CS 303	3	CS 330	3
MA 434	3	CS 355	3
Laboratory Science II	4	Area II Literature	3
Area IV course 1	3	Area IV course 2	3
		General elective	3
	13		15

### Junior

First Term	Hours	Second Term	Hours
CS 332 (Systems Programming)	3	CS 401	3
CS 350	3	CS 410	3
CMST 101 (Area II)	3	PHL 115 (Area II)	3
Area IV	3	Math elective	4
General elective	3	General elective	3
	15		16

### Senior

First Term	Hours	Second Term	Hours
CS 420	3	CS 499	3
CS 436	3	CS elective	3
CS elective	3	CS elective	3
Area IV	3	Area II: Fine Art	3
General elective	3	General elective	3
	15		15

Total credit hours: 119

## Minor in Computer Science

Requirements	Hours
<b>Required CS courses. Must earn a grade of C or better</b>	
CS 103 Introduction to Computer Science in Python	4
CS 203 Object-Oriented Programming	4
CS 250 Discrete Structures	3
CS 303 Algorithms and Data Structures	3
<b>CS Electives</b>	
Select 3 hours from 300-level or higher CS courses (CS 332 is recommended)	3
Total Hours	17

Note: A student who takes [CS 330](#) as the elective will be ready to apply directly to the CS M.S. program.

## GPA Requirement and Residency

A student must have at least a 2.0 average in all CS courses attempted and a 2.0 average in all CS courses taken at UAB. The current UAB course repeat policy will be used in calculating the grade point average.

A minimum of six semester hours in the minor must be taken at UAB.

Transfer students should be aware of the Department of Computer Science's policy regarding transfer credit.

## Honors Program: Computer Science

### Purpose

The Computer Science Honors Program offers outstanding, highly motivated students the opportunity to develop research skills in preparation for graduate work or a professional career.

### Eligibility

In order to be accepted into the Computer Science Honors program, a student must:

- have earned a 3.5 GPA in computer science (CS) courses;
- have earned a 3.0 GPA overall;
- have completed 18 semester hours in CS courses;
- have arranged with a faculty sponsor in Computer Science to do a research project.

## Requirements

Students in the Computer Science Honors Program will be required to have the following:

- during their first semester in the honors program, enroll in exactly 1 semester hour of Undergraduate Honors Research (CS 398), during which a formal research proposal will be developed and submitted, including an introduction, proposed methods, and relevant literature citation
- a total of 3 semester hours in Undergraduate Honors Research (CS 398) with each semester hour involving a minimum of three hours of laboratory work per week during the semester of enrollment;
- a formal written report in the form of a scientific paper; and
- an oral or poster presentation at a Computer Science departmental seminar.

In some instances, it will be recommended or required that Computer Science Honors students give a formal presentation of their work at a scientific meeting.

## Benefits

In addition to the educational and career benefits of participating in the Computer Science Honors program, students who complete the program will graduate "With Honors in Computer Science."

## Contact

For more information and/or admission to the Computer Science Honors program, contact:

Dr. John K. Johnstone  
1300 University Blvd. Room 125, Campbell Hall  
Birmingham, AL 35294-1170  
Telephone (205) 975-5633

E-mail: [jkj@uab.edu](mailto:jkj@uab.edu)

## Courses

### CS 102. Principles of Computer Science. 3 Hours.

This is an introductory course for non-CS majors to learn the fundamental concepts and topics of Computer Science (CS), and how CS is now impacting and changing every person's way of life. Students will explore the use of block-based and/or text-based programming languages to form computational solutions to problems. The main topics covered include program design, software development, abstract thinking, information analysis, the Internet, algorithmic methodology. The course will also discuss other topics including (but not limited to) modeling real-life phenomena, computing as a creative activity, social uses and abuses of information, and the foundations of cybersecurity. This course has a laboratory component.

**Prerequisites:** MA 102 [Min Grade: C] or MA 105 [Min Grade: C] or MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 125 [Min Grade: C] or MA 126 [Min Grade: C] or MA 225 [Min Grade: C] or MA 227 [Min Grade: C]

### CS 102L. Principles of Computer Science Lab. 0 Hours.

Laboratory to accompany CS102.

### CS 103. Introduction to Computer Science in Python. 4 Hours.

An introduction to computation and computational thinking, explored through programming in Python. Python is a scripting programming language that encourages exploration and quick development. This course assumes no prior programming experience and is appropriate for students in any discipline, such as linguistics, biology, business, and art. The student will leave the course with the ability to write clear and well-designed programs that solve interesting problems, and an appreciation of the power and beauty of computation. Strings, tuples, lists, dictionaries; branching, iteration, abstraction through functions, recursion, higher order programming; insertion sort, binary search, turtle graphics, binary numbers, introduction to classes. Principles of software development are emphasized, including specification, documentation, testing, debugging, exception handling. This course has a laboratory component.

**Prerequisites:** MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 125 [Min Grade: C] or MA 126 [Min Grade: C] or MA 225 [Min Grade: C] or MA 227 [Min Grade: C] or MA 226 [Min Grade: C]

### CS 103L. Introduction to Computer Science in Python Lab. 0 Hours.

Laboratory to accompany CS103.

### CS 104. Introduction to Data Science. 4 Hours.

Spurred by the recent proliferation of large datasets and the maturation of techniques such as machine learning, data science is revolutionizing modern computer science in the twenty-first century. In this introductory course, students will develop an understanding of the modern use of computer science to analyze data, to make predictions from large datasets, to cluster and classify data, to analyze the reliability of conclusions drawn from data, and to communicate data visually.

Empirical analysis includes datasets from areas including economics, medicine, and geography. The course introduces Python to explore and analyze data in code (no previous experience with Python is necessary). Computational tools covered include basic probability, inference, linear regression, least squares, and nearest neighbors.

**Prerequisites:** MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 125 [Min Grade: C] or MA 225 [Min Grade: C]

### CS 104L. Introduction to Data Science Laboratory. 0 Hours.

Laboratory to accompany CS104.

### CS 130. Introduction to Cyber Security. 3 Hours.

This course introduces students to the rapidly evolving and critical international arenas of privacy, information security, and critical infrastructure, and is designed to develop knowledge and skills for security of information and information systems at both individual and organizational levels. Stakeholders of information security and privacy. Framework of information security and privacy. Nature of common information hazards. Common cyber attacks and counter-measures. Operation and limitations of information and system safeguards. Ethics, privacy, policy and information decisions. Legal aspects, professional practices, and standards for information security and privacy. Security of national critical infrastructures.

### CS 198. Selected Topics in Computer Science. 3 Hours.

Selected topics in computer science. This course does not have a laboratory component.

### CS 199. Special Topics in Computer Science. 3 Hours.

Selected topics in computer science. This course has a laboratory component.

### CS 199L. Special Topics Lab. 0 Hours.

Project oriented hands-on approach lab. Mandatory first day of attendance.

### CS 203. Object-Oriented Programming. 4 Hours.

A second course in computational thinking, through the lens of object oriented programming. Fundamental concepts of object oriented programming and basic data structures. Types, classes, objects, inheritance, containers, OO software design, program structure and organization, reflection, generic programming. Lists, trees, stacks, queues, heaps, search trees, hash tables, graphs, complexity analysis. This course has a laboratory component.

**Prerequisites:** CS 103 [Min Grade: C]

### CS 203L. Object-Oriented Programming Lab. 0 Hours.

Laboratory to accompany CS203.

### CS 221. Web Development. 3 Hours.

Fundamental concepts of web development. Client side application development using web languages and technologies. Client-server communication. Responsive design. User interaction models. Server-side development. This course has a laboratory component.

### CS 221L. Web Development Laboratory. 0 Hours.

Laboratory to accompany CS 221.

**CS 250. Discrete Structures. 3 Hours.**

Discrete mathematics for computer science, including elementary propositional and predicate logic, sets, relations, functions, counting, elementary graph theory, proof techniques including proof by induction, proof by contradiction, and proof by construction.

**Prerequisites:** CS 103 [Min Grade: C] and (MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 125 [Min Grade: C] or MA 225 [Min Grade: C] or MA 226 [Min Grade: C] or MA 126 [Min Grade: C] or MA 227 [Min Grade: C])

**CS 303. Algorithms and Data Structures. 3 Hours.**

Techniques for design and analysis of algorithms; efficient algorithms for sorting, searching, graphs, and string matching; and design techniques such as divide-and-conquer, recursive backtracking, dynamic programming, and greedy algorithms.

**Prerequisites:** CS 250 [Min Grade: C] and CS 203 [Min Grade: C]

**CS 303L. Algorithms and Data Structures Laboratory. 0 Hours.**

Project oriented hands-on approach to accompany CS 303.

**CS 309. Programming in Mathematica. 1 Hour.**

Syntax, semantics and concepts of programming in Mathematica: expressions, lists, patterns and rules, functional programming, procedural programming, recursion, numeric, strings, graphics and visualization, dynamic expressions, optimization, and applications.

**Prerequisites:** CS 203 [Min Grade: C] and CS 250 [Min Grade: C]

**CS 330. Computer Organization and Assembly Language Programming. 3 Hours.**

Register-level architecture of modern digital computer systems, digital logic, machine-level representation of data, assembly-level machine organization, and alternative architectures. Laboratory emphasizes machine instruction execution, addressing techniques, program segmentation and linkage, macro definition and generation, and computer solution of problems in assembly language.

**Prerequisites:** CS 250 [Min Grade: C] and CS 203 [Min Grade: C]

**CS 330L. Computer Organization and Assembly Language Programming Lab. 0 Hours.**

Laboratory to accompany CS330.

**CS 332. Systems Programming. 3 Hours.**

Unix architecture and internals with an emphasis on Linux, shell scripting, distributions of Linux for various computing platforms including large and desktop computers, and embedded computing devices, introduction to the C programming language, systems programming in C covering signals and process control, networking, I/O, concurrency and synchronization, memory allocation, threads, debugging, library development and usage.

**Prerequisites:** CS 203 [Min Grade: C] and CS 250 [Min Grade: C]

**CS 332L. Systems Programming Laboratory. 0 Hours.**

Laboratory to accompany CS332.

**CS 334. Networking. 3 Hours.**

Underlying network technology, including IEEE 802.11. Interconnecting networks using bridges and routers. IP addresses and datagram formats. Static and dynamic routing algorithms. Control messages. Subnet and supernet extensions. UDP and TCP. File transfer protocols. E-mail and the World Wide Web. Network address translation and firewalls. Mandatory weekly Linux-based lab.

**Prerequisites:** CS 250 [Min Grade: C] and CS 203 [Min Grade: C]

**CS 334L. Networking Lab. 0 Hours.**

Project oriented hands-on approach to accompany CS 334. Mandatory first day of class.

**CS 350. Automata and Formal Languages. 3 Hours.**

Finite-state automata and regular expressions, context-free grammars and pushdown automata, computability.

**Prerequisites:** CS 250 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and CS 203 [Min Grade: C]

**CS 355. Probability and Statistics in Computer Science. 3 Hours.**

Introduction to probability and statistics with applications in computer science. Counting, permutations and combinations. Probability, conditional probability, Bayes theorem. Standard probability distributions. Measures of central tendency and dispersion. Central Limit Theorem. Hypothesis testing. Random number generation. Random algorithms. Estimating probabilities by simulation.

**Prerequisites:** CS 250 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and CS 203 [Min Grade: C]

**CS 380. Matrix Computation. 3 Hours.**

Matrix computation is the foundation of data science, of many key areas of computer science (machine learning, computer graphics, computer vision, high performance computing), and of companies like Google. The main object of study in this course is the matrix, including matrix computation (matrix multiplication, null space, solution of linear systems, least squares) and applications (e.g., image filtering, face detection, compression).

**Prerequisites:** CS 203 [Min Grade: C] and CS 250 [Min Grade: C]

**CS 391. Special Topics. 3 Hours.**

Selected Topics in Computer Science.

**CS 392. Special Topics. 3 Hours.**

Selected Topics in Computer Science.

**CS 398. Undergraduate Honors Research. 1-3 Hour.**

Research project under supervision of faculty sponsor. Prerequisite: 18 semester hours in Computer Science with grade point average of 3.5 in Computer Science and permission of instructor.

**CS 399. Directed Readings. 1-3 Hour.**

Selected readings, research and project development under the direction of a faculty member. Permission of instructor.

**Prerequisites:** CS 203 [Min Grade: D] and CS 250 [Min Grade: D]

**CS 401. Programming Languages. 3 Hours.**

CS401 is a programming language overview course. The course will discuss computability, lexing, parsing, type systems, and ways to formalize a language's semantics. The course will introduce students to major programming paradigms, such as functional programming and logic programming, and their realization in programming languages. Students will solve problems using different paradigms and study the impact on program design and implementation. The course enables students to assess strengths and weaknesses of different languages for problem solving.

**Prerequisites:** CS 303 [Min Grade: C] and CS 350 [Min Grade: C]

**CS 401L. Programming Languages Laboratory. 0 Hours.**

Laboratory to accompany CS401.

**CS 402. Compiler Design. 3 Hours.**

Study the design and implementation of compilers, including front-end (lexer, parser, type checking), to mid-end (intermediate representations, control-flow analysis, dataflow analysis, and optimizations) to back-end (code generation). Students will get hands-on experience by implementing several compiler components.

**Prerequisites:** CS 303 [Min Grade: C] and CS 332 [Min Grade: C] and CS 350 [Min Grade: C]

**CS 403. Cloud Computing. 3 Hours.**

Introduction to cloud computing architectures and programming paradigms. Theoretical and practical aspects of cloud programming and problem-solving involving compute, storage and network virtualization. Design, development, analysis, and evaluation of solutions in cloud computing space including machine and container virtualization technologies.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 403L. Cloud Computing Lab. 0 Hours.**

Laboratory to accompany CS403.

**CS 410. Database Application Development. 3 Hours.**

Relational model of databases, structured query language, relational database design and application development, database normal forms, and security and integrity of databases.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 415. Multimedia Databases. 3 Hours.**

Multimedia information processing, multimedia database architecture, multimedia database retrieval, semantic models for multimedia databases.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 416. Big Data Programming. 3 Hours.**

Introduction to Big Data, Properties of Big Data, platforms, programming models, applications, business analytics programming, big data processing with Python, R, and SAS, MapReduce programming with Hadoop.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 417. Database Security. 3 Hours.**

Database fundamentals, introduction to database security, overview of security models, access control models, covert channels and inference channels, MySQL security, Oracle security, Oracle label security, developing a database security plan, SQL server security, security of statistical databases, security and privacy issues of data mining, database applications security, SQL injection, defensive programming, database intrusion prevention, audit, fault tolerance and recovery, Hippocratic databases, XML security, network security, biometrics, cloud database security, big database security.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 419. Investigating Online Crimes. 3 Hours.**

Introduction to cyber-investigative techniques involving network forensics. Students will develop and learn to apply new programs and techniques to automatically evaluate digital evidence from network packet captures, emails, server logs, social media, darknets and online forums related to cyber crime cases from both a law enforcement and incident response perspective.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 420. Software Engineering. 3 Hours.**

Design and implementation of large-scale software systems, software development life cycle, software requirements and specifications, software design and implementation, verification and validation, project management and team-oriented software development. Lecture and laboratory.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 420L. Software Engineering Laboratory. 0 Hours.**

Laboratory to accompany CS 420.

**CS 421. Advanced Web Application Development. 3 Hours.**

Introduction to web application design and development. Includes traditional web applications utilizing server-side scripting as well as client/server platforms. Covers responsive design for both mobile and desktop users, as well as hands on server provisioning and configuration. Other topics include web security problems and practices, authentication, database access, application deployment and Web API design, such as REpresentational State Transfer (REST).

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 421L. Advanced Web Application Development Laboratory. 0 Hours.**

Laboratory to accompany CS 421.

**CS 422. Mobile Application Development. 3 Hours.**

Fundamental concepts of mobile application development. Focused on native application development for Android and iOS. Understand application architecture and lifecycle best practices. UX considerations for mobile devices. Interact with device sensors. Compare native vs hybrid frameworks. This course has a laboratory component.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 422L. Mobile Application Development Laboratory. 0 Hours.**

Laboratory to accompany CS422.

**CS 423. Network Security. 3 Hours.**

Conventional network security (symmetric and public-key cryptography). Message encryption and authentication. Secure communication between computers in a hostile environment, including E-mail (PGP), virtual private networks (IPSec), remote access (SSH), and E-commerce (SSL), firewalls, intrusion detection and prevention, security of IEEE 802.11 wireless networks (WEP, WPA). Mandatory weekly Linux-based lab.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 423L. Network Security Laboratory. 0 Hours.**

Laboratory to accompany CS423.

**CS 425. Metrics and Performance. 3 Hours.**

Theory and practice of metrics for performance and scalability of software systems. The course will introduce students to the principles of queuing theory and statistical analysis relevant to analyzing the performance of software products. Students will use profiling frameworks to identify a range of performance problems in existing software. The course will enable students to improve the design of software and eliminate many common design oversights that hamper a system's performance and scalability.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 426. Secure Software Development. 3 Hours.**

Why and how software fails, characteristics of secure and resilient software, life cycle of secure software development, metrics and models for secure software maturity, design methodology, best practices for secure programming, secure software for mobile computing, cloud computing and embedded systems, methodology for testing and validation.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 427. Software Design and Integration. 3 Hours.**

This course provides hands-on experience in the design and integration of software systems. Component-based technology, model-driven technology, service-oriented technology, and cloud technology are all explored. Software design basics, including the decomposition of systems into recognizable patterns, the role of patterns in designing software and design refactoring, and attributes of good design. Agile culture, CASE tools, tools for continuous integration, build, testing, and version control.

**Prerequisites:** CS 420 [Min Grade: C]

**CS 429. Software Engineering Research Project. 3 Hours.**

This is a project-based research course in software engineering, involving significant implementation and experimentation under the supervision of a faculty member. A project proposal must be accepted before registering for this course.

**Prerequisites:** CS 420 [Min Grade: C]

**CS 430. Computer Architecture. 3 Hours.**

Introduction to computer architecture, including memory subsystems, direct-mapped and set-associative cache and multi-level cache subsystems, direct-access devices including RAID and SCSI disk drives, processor pipelining including super-scalar and vector machines, parallel architectures including SMP, NUMA and distributed memory systems, Interrupt mechanisms, and future microprocessor design issues.

**Prerequisites:** CS 330 [Min Grade: C] and CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 431. Distributed Systems. 3 Hours.**

Introduction to distributed systems, distributed hardware and software concepts, communication, processes, naming, synchronization, consistency and replication, fault tolerance, security, client/server computing, web technologies, enterprise technologies.

**Prerequisites:** CS 303 [Min Grade: C] and CS 332 [Min Grade: C] (Can be taken Concurrently) and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 432. Parallel Computing. 3 Hours.**

Introduction to parallel computing architectures and programming paradigms. Theoretical and practical aspects of parallel programming and problem solving. Design, development, analysis, and evaluation of parallel algorithms.

**Prerequisites:** (CS 303 [Min Grade: C] and CS 330 [Min Grade: C]) and CS 332 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 433. Operating Systems. 3 Hours.**

Introduction to operating systems. This course looks at the internal design and operation of a modern operating system. Topics include interrupt handling, process scheduling, memory management, virtual memory, demand paging, file space allocation, file and directory management, file/user security and file access methods. Several comparisons among current operating systems are used, with attention to Windows and Unix in particular.

**Prerequisites:** CS 330 [Min Grade: C] and CS 332 [Min Grade: C] and CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 433L. Operating Systems Laboratory. 0 Hours.**

Laboratory to accompany CS 433.

**CS 434. Virtualization. 3 Hours.**

Theory and practice of virtualization. Origins, history, technical and economic motivations. Relationship to network operating systems and operating system architecture. Simulation, Emulation, Virtualization of CPUs, networks, storage, desktops, memory, devices, and combinations thereof. Different approaches to virtualization, including hardware assisted and software-only techniques. Techniques, approaches, and methodologies for scale-out and scale-up computing, including security, performance and economic concerns.

**Prerequisites:** CS 433 [Min Grade: C] and CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 435. Network Programming. 3 Hours.**

Remote procedure call and client-server mechanisms. Protocol definition and compilation; client and server stubs and application code; transport independence; multiple client and server systems. Applications, e.g., remote database query and update and image filtering and archiving; systems programming and file systems contexts.

**Prerequisites:** CS 334 [Min Grade: C] and CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 436. Computer Security. 3 Hours.**

Study of the breadth of major computer security topics including cyber threats, malware, information assurance, authorization, applied cryptography, web security, mobile and wireless security, network security, systems/software security, database and storage security, user-centered security, and best security practices and countermeasures.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 437. Digital Media Forensics. 3 Hours.**

Digital media forensics addresses all stored digital evidence types faced by cyber security professionals and computer forensics examiners. Students will learn to analyze character encoding, file formats, and digital media, including hard drives, smartphones and other portable devices, and cloud-hosted evidence, as well as disk acquisition, duplication and evidence preservation techniques and how to apply these techniques in typical criminal investigation scenarios.

**Prerequisites:** CS 303 [Min Grade: C] and CS 330 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 437L. Digital Media Forensics Lab. 0 Hours.**

Laboratory to accompany CS 437.

**CS 442. Mobile and Wireless Security. 3 Hours.**

Mobile/wireless devices are ubiquitous, raising the potential for many cyber threats. This course examines security vulnerabilities inherent in many existing and emerging mobile and wireless systems, ranging from smartphones to wearables and RFID tags. In addition to exposing security vulnerabilities, defensive mechanisms to address these vulnerabilities drawn from existing deployments and research literature will be studied.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 443. Cloud Security. 3 Hours.**

Definition of cloud computing, cloud computing models, privacy, authenticity and integrity of outsourced data, proof of data possession / retrievability, cloud forensics, malware analysis as a service, remote verification of capability and reliability, proof of availability, economic attacks on clouds and outsourced computing, virtual machine security, trusted computing technology and clouds, verifiable resource accounting, cloud-centric regulatory compliance issues and mechanisms, business and security risk models, secure MapReduce, applications of secure cloud computing, private information retrieval and cloud cartography.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 444. Network Forensics. 3 Hours.**

This course covers concepts and methods involved in unraveling network intrusions, DDOS, and other untoward network behavior.

**Prerequisites:** CS 303 [Min Grade: C] and CS 334 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 445. Modern Cryptography. 3 Hours.**

Theory and practices of modern cryptographic techniques, algorithms and protocols, including formal analysis. Secret key encryption algorithms, public key encryption algorithms, stream ciphers, one-way hashing algorithms, authentication and identification, digital signatures, signcryption, key establishment and management, secret sharing and data recovery, zero-knowledge proofs, public key infrastructures, efficient implementation, cryptanalytic attacks and countermeasures, security models, assumptions and proofs.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 446. Blockchain and Cryptocurrency. 3 Hours.**

Fundamental principles of blockchains and their applications in digital cash systems including Bitcoin, Ethereum and other notable cryptocurrencies. Topics to be covered include how a cryptocurrency works, blockchain and other decentralized consensus protocols, proof of work, proof of stake, smart contracts, security and privacy of cryptocurrencies, cryptographic techniques for digital currency, and applications of blockchain in peer-to-peer trust establishment, digital asset management, financial exchanges and distributed autonomous organization.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 447. Biomedical Modeling. 3 Hours.**

Modeling and analysis of biomedical datasets. Aspects of image processing and shape modeling related to biomedical datasets, morphometry, alignment, surgical planning, case studies.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 452. Advanced Algorithms and Applications. 3 Hours.**

This courses introduce students to the design and analysis of fundamental algorithms that underpin many fields of importance ranging from data science, business intelligence, finance and cyber security to bioinformatics. Algorithms to be covered include dynamic programming, greedy technique, linear programming, network flow, sequence matching, search and alignment, randomized algorithms, page ranking, data compression, and quantum algorithms. Both time and space complexity of the algorithms are analyzed.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 454. Malware Analysis. 3 Hours.**

Hands-on course teaching static, dynamic and contextual analysis of malware. Malware analysis, and investigation is taught through interaction with both "classroom" and "wild" malware samples. Defensive and counter-measure techniques for both corporate and law enforcement environments are explored.

**Prerequisites:** CS 303 [Min Grade: C] and CS 330 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 454L. Malware Analysis Lab. 0 Hours.**

Laboratory to accompany CS 454.

**CS 456. Web Security. 3 Hours.**

The web uses advanced applications that run on a large variety of browsers that may be built using programming languages such as JavaScript, AJAX, Google Web Toolkit and Apache Struts, to name a few. This course studies how core web technologies work, the common security vulnerabilities associated with them, and how to build secure web applications that are free from these vulnerabilities.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 457. Penetration Testing and Vulnerability Assessment. 3 Hours.**

This course focuses on penetration testing and vulnerability analysis. It introduces methodologies, techniques and tools to analyze and identify vulnerabilities in stand-alone and networked applications. It also covers methodologies for legal and standards compliance.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 457 [Min Grade: C])

**CS 460. Artificial Intelligence. 3 Hours.**

This course will provide an introduction to fundamental concepts in the field of artificial intelligence. Topics typically covered include agents, search, logic and knowledge representation, probabilistic models, machine learning, natural language processing and perception.

**Prerequisites:** CS 303 [Min Grade: C] and CS 350 [Min Grade: C]

**CS 462. Natural Language Processing. 3 Hours.**

This course provides a broad introduction to Natural Language Processing (Computational Linguistics). Topics typically covered in this course include part-of-speech tagging, syntactic parsing, semantic analysis, speech recognition, machine translation, sequence labeling algorithms, n-gram language models, statistical parsing, grammar formalisms and treebanks.

**Prerequisites:** (CS 303 [Min Grade: C] and CS 350 [Min Grade: C] and CS 355 [Min Grade: C]) or CS 460 [Min Grade: C]

**CS 463. Data Mining. 3 Hours.**

Techniques used in data mining (such as frequent sets and association rules, decision trees, Bayesian networks, classification, clustering), algorithms underlying these techniques, and applications.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 467. Machine Learning. 3 Hours.**

Introduction to machine learning, the design of algorithms that can make predictions about the future based on past experience. Emphasizes practical considerations for developing efficient and accurate machine learning models, and theoretical underpinnings of different learning algorithms.

**Prerequisites:** CS 303 [Min Grade: C] and CS 355 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 469. Introduction to the Internet of Things. 3 Hours.**

Definition of the Internet of Things (IoT), history, IoT components, device specifications and examples, architectures, protocols, applications, security and privacy issues, programming and development environments for IoT, interoperability, interfacing IoT devices via web and mobile applications.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 470. Computer Graphics. 3 Hours.**

Computer graphics is the study of the creation, manipulation, and rendering of shape models and images, for visualization, modeling, shape analysis, and animation. Topics include matrix transforms for motion and viewing, shading, viewing and camera modeling, shape modeling including meshes and smooth parametric curves and surfaces, visibility analysis, sampling, nonphotorealistic rendering, shape analysis, and texture mapping.. Topics are explored through code, including OpenGL and GLSL.

**Prerequisites:** CS 303 [Min Grade: C] and CS 332 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 473. Computer Vision and Convolutional Neural Networks. 3 Hours.**

Computer vision, the study of the interpretation of images, is central to many areas of computer science, including data science and machine learning, driverless cars, and biomedical computing. Recent algorithms for vision also leverage deep learning with convolutional neural networks for object recognition. Topics in this course include linear filters, edge and corner detection, segmentation, projective geometry, camera models, epipolar geometry and the fundamental matrix, structure from motion, neural networks.

**Prerequisites:** CS 332 [Min Grade: C] and (MA 260 [Min Grade: C] or MA 434 [Min Grade: C])

**CS 475. Data Visualization. 3 Hours.**

The amount and complexity of data produced everyday is increasing at a staggering rate. Visualization presents an intuitive way to explore and interpret data. This course will be an introduction to the principles, and methods for effective visual analysis of data. Techniques to facilitate information visualization for non-spatial data (eg. graphs, text, high-dimensional data) and scientific visualization for spatial data (eg. gridded data from simulations and scanners and sensors) will be covered. Emphasis will be given to interactive approaches, especially while dealing with massive volumes of data. Topics in the domain of data analytics tightly coupled with visualization will also be covered. Students will learn fundamentals of perception, visualization techniques and methods for a broad range of data types, good practices for visualization, and will ultimately be able to develop their own visualization system.

**Prerequisites:** CS 303 [Min Grade: C] and CS 332 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 476. Introduction to Game Development. 3 Hours.**

A course in game development and game design that considers the theory and practice of developing computer games from both a technical and aesthetic perspective. Technical components include shaders and materials, meshes, procedural generation, game physics, collision detection, game AI, pathfinding, animation, and lighting. Aesthetic components include game loop design, level design, gameplay, and sound.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 226 [Min Grade: C])

**CS 483. Open Source Security Systems. 3 Hours.**

An introduction to the design, implementation, evaluation and maintenance of secure software systems and applications using open source technologies, with an emphasis on hands-on experience. Topics include: open source ecosystems, open source security methodologies and models, notable open source software systems and projects, quality and security assurance through open source, open source supply chain security, major open source cryptographic packages; designing, implementing and maintaining security systems using open source technologies; assessment and regulatory compliance using open source tools, and open source hardware.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 484. Robot Motion. 3 Hours.**

Path planning algorithms. Configuration space, potential functions, roadmaps, cell decomposition, probabilistic motion planning, compliant motion.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 485. Foundations of Data Science. 3 Hours.**

This introductory course in data science teaches fundamental concepts and techniques in statistical inference and big data analytics. Topics include high-dimensional space, singular value decomposition, random graphs, random walks and Markov chains, data streaming and sketching, and basics of data mining and machine learning.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 486. Software-Defined Networking. 3 Hours.**

Software defined networking (SDN) allows a logically centralized software component to manage and control the behavior of an entire network. Topics to be covered include abstractions and layered architecture of SDN, data, control and management planes, network virtualization, programming SDN, network functions (e.g. routing, load balancing and security), comparison of OpenFlow and proprietary SDN technologies, and network optimization with SDN.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 487. Complex Networks. 3 Hours.**

Introduction to complex network theory and real-world applications in biology, physics, sociology, national security and cyber enabled technology systems such as social networks. Essential network models including small world networks, scale free networks, spatial and hierarchical networks together with methods to generate them with a computer will be discussed. In addition, various techniques for the analysis of networks including network modeling and evolution, community structure, dynamic network analysis, and network visualization will be explored.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 489. Cyber Risk Management. 3 Hours.**

This course develops knowledge and skills in risk based information security management geared toward preventive management and assurance of security of information and information systems in technology-enabled environments. It focuses on risk assessments, risk mitigation strategies, risk profiling and sensitivity, quantitative and qualitative models of calculating risk exposures, security controls and services, threat and vulnerability management, financing the cost of security risks, and return on investment for information security initiatives. The course presents several risk assessment models with an ultimate goal of identifying and realizing the unique and acceptable level of information risk for an organization.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 491. Special Topics. 3 Hours.**

Special Topics in Computer Science.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 492. Special Topics. 3 Hours.**

Special Topics in Computer Science.

**Prerequisites:** CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 496. Research Seminar. 1 Hour.**

Participation in research seminar directed by a faculty member.

**CS 497. Competitive Programming Techniques. 1 Hour.**

This course will help students become more competitive in a programming competition such as the ACM programming contest by exploring numerous problem solving techniques and algorithms not covered in the traditional curriculum.

**CS 498. Research Methods in Computer Science. 3 Hours.**

This course is designed to provide future computer science teachers with the tools that computer science uses to develop new knowledge. Students will design, implement, and document independent research inquiry. Students will learn how scientists communicate through peer-reviewed publications and evaluate conflicting scientific claims. Work is closely coordinated with the work of students from other content disciplines so that students see the similarity and differences of research methods in their own field as compared with those of other science disciplines.

**Prerequisites:** EHS 126 [Min Grade: D]

**CS 499. Senior BS Capstone. 3 Hours.**

This capstone course consolidates key concepts in the undergraduate BS curriculum and prepares students for their professional careers. Teamwork and writing are key themes of the course. Students discuss and write about topics in ethics, professional practice, entrepreneurship, intellectual property, licensing (e.g., GPL, MIT), privacy, continuing professional development, professional networking tools, compliance, tolerance, inclusion, appreciation of diversity, and contemporary issues. In a software engineering project, students work in a team to put to practice principles and techniques that they have acquired throughout the undergraduate curriculum. Students take the Major Field Test in Computer Science as a requirement for completing this course. Students should be CS BS majors in their last year of undergraduate study.

**Prerequisites:** (CMST 101 [Min Grade: C] or CM 101 [Min Grade: C]) and PHL 115 [Min Grade: C] and CS 303 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**CS 499L. Senior Capstone Laboratory. 0 Hours.**

Laboratory to accompany CS 499.

## Department of Criminal Justice

**Chair:** Dr. Kent Kerley

The Department of Criminal Justice offers programs of study leading to a Bachelor of Science with a major in Criminal Justice, a Master of Science in Criminal Justice, a joint Bachelor of Science with a major in Digital Forensics, a Master of Science in Forensic Science, a joint Master of Science in Criminal Justice/Master of Public Administration, a joint Master of Science in Cyber Security. The Department also offers undergraduate minors in Forensics Science, Legal Affairs, a joint minor in Forensic Psychology and an interdisciplinary minor in Urban Affairs. The department also sponsors category "A" and "B" graduate Certificate Programs in Computer Forensics.

### Bachelor of Science with a Major in Criminal Justice

The program leading to the Bachelor of Science with a major in Criminal Justice offers students broad academic exposure to the fields of criminal justice and criminology. It also provides students opportunities to take courses in computer forensics/cybercrime and forensic science. The primary mission of the program is to educate students by developing in them the knowledge and skills necessary to be successful in their careers, including:

1. Major theoretical explanations of crime/delinquency.
2. The logic and procedures associated with the research process, including understanding statistical analysis.
3. The substantive, procedural, and operational aspects of the criminal justice system and its processes.
4. Ethical foundations.

Each of these areas is developed through activities associated with specific courses in the curriculum as well as through an Internship/Capstone experience during the student's senior year.

Undergraduate students interested in Forensic Science should consult the Master of Science in Forensic Science Program Director to learn more about the field. Students interested in the Legal Affairs minor should contact the Department Chair. Students interested in the Bachelor of Science with a major in Digital Forensics or Forensic Psychology minor should contact the Department Chair.

### Grade and Residency Requirement

A grade of C or better is required in all Criminal Justice courses. At least 3 hours must be taken at the 300 level or higher and 9 hours must be taken at the 400 – level or higher. Students must have a 2.3 cumulative GPA prior to applying for their Internship.

### Additional Requirements

#### Minor

A minor is not required for this degree. Students are encouraged to take a minor in an area related to their career interests. Contact the criminal justice advisor for more information about minors.

### General Electives

Students must take general electives to reach the 120 semester hour requirement.

## Bachelor of Science with a major Digital Forensics (p. 192)

The Bachelor of Science with a major in Digital Forensics is an interdisciplinary degree that prepares graduates for a professional career in the field of digital forensics and cyber security. The focus of the program is an understanding of the procedures and processes necessary to discover, recover, analyze, and present in court information that has been stored on digital devices, including mainframe and personal computers, cellular telephones, tablets, gaming and other devices used during illegal activities. Students graduating with the Bachelor of Science with a major in Digital Forensics degree will be prepared to fill entry- and advanced-level positions with federal, state, and local law enforcement agencies; with public and private sector non-profit companies; and with private sector for-profit companies. Students completing the program will also be prepared to pursue graduate studies (master's and doctoral-level) in computer science, criminal justice, information systems, and information technology or pursue law school.

## Proposed Program of Study for a Major in Criminal Justice

### Freshman

First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
MA 110		3 Core Curriculum Area II: Humanities	3
Core Curriculum Area IV: History <sup>1</sup>		3 CJ 101	3
CJ 100		3 Core Curriculum Area IV: History <sup>1</sup>	3
Core Curriculum Area IV		3 Core Curriculum Area IV	3
	15		15

### Sophomore

First Term	Hours	Second Term	Hours
CJ 220		3 CJ 230	3
CJ 302		3 CJ 240	3
Core Curriculum Area II: Literature <sup>2</sup>		3 Core Curriculum Area III: Natural Science with Laboratory	4
Core Curriculum Area II: Fine Art <sup>3</sup>		3 Core Curriculum Area II: Humanities	3
Core Curriculum Area II: Natural Science with Laboratory		4 General Elective	3
	16		16

### Junior

First Term	Hours	Second Term	Hours
CJ 300		3 Criminal Justice Elective (400 level)	3
CJ 360		3 Criminal Justice Elective	3
Criminal Justice Elective		3 General Elective	9
General Elective		6	
	15		15

### Senior

First Term	Hours	Second Term	Hours
CJ 410		3 Capstone (Select one):	3
Criminal Justice Elective (300-400 level)		3 CJ 497	3
General Elective		3 CJ 499	3-6

General Elective	10-12
9	19-24
Total credit hours: 120-125	

- 1 Select One: [HY 101](#), [HY 102](#), [HY 104](#), [HY 105](#), [HY 120](#) or [HY 121](#).
- 2 Select One: [EH 216](#), [EH 217](#), [EH 218](#), [EH 221](#), [EH 222](#), [EH 223](#) or [EH 224](#).
- 3 Select One: [ARH 101](#), [ARH 203](#), [ARH 204](#), [ARH 206](#), [MU 120](#), [THR 100](#), [THR 105](#) or [THR 200](#).

## Minor in Criminal Justice

The minor in criminal justice is designed for students who are majoring in a discipline related to human and societal issues or in the sciences. Crime, justice, and community have relevance to almost all fields. The minor in criminal justice provides students with the background they need to understand these issues in the broader context of society.

Requirements	Hours
<b>Required Criminal Justice Courses</b>	
CJ 100 Introduction to the Criminal Justice System	3
CJ 101 Crime and Criminality	3
CJ 220 Police in America: An Overview	3
CJ 230 The Judicial Process in America: An Overview	3
<b>Criminal Justice Electives</b>	<b>6</b>
CJ 240 Corrections in America: An Overview	3
Select six hours from Criminal Justice (CJ) courses, with both courses being at the 300-level or above.	
Total Hours	21

**GPA Requirement:** A C or better is required in all courses applied to the minor.

## Legal Affairs Minor (18 Semester Hours)

The minor in Legal Affairs is designed to help students learn to think both critically and creatively about law. Because the program is interdisciplinary and presents law as the subject of liberal inquiry, students in the program examine law from various perspectives. The minor exposes students to both general and specific aspects of both substantive and procedural law – civil and criminal; and helps them understand not only litigation, but alternatives to it.

## Minor in Legal Affairs

Requirements	Hours
<b>Required Courses</b> <sup>1</sup>	
Select three of the following courses:	9
CJ 230 The Judicial Process in America: An Overview	
CJ 255 Journey to Attorney	
CJ 330 Criminal Law	
CJ 331 Criminal Procedure	
CJ 332 Criminal Evidence	
CJ 334 Justice Advocacy	
PSC 270 Law and Film	
PSC 380 The Politics of Constitutional Law	
PSC 381 The Bill of Rights	
PSC 432 Law and Society	
PSC 465 International Law	
<b>Electives</b>	
Select three of the following courses:	9

AC 473	Fraud Examination
CJ 333	Trial Advocacy
EC 302	Law and Economics
EC 450	Economics, Institutions & Law
LS 246	Legal Environment of Business
LS 471	Legal Elements of Fraud Investigation
MG 413	Employment Law
PHL 120	Practical Reasoning
PHL 135	The Rule of Law
PHL 220	Introduction to Symbolic Logic
PHL 435	Advanced Topics in Philosophy of Law
PY 376	Psychology and Law
Total Hours	18

<sup>1</sup> A grade of "C" or better required for all courses

## Minor in Urban Affairs (p. 219)

Urban Affairs provides a broad, interdisciplinary examination of the development, functions, and problems of metropolitan areas. Urban Affairs focuses on the social, health, and spatial characteristics of neighborhoods and cities. It highlights the application of social science principles in the study of how formal and informal forces influence urban people and neighborhoods. The minor crosses the disciplines of Urban Studies, Criminal Justice, Social Work, Sociology, Political Science/Public Administration, Public Health, Anthropology, History, Geography, and others. It prepares students to work in a variety of social service and technical areas in public and private organizations in metropolitan areas.

## Minor in Forensic Psychology

Forensic Psychology is the professional practice by psychologists within the areas of clinical psychology, counseling psychology, neuropsychology, and school psychology, when they are engaged regularly as experts in an activity primarily intended to provide professional psychological expertise to the judicial system. Forensic psychologists work with individuals who may present a variety of mental health issues within the context of the civil law (e.g., personal injury suits, civil commitment proceedings, child custody disputes, or workers' compensation cases) and criminal law (e.g., insanity, competency to stand trial, assessment of future violence potential, or treatment of sex offenders). The minor is co-sponsored by the Department of Criminal Justice and the Department of Psychology, and is intended to expose students with an interest in forensic psychology to a broad-based overview of the field. A total of 24 semester hours is required to complete the minor.

Requirements		Hours
Required Courses		
<u>CJ 110</u>	Introduction to Forensic Science	3
<u>PY 125</u>	Introduction to Forensic Psychology	3
<u>CJ 404</u>	Serial Killers	3
<u>CJ 460</u>	Violence: An American Tradition	3
<u>PY 218</u>	Abnormal Psychology	3
<u>PY 372</u>	Social Psychology	3
<u>CJ 424</u>	Serial Killers in Cross-National Settings	3
<u>CJ 362</u>	Victimology	3
Total Hours		24

A grade of "C" or better is required for all courses.

Transfer Students must earn at least 9 hours of PY or CJ credit at UAB, 6 hours of which must be at the 300 level or higher. Students may have to satisfy prerequisites before taking some of the courses.

## Minor in Forensic Science

A minor in forensic science is perfect for anyone interested in the fundamental concepts and principles used in analysis of crime scene evidence. While the minor is open to all undergraduates, when paired with a degree in criminal justice, it will introduce students to careers in crime scene investigation. When paired with a major in the natural sciences, the minor prepares students for a job in a forensic crime lab or a Master of Science program in forensic science.

Requirements	Hours
<b>Students will be required to take the following courses:</b>	
<u>CJ 110</u>	Introduction to Forensic Science 3
<u>CJ 250</u>	Criminalistics: An Overview 3
<b>Students will select 2 of the following forensic science electives:</b> 6	
<u>ANTH 401</u>	Forensic Anthropology
<u>CJ 350</u>	Advanced Criminalistics
<u>CJ 351</u>	Forensic Science Lab I
<u>CJ 352</u>	Forensic Science Laboratory II
<u>CJ 402</u>	Computer Forensics
<u>CJ 451</u>	Research Methods in Forensic Science
<u>CJ 453</u>	Investigation of Fires and Explosions
<u>CJ 419</u>	Investigating Online Crimes
<u>CJ 437</u>	Digital Media Forensics
<b>Students will select 2 of the following natural science electives:</b> 8	
<u>BY 123</u> & <u>123L</u>	Introductory Biology I and Introductory Biology I Laboratory
<u>BY 124</u> & <u>124L</u>	Introductory Biology II and Introductory Biology II Laboratory
<u>BY 210</u>	Genetics
<u>BY 311</u>	Molecular Genetics
<u>CH 115</u> & <u>CH 116</u>	General Chemistry I and General Chemistry I Laboratory
<u>CH 117</u> & <u>CH 118</u>	General Chemistry II and General Chemistry II Laboratory
<u>CH 355</u> & <u>355L</u>	Quantitative Analysis and Quantitative Analysis Laboratory
<u>CH 450</u> & <u>450L</u>	Instrumental Analysis and Instrumental Analysis Laboratory
Total Hours 20	

\*Note: A C or better is required in all courses in the minor.

## Honors Program in Criminal Justice

The Criminal Justice Honors Program encourages and prepares outstanding Criminal Justice students to pursue careers in the field of Criminology and Criminal Justice by providing an opportunity to conduct independent research with a faculty member. It promotes initiative, creativity, and critical thinking among academically talented students. Under faculty supervision, students will have the opportunity to participate in and complete a research project. The program can accept up to six (6) outstanding students each fall.

## Eligibility

Students are admitted to the Honors Program based on an evaluation conducted by the Honors Program Coordinator and a committee of faculty members. Students seeking admission to the Honors Program must:

- Complete an honors application. One may be obtained by contacting Dr. Heith Copes (jhcopes@uab.edu).
- Have a cumulative GPA of 3.25 or higher and a GPA of 3.2 or higher in all Criminal Justice courses attempted.
- Be Junior or Senior.
- Completion of CJ 100, CJ 101, CJ 302, & CJ 300. May enroll in up to two of these courses the fall semester enrolled in the Honors program.

## Benefits

Joining the Honors Program gives students the opportunity to interact with faculty and other honors students in an environment that encourages creative and innovative thinking. The hands-on research opportunities will help students prepare for future careers in the field or for embarking on an academic career. Those who complete the program will graduate from UAB "With Honors in Criminal Justice".

## Requirements

- Completion of all required courses for the Criminal Justice major.
- Completion of Honors Seminar (CJ 481) during the fall semester.
- Completion of Honors Project (CJ 482) during the spring semester.
- Completion of a research presentation at the annual Honors Research Colloquium at the end of the spring semester.

## Contact

For additional information on the Criminal Justice Honors Program, please contact

Dr. Heith Copes  
Department of Criminal Justice  
1201 University Blvd.  
Suite 210  
Birmingham AL 35294-4562  
E-mail: [jhcopes@uab.edu](mailto:jhcopes@uab.edu) ([jhcopes@uab.edu](mailto:jhcopes@uab.edu))

## Courses

### **CJ 100. Introduction to the Criminal Justice System. 3 Hours.**

Introduction to criminal justice as a system consisting of interactions among three main components: police, courts, and corrections and the processes involving those components.

### **CJ 101. Crime and Criminality. 3 Hours.**

Examination of the causes and consequences in society of crime/delinquency, including theoretical explanations, sources of data on crime/delinquency, and efforts at controlling the behavior.

### **CJ 110. Introduction to Forensic Science. 3 Hours.**

Overview of the major components of forensic science including death investigation, toxicology, osteology, questioned documents, law, and criminalistics.

### **CJ 115. Comparative Criminal Justice Systems. 3 Hours.**

Analysis of police, judicial, and correctional components found in the world's four major legal systems: Common Law, Islamic, Napoleonic and Socialist.

### **CJ 125. Introduction to Forensic Psychology. 3 Hours.**

Overview of issues involving the intersection of law and psychology. Focus on role of clinical assessment of competency, scientific jury selection, expert witnesses in court, punishment and sentencing, and related issues.

### **CJ 160. Introduction to Private Security. 3 Hours.**

Survey of the field of private security, including organizational, administrative, operational, and liability issues common to it.

### **CJ 170. Introduction to Crime Scene Analysis. 3 Hours.**

Overview of crime scene investigation (CSI), including history of crime scene investigation; processing techniques and methods used to document and preserve evidence found at crime scenes.

### **CJ 207. Crime and Everyday Life. 3 Hours.**

Crime affects all of us—in large and small ways, and through circumstances and situations that range from exceptional to ordinary. Criminology, at its core, is a social science—it seeks to understand people, and how they interact within (and are affected by) the environments they create. Therefore, this course aims to provide you with a socio-criminological approach to the field of criminology. This means thinking about and understanding crime and deviance in ways that enable us to make observations and offer insights that extend far beyond "common sense," personal experience, or explanations that rely only on individual characteristics. This course is designed to introduce you to "the sociological imagination" and encourage you to develop this critical capacity to recognize and understand the social causes of criminal behavior, highlighting, in particular, the roles of race/ethnicity, social class, and gender. The lectures, readings, and assignments will focus on understanding basic social processes and their application to criminology, equipping students with the ability to identify and understand the social systems and structures that allow crime to emerge, persist, and often remain invisible.

### **CJ 210. Introduction to Digital Forensics. 3 Hours.**

This course provides a general introduction to the concepts, theories, principles, and practice of digital forensics. Topics include types of digital forensics, DOS/LINUX commands and DF, forensic acquisition and validation, forensic methodologies, file systems and file examination, expert testimony, legal issues, and challenges for the field. This course prepares students for advanced courses in program and in digital forensics.

### **CJ 220. Police in America: An Overview. 3 Hours.**

Introduction to the history and evolution of modern law enforcement in the United States, including the role and functions of police in the community.  
**Prerequisites:** CJ 100 [Min Grade: C](Can be taken Concurrently) or JS 100 [Min Grade: C]

### **CJ 230. The Judicial Process in America: An Overview. 3 Hours.**

Introduction to the structure and function of American courts, including judicial selection and behavior, the prosecution function, jury system, and the role of lawyers.

**Prerequisites:** CJ 100 [Min Grade: C] or JS 100 [Min Grade: C]

### **CJ 240. Corrections in America: An Overview. 3 Hours.**

Introduction to history and evolution of probation, prisons, parole, and community-based programs for adult and juvenile offenders.

**Prerequisites:** CJ 100 [Min Grade: C] or JS 100 [Min Grade: C]

### **CJ 250. Criminalistics: An Overview. 3 Hours.**

Introduction to identification and application of major types of physical trace evidence in criminal cases involving analysis and comparison. Laboratory component included; Laboratory fee is charged.

**Prerequisites:** JS 110 [Min Grade: C] or CJ 110 [Min Grade: C]

**CJ 255. Journey to Attorney. 3 Hours.**

This course introduces students to American law as well how law is studied. Specifically, the course examines topics law students typically encounter in their first year of law school -- including criminal law, tort law, contract law, property law, civil procedure, and legal writing – provides an overview of the law school application process, and covers some of the skills necessary for success in law school.

**CJ 300. Research Methods in Criminal Justice. 3 Hours.**

Introduction to ideas, techniques, and problems associated with social research with an emphasis on criminal justice/criminology applications. Writing assignments emphasize ability to make a logical argument and respond to counter claims; incorporating outside sources into written materials; and use conventions appropriate for the discipline. Writing is a significant component of this course.

**Prerequisites:** (JS 100 [Min Grade: C] or CJ 100 [Min Grade: C]) and (JS 101 [Min Grade: C] or CJ 101 [Min Grade: C])

**CJ 302. Introduction to Statistics. 3 Hours.**

Introduction to basic statistical theory and analysis. Course emphasizes computation, units of measurement, and evaluation of quantitative assertions; interpretation of quantitative data; use of quantitative data for problem-solving; and communication of information using numbers/ words appropriate for the audience. Quantitative Literacy is a significant component of this course.

**CJ 307. Crime and Everyday Life. 3 Hours.**

Examines everyday aspects of crime, including different forms of crime, media involvement, crime patterns, and policy responses.

**CJ 320. Police Organization and Administration. 3 Hours.**

Analysis of organizational and administrative structure and function of police departments in the U.S.

**Prerequisites:** JS 100 [Min Grade: C] or CJ 100 [Min Grade: C]

**CJ 321. Police-Community Relations. 3 Hours.**

Overview and analysis of historical and contemporary relationship between police agencies and the public; legal issues; analysis of crime prevention programs, community participation, and police discretion.

**Prerequisites:** JS 100 [Min Grade: C] or CJ 100 [Min Grade: C]

**CJ 330. Criminal Law. 3 Hours.**

Analysis of the development of criminal law, including legal elements of a crime, defenses in criminal cases, appellate case analysis, and legal terminology.

**CJ 331. Criminal Procedure. 3 Hours.**

Introduction to legal rules relating to the criminal process from investigation through punishment.

**CJ 332. Criminal Evidence. 3 Hours.**

Examination of the system of rules and standards, both state and federal, by which admission of proof at criminal trial is regulated.

**CJ 333. Trial Advocacy. 3 Hours.**

Overview of preparations for civil and criminal litigation including courtroom procedure, evidence, and the art of advocacy.

**CJ 334. Justice Advocacy. 3 Hours.**

Analyze theoretical foundations of advocacy in justice, in the court process, and in social, political, and legal settings. Presents philosophy and techniques of advocacy for an equitable and collaborative system of justice.

**CJ 336. Criminal Investigation: Techniques and Analysis. 3 Hours.**

Examination of both technical and analytical aspects of the criminal investigative process.

**CJ 341. Correctional Institutions. 3 Hours.**

Introduction to prisons, jails, and juvenile institutions in the U.S.; evolution of penology and correctional change strategies; inmate social system; prison stress, violence, and reform.

**Prerequisites:** JS 100 [Min Grade: C] or CJ 100 [Min Grade: C]

**CJ 342. Probation and Parole. 3 Hours.**

Analysis of history, structure, and function of probation and parole systems in the United States; pre-sentence investigations; offender selection and classification; offender supervision; and agency administration.

**Prerequisites:** JS 100 [Min Grade: C] or CJ 100 [Min Grade: C]

**CJ 343. Community-Based Corrections. 3 Hours.**

Examination of contemporary redefinition of correctional functions emphasizing development and use of community resources; diversion of offenders from criminal justice system; nontraditional correctional programs.

**Prerequisites:** (JS 100 [Min Grade: C] or CJ 100 [Min Grade: C])

**CJ 350. Advanced Criminalistics. 3 Hours.**

Examination of advanced criminalistics, including trace evidence, fingerprints, documents, drugs and other areas. Comparison of methods is emphasized.

**Prerequisites:** JS 110 [Min Grade: C] or CJ 110 [Min Grade: C]

**CJ 352. Forensic Science Lab. 3 Hours.**

Examination of forensic science, including collection, serology, DNA extraction, DNA amplification, and DNA analysis.

**Prerequisites:** JS 110 [Min Grade: C] or CJ 110 [Min Grade: C]

**CJ 360. Criminology. 3 Hours.**

Identification and assessment of early and modern theories concerning the causes of crime in society.

**Prerequisites:** JS 101 [Min Grade: C] or CJ 101 [Min Grade: C]

**CJ 362. Victimology. 3 Hours.**

Examination of the criminal-victim relationship and societal reaction to victims including victim services, restitution, and compensation.

**Prerequisites:** (JS 100 [Min Grade: C] or CJ 100 [Min Grade: C]) and (JS 101 [Min Grade: C] or CJ 101 [Min Grade: C])

**CJ 380. Media, Crime & Justice. 3 Hours.**

Examination of issues in crime and justice as depicted in popular media, including motion pictures, television, video, and other media.

**CJ 390. The Death Penalty in America. 3 Hours.**

Overview of capital punishment in America including its history and justification, major Supreme Court rulings, current issues, and future directions.

**CJ 400. Drugs and Society. 3 Hours.**

This course teaches students the pharmacological effects of and different categories of drugs. Different theories of drug use are discussed as well as the historical development of drug laws. Various harms associated with drug use are discussed as well as the consequences of drug prohibition. Lastly, students are expected to understand the different methods of drug research.

**CJ 402. Computer Forensics. 3 Hours.**

Use of analytical and investigative techniques in criminal or civil litigation to identify, collect, examine and preserve evidence/information magnetically stored or encoded.

**Prerequisites:** CJ 210 [Min Grade: C]

**CJ 403. Restorative Justice. 3 Hours.**

Introduction to, and analysis of, movement in criminal justice to institutionalize peaceful approaches to harm, problem-solving and violations of legal and human rights. Includes discussion of specific programs, critical evaluation of these programs, and analysis of future directions of the movement.

**CJ 404. Serial Killers. 3 Hours.**

Examination of the psychology and sociology of serial killers, including case studies, agency responses and related issues.

**CJ 407. Special Topics in Criminal Justice. 3 Hours.**

In-depth analysis of substantive topic in criminal justice or criminology including contemporary issues, ethics, historical review, or related topics. Varies by semester and by Instructor. May be repeated twice for credit.

**CJ 408. Juvenile Delinquency. 3 Hours.**

Introduction to the nature, scope, and causes of illegal behavior by juveniles, and societal responses to that behavior.

**CJ 410. Criminal Justice Ethics. 3 Hours.**

Analysis of systems of ethics and their applicability to problems in the administration of the justice system including those facing police officials, lawyers, judges, and correctional professionals. Writing and Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** JS 100 [Min Grade: C] or CJ 100 [Min Grade: C]

**CJ 411. Juvenile Justice System. 3 Hours.**

Introduction to the evolution and operation of specialized agencies and procedures to address juvenile law-breaking, including emerging problems and solutions.

**CJ 412. Juvenile Law. 3 Hours.**

Review and analysis of emerging statutory and case law in American juvenile justice.

**CJ 419. Investigating Online Crimes. 3 Hours.**

Introduction to cyber investigative techniques involving focused analysis of email and websites; examination of legal process and preparing evidence in cyber crime cases; rules concerning introduction of digital evidence.

**Prerequisites:** CJ 402 [Min Grade: C] or JS 402 [Min Grade: C]

**CJ 424. Serial Killers in Cross-National Settings. 3 Hours.**

Examines serial homicide in cross-national settings including offender disorders; crime scene analysis; significance of victims; and offender classification process.

**CJ 436. The Intelligence Community. 3 Hours.**

Weekly seminars by intelligence community experts covering relevant topics including state fusion centers; proliferation of intelligence units within first responder agencies; growing role of the private sector; and local prosecution for intelligence agency abuse.

**CJ 437. Digital Media Forensics. 3 Hours.**

Digital media forensics addresses all stored digital evidence types faced by cyber security professionals and computer forensics examiners. Students will learn to analyze character encoding, file formats, and digital media, including hard drives, smartphones and other portable devices, and cloud-hosted evidence, as well as disk acquisition, duplication and evidence preservation techniques and how to apply these techniques in typical criminal investigation scenarios.

**Prerequisites:** JS 402 [Min Grade: C] or CJ 402 [Min Grade: C]

**CJ 437L. Digital Media Forensics Lab. 0 Hours.**

Laboratory to accompany CJ 437.

**CJ 438. Investigations of Malicious Attacks. 3 Hours.**

This course will address the means to investigate cyber attacks in a corporate or industrial setting. Tools for investigating and responding to malicious emails, phishing, ransomware, and attacks on websites, database systems, Windows, and Linux systems will be addressed from the varying perspectives of system administrators, network defenders, security researchers, and cyber law enforcement.

**CJ 440. White Collar and Corporate Crime. 3 Hours.**

Introduction to, and analysis of, illegal/deviant behavior occurring in complex organizational settings, including theoretical explanations; patterns and case studies; and control strategies.

**CJ 442. Race, Crime, Gender and Social Policy. 3 Hours.**

Examination of how subordinate status of minority groups (African Americans, Hispanics, Native Americans and Women) affects interaction with the justice system as offenders, victims, and professionals.

**CJ 443. Women and the Criminal Justice System. 3 Hours.**

Examination of women's experiences as offenders, victims, and professionals in the criminal and civil justice systems.

**Prerequisites:** (CJ 100 [Min Grade: C] or JS 100 [Min Grade: C]) and (CJ 101 [Min Grade: C] or JS 101 [Min Grade: C])

**CJ 445. Juvenile Corrections. 3 Hours.**

Examination of historical and contemporary efforts to reduce juvenile delinquency through institutional and community-based programs; innovative programs; evaluation of program effectiveness.

**Prerequisites:** (CJ 100 [Min Grade: C] or JS 100 [Min Grade: C]) and (CJ 101 [Min Grade: C] or JS 101 [Min Grade: C])

**CJ 454. Financial Crimes and Investigations. 3 Hours.**

Survey of the field of financial crime and its investigation, including review of various financial crimes (fraud, money laundering, cybercrime, etc.), investigative techniques, resources specific to the investigation of these crimes, and the role of financial institutions in combating these crimes.

**CJ 460. Violence: An American Tradition. 3 Hours.**

Examines violence as an American tradition, including historical acts of violence as catalysts for social change, destructive or negative violence, and policies and prevention strategies.

**CJ 463. Urban Structures. 3 Hours.**

One of the oldest explanations of criminal behavior is that crime is concentrated in particular areas of the city. This class examines the structure of cities, how they grow, and particularly how they decline. It addresses how this decline can produce high levels of crime. It also addresses how cities can be revitalized, and how the justice system can work to reduce crime in these areas.

**CJ 464. Crime and Place. 3 Hours.**

One of the oldest explanations of criminal behavior is that crime is concentrated in particular areas of the city. But why is that? Is it something about the people, the place, or both? This class will look at the structure of cities, how they grow, and particularly how they decline. We will talk about how this decline can produce high levels of crime. We will also talk about how cities can be revitalized, and how the justice system can work to reduce crime in these areas.

**Prerequisites:** CJ 463 [Min Grade: D]

**CJ 466. Spatial Analysis. 3 Hours.**

This skills-based class will introduce students to the application of geographic information systems (GIS) to crime-related topics and issues.

**CJ 481. Honors Research. 3 Hours.**

Undergraduate research project developed and completed under direction of faculty mentor.

**CJ 482. Honors Research and Colloquium. 3 Hours.**

Completion of undergraduate Honors Project under the guidance of a faculty mentor with presentation of project at department colloquium.

**CJ 483. Patterns in Crime. 3 Hours.**

Examination of the major correlates of crime and criminality; critical examination of major sources of information from which data on crime correlates are gathered.

**Prerequisites:** (CJ 100 [Min Grade: C] or JS 100 [Min Grade: C]) and (CJ 101 [Min Grade: C] or JS 101 [Min Grade: C])

**CJ 490. Independent Research in Criminal Justice. 1-3 Hour.**

Independent readings, research or project approved and directed by a criminal justice faculty member who supervises proposed plan of study. Permission of Department Chair.

**CJ 492. Study Abroad in Criminal Justice. 3 Hours.**

This course affords students the opportunity engage in academic study outside of the U.S. to examine substantive topics in crime and justice. Students spend time (to be determined by the specific program) at a destination point, where they engage with students and faculty members in classroom and research settings at partner post-secondary institutions, experience immersion in foreign culture, and engage in comparative analysis of policies and programs relating to crime and justice.

**CJ 493. Internship and Capstone for Digital Forensics Practitioners. 3 Hours.**

Supervised capstone experience for students working full-time in a government agency or company in a position utilizing skills in digital forensics or cyber security. Course strongly emphasizes demonstration of student's ability to communicate in writing; understanding and practicing ethical decision making and civic responsibility; and quantitative analyses including construction and interpretation of tables and ability to adequately communicate quantitative information. Prerequisite: Permission of Internship Coordinator. No more than 3 hours of credit toward the degree may be earned.

**CJ 494. Digital Forensics Capstone. 1 Hour.**

The digital forensics capstone is designed to prepare students with the skills needed to secure employment in the field of digital forensics, cyber security, and forensic investigation. Students will engage in resume writing, interview skills and career launch learning modules. The course strongly emphasizes demonstration of ability to communicate in writing, understanding ethical decision making, and civic responsibility. Prerequisite: Permission of the Capstone Instructor and verification from academic advisor that student is in the last 30 hours of coursework.

**CJ 495. Digital Forensics Internship and Capstone. 3,6 Hours.**

Supervised capstone experience in government agency or private company utilizing skills learned in cyber security and forensic investigation. Course strongly emphasizes demonstration of ability to communicate in writing; understanding and practicing ethical decision making and civic responsibility; and quantitative analyses including construction and interpretation of tables and ability to adequately communicate quantitative information. Prerequisite: Permission of the Internship Coordinator. May be repeated for maximum of 12 hours of which not more than 6 hours may be counted toward fulfilling major or minor requirements.

**CJ 497. Internship and Capstone in Criminal Justice for Practitioners. 3 Hours.**

Supervised capstone experience for students already working in a local, state, or federal criminal justice or ancillary agency. Course strongly emphasizes demonstration of student's ability to communicate in written form to appropriate audiences, including competence in grammar and mechanics; understanding and practicing ethical decision making and civic responsibility; and quantitative analyses including construction and interpretation of tables and ability to adequately communicate quantitative information. No more than 3 hours of credit toward degree may be earned. Prerequisite: Permission of Internship Coordinator.

**CJ 499. Internship and Capstone in Criminal Justice. 3-6 Hours.**

Supervised capstone experience in local, state, or federal criminal justice or ancillary agency. Course strongly emphasizes demonstration of ability to communicate in written form to an appropriate audience, including competence in grammar and mechanics; understanding and practicing ethical decision making and civic responsibility; and quantitative analyses including construction and interpretation of tables and ability to adequately communicate quantitative information. Prerequisite: Permission of the Internship Coordinator. May be repeated for maximum of 12 hours of which not more than 6 hours may be counted toward fulfilling major or minor requirements. Ethics and Civil Responsibility and Writing are significant components of this course.

## Department of English

**Chair:** Alison Chapman

**Director, Graduate Studies:** Rebecca Bach

**Director, Undergraduate Studies:** Margaret Jay Jessee

**Director, Creative Writing Program:** Adam Vines

**Director, Freshman Composition and Developmental Program:** Christopher Minnix

**Director, Professional Writing:** Cynthia Ryan

**Director, Linguistics:** David Basilico

**Director, Departmental Honors:** David Basilico

**Director, Internships:** Jeff Bacha

The Department of English offers programs of study leading to the degree of Bachelor of Arts with a major or minor in English. The department offers four tracks to the English major: an English major with a concentration in literature, an English major with a concentration in professional writing, an English major with a concentration in creative writing, and an English major with a concentration in linguistics. The department offers four different minors: a minor in English literature, a minor in professional writing, a minor in creative writing, and a minor in linguistics. The Department of English also offers courses leading to the Master of Arts degree in English. Further information about the department and its programs may be obtained from the department website (<http://www.uab.edu/cas/english>) or the department office; information on the graduate program may also be found in the UAB Graduate School Catalog.

## English Literature

The study of English literature challenges students to develop their skills in reading, critical analysis, and written expression and also to develop a deeper appreciation of the aesthetic and historical contexts in which authors wrote. Students may pursue a concentration in literature within the English major or a minor in literature.

## Creative Writing

Students may pursue a concentration in creative writing within the English major or a minor in creative writing, taking workshops in poetry, fiction, creative nonfiction, and writing for young people; one forms class; and special topics in creative writing.

## Linguistics: Interdisciplinary Program

Students interested in a concentration in linguistics within the English major or a minor in linguistics are invited to participate in an interdisciplinary program. The linguistics concentration and minor are designed for students interested in careers represented by the participating disciplines that might involve detailed knowledge of natural or artificial languages. Note that the program is not necessarily one for "people who speak a lot of languages," but rather is intended for students interested in the structure and function of language. Students should consult the program director for advising.

## Professional Writing

Students interested in non-fiction writing for corporate and public life may pursue a concentration in professional writing within the English major or a minor in writing.

## Bachelor of Arts with a Major in English and a Concentration in Literature

Requirements		Hours
<b>Required Courses</b>		
EH 245	Introduction to the English Major	1
EH 301	Reading, Writing, and Research for Literature Classes	3
<b>Literature Sequence <sup>1</sup></b>		
Select one of the following two course sequences:		6
EH 212 & EH 213	Forms of Literature and Ideas in Literature	
EH 217 & EH 218	World Literature I: Before 1660 and World Literature II: 1660-Present	
EH 221 & EH 222	British and Irish Literature I: Before 1800 and British and Irish Literature II: 1800-Present	
EH 223 & EH 224	American Literature I: Before 1865 and American Literature II: 1865-Present	
<b>African, African American, or African Diasporic Literature</b>		
Select one of the following:		3
EH 324	African-American Special Topics	
EH 365	African American Literature, 1746-1954	
EH 366	African American Literature, 1954-Present	
EH 422	African Literature	
EH 423	African Women's Literature	
EH 424	African-American Special Topics	
EH 446	African American Autobiography	
EH 447	African American Dramatic Tradition	
EH 448	African American Poetry Tradition	
EH 466	The Slave Narrative and Its Literary Expressions	
EH 467	Black Women Writers	
EH 468	The Harlem Renaissance	
<b>Literature pre-1800</b>		
Select two of the following:		6
EH 326	Pre-1800 Literature: Special Topics	
EH 329	Literature of the Vikings	

EH 376	Shakespeare
EH 426	Pre-1800 Literature: Special Topics
EH 461	American Literature, 1620 - 1820
EH 469	Medieval Culture: Literature and Society
EH 470	Arthurian Legend
EH 471	Beowulf in Context
EH 472	Introduction to Old English
EH 473	Chaucer: Pilgrimage to Canterbury
EH 474	English Renaissance Drama (Excluding Shakespeare)
EH 475	English Renaissance Poetry and Prose
EH 476	Shakespeare
EH 478	Milton
EH 480	The Restoration
EH 481	The Eighteenth Century: Literature and Culture
EH 482	The Eighteenth Century: Theory and Interpretation
EH 486	Eighteenth-Century British Novel

### Literature post-1800

Select two of the following:		6
EH 327	Post-1800 Literature: Special Topics	
EH 339	Twentieth Century Theater	
EH 365	African American Literature, 1746-1954	
EH 366	African American Literature, 1954-Present	
EH 414	Modern British and European Drama	
EH 416	Modern American Poetry	
EH 427	Post-1800 Literature: Special Topics	
EH 431	Special Topics in Film	
EH 444	Women's Literature and Theory	
EH 462	American Literature, 1820 - 1870	
EH 463	American Literature, 1870 - 1914	
EH 464	American Literature, 1914 - 1945	
EH 465	American Literature, 1945-Present	
EH 468	The Harlem Renaissance	
EH 483	British Romanticism	
EH 485	British Victorian Poetry	
EH 487	Nineteenth-Century British Novel	
EH 488	British Novel: The Modern Age	
EH 489	James Joyce	

### Professional Writing <sup>2</sup>

Select one of the following:		3
EH 304	Editing in Professional Contexts	
EH 315	Introduction to Professional Writing	
EH 335	Public Writing	
EH 340	Developing Digital Documents	
EH 403	Business Writing	
EH 404	Technical Writing	
EH 455	Digital Publishing	
EH 458	Science Writing	

### Study of English as a Language

Select one of the following:		3
LING 350	Introduction to Linguistics	
LING 351	Structure of English	
LING 352	The Structure of English Words	
LING 356	Semantics	
LING 360	Phonology	
LING 393	Special Topics in Linguistics	
LING 450	Advanced Grammar	
LING 451	Generative Grammar	

LING 452	Grammar and Usage for English Teachers
LING 453	History of the English Language
LING 454	The Biology of Language
LING 493	Special Topics in Linguistics
LING 494	Special Problems in Linguistics
LING 495	Special Problems in Linguistics

**Literary Theory**

Select one of the following:	3
EH 441	Literary Theory and Criticism, the Ancients to the Nineteenth Century
EH 442	Literary Theory and Criticism, the Twentieth Century to the Present

**English Electives**

Select two of the following:	6
EH 203	Writing in Birmingham
EH 205	Introduction to Creative Writing
EH 210	Interpreting Film
EH 214	Introduction to Literature: Special Topics
EH 303	Advanced Composition
EH 304	Editing in Professional Contexts
EH 305	Beginning Poetry Writing Workshop
EH 307	Beginning Creative Nonfiction Writing Workshop
EH 309	Beginning Fiction Writing Workshop
EH 311	English Internship
EH 315	Introduction to Professional Writing
EH 318	Science Fiction
EH 324	African-American Special Topics
EH 326	Pre-1800 Literature: Special Topics
EH 327	Post-1800 Literature: Special Topics
EH 328	English Elective: Special Topics
EH 329	Literature of the Vikings
EH 330	Professional Writing: Special Topics
EH 332	Public Discourse: Special Topics
EH 335	Public Writing
EH 339	Twentieth Century Theater
EH 340	Developing Digital Documents
EH 345	Topics in Rhetoric
EH 365	African American Literature, 1746-1954
EH 366	African American Literature, 1954-Present
EH 367	Southern Literature
EH 369	The American Dream
EH 376	Shakespeare
EH 389	Bible as Literature
EH 401	Tutoring Writing
EH 402	Writing in Popular Periodicals
EH 403	Business Writing
EH 404	Technical Writing
EH 405	Poetry Writing Workshop (Seminar)
EH 407	Creative Nonfiction Writing Workshop (Seminar)
EH 409	Fiction Writing Workshop (Seminar)
EH 411	Capstone Internship
EH 412	Forms of Poetry Writing Workshop
EH 413	Forms of Creative Nonfiction
EH 414	Modern British and European Drama
EH 415	Forms of Fiction
EH 416	Modern American Poetry
EH 419	Young Adult Literature

EH 420	World Literature
EH 421	World Literature
EH 422	African Literature
EH 423	African Women's Literature
EH 424	African-American Special Topics
EH 426	Pre-1800 Literature: Special Topics
EH 427	Post-1800 Literature: Special Topics
EH 428	English Elective: Special Topics
EH 429	Creative Writing: Special Topics
EH 430	Professional Writing: Special Topics
EH 431	Special Topics in Film
EH 432	Public Discourse: Special Topics
EH 433	Academic Writing
EH 435	Teaching Creative Writing
EH 436	Workshop in Writing for Young People
EH 441	Literary Theory and Criticism, the Ancients to the Nineteenth Century
EH 442	Literary Theory and Criticism, the Twentieth Century to the Present
EH 443	Archetype and Myth
EH 444	Women's Literature and Theory
EH 446	African American Autobiography
EH 447	African American Dramatic Tradition
EH 448	African American Poetry Tradition
EH 455	Digital Publishing
EH 456	Visual Rhetoric
EH 457	Writing and Medicine
EH 458	Science Writing
EH 459	Discourse Analysis
EH 460	American Women Writers Before 1900
EH 461	American Literature, 1620 - 1820
EH 462	American Literature, 1820 - 1870
EH 463	American Literature, 1870 - 1914
EH 464	American Literature, 1914 - 1945
EH 465	American Literature, 1945-Present
EH 466	The Slave Narrative and Its Literary Expressions
EH 467	Black Women Writers
EH 468	The Harlem Renaissance
EH 469	Medieval Culture: Literature and Society
EH 470	Arthurian Legend
EH 471	Beowulf in Context
EH 472	Introduction to Old English
EH 473	Chaucer: Pilgrimage to Canterbury
EH 474	English Renaissance Drama (Excluding Shakespeare)
EH 475	English Renaissance Poetry and Prose
EH 476	Shakespeare
EH 478	Milton
EH 480	The Restoration
EH 481	The Eighteenth Century: Literature and Culture
EH 482	The Eighteenth Century: Theory and Interpretation
EH 483	British Romanticism
EH 485	British Victorian Poetry
EH 486	Eighteenth-Century British Novel
EH 487	Nineteenth-Century British Novel
EH 488	British Novel: The Modern Age
EH 489	James Joyce
EH 491	Eng Honors Research for Non-Concentrators

EH 494	English Honors Research
EH 495	Honors Capstone Thesis
EH 496	Capstone Seminar
EH 497	Individual Studies
LING 260	Language and Culture
LING 350	Introduction to Linguistics
LING 351	Structure of English
LING 352	The Structure of English Words
LING 355	Introduction to Sociolinguistics
LING 356	Semantics
LING 360	Phonology
LING 393	Special Topics in Linguistics
LING 450	Advanced Grammar
LING 451	Generative Grammar
LING 452	Grammar and Usage for English Teachers
LING 453	History of the English Language
LING 454	The Biology of Language
LING 493	Special Topics in Linguistics
LING 494	Special Problems in Linguistics
LING 495	Special Problems in Linguistics
EDR 441	Literature for Adolescents
<b>Capstone</b> <sup>3</sup>	
Select one of the following:	
EH 411	Capstone Internship
EH 495	Honors Capstone Thesis
EH 496	Capstone Seminar

Total Hours 43

<sup>1</sup> Completing this requirement will automatically satisfy the Core Curriculum Area II: Literature requirement.

<sup>2</sup> ELA (Education Language Arts) students may take EH 401 to fulfill this requirement.

<sup>3</sup> EH 411 and EH 495 must be approved. This requirement should be satisfied in the student's final year.

## Additional Requirements

- Students majoring in English must achieve a grade of C or higher in all courses applied toward the major requirement.
- Fifteen semester hours of English courses at the 300 and 400 levels must be taken at UAB.
- Eighteen semester hours of English courses must be at the 400 level.
- A single course may not count toward more than one departmental requirement.

## Bachelor of Arts with a Major in English and a Concentration in Creative Writing

Requirements	Hours
<b>Required Courses</b>	
EH 245	Introduction to the English Major 1
<b>Literature Sequence</b> <sup>1</sup>	
Select one of the following two course sequences:	
EH 212	Forms of Literature
& EH 213	and Ideas in Literature
EH 217	World Literature I: Before 1660
& EH 218	and World Literature II: 1660-Present
EH 221	British and Irish Literature I: Before 1800
& EH 222	and British and Irish Literature II: 1800-Present

EH 223	American Literature I: Before 1865
& EH 224	and American Literature II: 1865-Present
<b>African, African American, or African Diasporic Literature</b>	
Select one of the following:	
EH 324	African-American Special Topics
EH 365	African American Literature, 1746-1954
EH 366	African American Literature, 1954-Present
EH 422	African Literature
EH 423	African Women's Literature
EH 424	African-American Special Topics
EH 446	African American Autobiography
EH 447	African American Dramatic Tradition
EH 448	African American Poetry Tradition
EH 466	The Slave Narrative and Its Literary Expressions
EH 467	Black Women Writers
EH 468	The Harlem Renaissance
<b>Literature Pre-1800</b> <sup>2</sup>	
Select one of the following:	
EH 326	Pre-1800 Literature: Special Topics
EH 329	Literature of the Vikings
EH 376	Shakespeare
EH 426	Pre-1800 Literature: Special Topics
EH 441	Literary Theory and Criticism, the Ancients to the Nineteenth Century
EH 461	American Literature, 1620 - 1820
EH 469	Medieval Culture: Literature and Society
EH 470	Arthurian Legend
EH 471	Beowulf in Context
EH 472	Introduction to Old English
EH 473	Chaucer: Pilgrimage to Canterbury
EH 474	English Renaissance Drama (Excluding Shakespeare)
EH 475	English Renaissance Poetry and Prose
EH 476	Shakespeare
EH 478	Milton
EH 480	The Restoration
EH 481	The Eighteenth Century: Literature and Culture
EH 482	The Eighteenth Century: Theory and Interpretation
EH 486	Eighteenth-Century British Novel
<b>Literature Post-1800</b>	
Select one of the following:	
EH 327	Post-1800 Literature: Special Topics
EH 339	Twentieth Century Theater
EH 365	African American Literature, 1746-1954
EH 366	African American Literature, 1954-Present
EH 414	Modern British and European Drama
EH 416	Modern American Poetry
EH 427	Post-1800 Literature: Special Topics
EH 431	Special Topics in Film
EH 442	Literary Theory and Criticism, the Twentieth Century to the Present
EH 444	Women's Literature and Theory
EH 462	American Literature, 1820 - 1870
EH 463	American Literature, 1870 - 1914
EH 464	American Literature, 1914 - 1945
EH 465	American Literature, 1945-Present
EH 466	The Slave Narrative and Its Literary Expressions
EH 468	The Harlem Renaissance

EH 483	British Romanticism
EH 485	British Victorian Poetry
EH 487	Nineteenth-Century British Novel
EH 488	British Novel: The Modern Age
EH 489	James Joyce

**Professional Writing<sup>3</sup>**

Select one of the following: 3

EH 304	Editing in Professional Contexts
EH 315	Introduction to Professional Writing
EH 335	Public Writing
EH 340	Developing Digital Documents
EH 403	Business Writing
EH 404	Technical Writing
EH 455	Digital Publishing
EH 458	Science Writing

**Study of English as a Language**

Select one of the following: 3

LING 350	Introduction to Linguistics
LING 351	Structure of English
LING 352	The Structure of English Words
LING 355	Introduction to Sociolinguistics
LING 356	Semantics
LING 360	Phonology
LING 393	Special Topics in Linguistics
LING 450	Advanced Grammar
LING 451	Generative Grammar
LING 452	Grammar and Usage for English Teachers
LING 453	History of the English Language
LING 454	The Biology of Language
LING 493	Special Topics in Linguistics
LING 494	Special Problems in Linguistics
LING 495	Special Problems in Linguistics

**Beginning Creative Writing Genre Workshops<sup>4</sup>**

Select two different courses: 6

EH 305	Beginning Poetry Writing Workshop
EH 307	Beginning Creative Nonfiction Writing Workshop
EH 309	Beginning Fiction Writing Workshop

**Advanced Creative Writing Genre Workshops**

Select six hours of the following (this can be two different courses or one course taken twice): 6

EH 405	Poetry Writing Workshop (Seminar)
EH 407	Creative Nonfiction Writing Workshop (Seminar)
EH 409	Fiction Writing Workshop (Seminar)
EH 412	Forms of Poetry Writing Workshop
EH 413	Forms of Creative Nonfiction
EH 415	Forms of Fiction
EH 429	Creative Writing: Special Topics
EH 436	Workshop in Writing for Young People

**Creative Writing Elective**

Select one of the following: 3

EH 205	Introduction to Creative Writing
EH 305	Beginning Poetry Writing Workshop
EH 307	Beginning Creative Nonfiction Writing Workshop
EH 309	Beginning Fiction Writing Workshop
EH 405	Poetry Writing Workshop (Seminar)
EH 407	Creative Nonfiction Writing Workshop (Seminar)
EH 409	Fiction Writing Workshop (Seminar)

EH 412	Forms of Poetry Writing Workshop
EH 413	Forms of Creative Nonfiction
EH 415	Forms of Fiction
EH 429	Creative Writing: Special Topics
EH 436	Workshop in Writing for Young People
EH 494	English Honors Research

**English Elective**

Select one of the following: 3

EH 203	Writing in Birmingham
EH 205	Introduction to Creative Writing
EH 210	Interpreting Film
EH 214	Introduction to Literature: Special Topics
EH 301	Reading, Writing, and Research for Literature Classes
EH 303	Advanced Composition
EH 304	Editing in Professional Contexts
EH 305	Beginning Poetry Writing Workshop
EH 307	Beginning Creative Nonfiction Writing Workshop
EH 309	Beginning Fiction Writing Workshop
EH 311	English Internship
EH 315	Introduction to Professional Writing
EH 318	Science Fiction
EH 324	African-American Special Topics
EH 326	Pre-1800 Literature: Special Topics
EH 327	Post-1800 Literature: Special Topics
EH 328	English Elective: Special Topics
EH 329	Literature of the Vikings
EH 330	Professional Writing: Special Topics
EH 332	Public Discourse: Special Topics
EH 335	Public Writing
EH 339	Twentieth Century Theater
EH 340	Developing Digital Documents
EH 345	Topics in Rhetoric
EH 365	African American Literature, 1746-1954
EH 366	African American Literature, 1954-Present
EH 367	Southern Literature
EH 369	The American Dream
EH 376	Shakespeare
EH 389	Bible as Literature
EH 401	Tutoring Writing
EH 402	Writing in Popular Periodicals
EH 403	Business Writing
EH 404	Technical Writing
EH 405	Poetry Writing Workshop (Seminar)
EH 407	Creative Nonfiction Writing Workshop (Seminar)
EH 409	Fiction Writing Workshop (Seminar)
EH 411	Capstone Internship
EH 412	Forms of Poetry Writing Workshop
EH 413	Forms of Creative Nonfiction
EH 414	Modern British and European Drama
EH 415	Forms of Fiction
EH 416	Modern American Poetry
EH 419	Young Adult Literature
EH 420	World Literature
EH 421	World Literature
EH 422	African Literature
EH 423	African Women's Literature
EH 424	African-American Special Topics

EH 426	Pre-1800 Literature: Special Topics
EH 427	Post-1800 Literature: Special Topics
EH 428	English Elective: Special Topics
EH 429	Creative Writing: Special Topics
EH 430	Professional Writing: Special Topics
EH 431	Special Topics in Film
EH 432	Public Discourse: Special Topics
EH 433	Academic Writing
EH 435	Teaching Creative Writing
EH 436	Workshop in Writing for Young People
EH 441	Literary Theory and Criticism, the Ancients to the Nineteenth Century
EH 442	Literary Theory and Criticism, the Twentieth Century to the Present
EH 443	Archetype and Myth
EH 444	Women's Literature and Theory
EH 446	African American Autobiography
EH 447	African American Dramatic Tradition
EH 448	African American Poetry Tradition
EH 455	Digital Publishing
EH 456	Visual Rhetoric
EH 457	Writing and Medicine
EH 458	Science Writing
EH 459	Discourse Analysis
EH 460	American Women Writers Before 1900
EH 461	American Literature, 1620 - 1820
EH 462	American Literature, 1820 - 1870
EH 463	American Literature, 1870 - 1914
EH 464	American Literature, 1914 - 1945
EH 465	American Literature, 1945-Present
EH 466	The Slave Narrative and Its Literary Expressions
EH 467	Black Women Writers
EH 468	The Harlem Renaissance
EH 469	Medieval Culture: Literature and Society
EH 470	Arthurian Legend
EH 471	Beowulf in Context
EH 472	Introduction to Old English
EH 473	Chaucer: Pilgrimage to Canterbury
EH 474	English Renaissance Drama (Excluding Shakespeare)
EH 475	English Renaissance Poetry and Prose
EH 476	Shakespeare
EH 478	Milton
EH 480	The Restoration
EH 481	The Eighteenth Century: Literature and Culture
EH 482	The Eighteenth Century: Theory and Interpretation
EH 483	British Romanticism
EH 485	British Victorian Poetry
EH 486	Eighteenth-Century British Novel
EH 487	Nineteenth-Century British Novel
EH 488	British Novel: The Modern Age
EH 489	James Joyce
EH 491	Eng Honors Research for Non-Concentrators
EH 494	English Honors Research
EH 495	Honors Capstone Thesis
EH 496	Capstone Seminar
EH 497	Individual Studies
LING 260	Language and Culture

LING 350	Introduction to Linguistics
LING 351	Structure of English
LING 352	The Structure of English Words
LING 355	Introduction to Sociolinguistics
LING 356	Semantics
LING 360	Phonology
LING 393	Special Topics in Linguistics
LING 450	Advanced Grammar
LING 451	Generative Grammar
LING 452	Grammar and Usage for English Teachers
LING 453	History of the English Language
LING 454	The Biology of Language
LING 466	Computational Linguistics
LING 493	Special Topics in Linguistics
LING 494	Special Problems in Linguistics
LING 495	Special Problems in Linguistics
EDR 441	Literature for Adolescents

**Capstone<sup>5</sup>**

Select one of the following: 3

EH 411	Capstone Internship
EH 495	Honors Capstone Thesis
EH 496	Capstone Seminar

Total Hours 43

- 1 Completing this requirement will automatically satisfy the Core Curriculum Area II: Literature requirement.
- 2 All Creative Writing students are encouraged to take EH 376, Shakespeare, or EH 476, Shakespeare.
- 3 ELA (Education Language Arts) students may take EH 401 to fulfill this requirement.
- 4 Students may petition the Director of Creative Writing to allow one relevant course in English or a related discipline to count toward this requirement. Examples include, but are not limited to, EH 311, English Internship; THR 215, Playwriting I; and THR 216, Screenwriting I.
- 5 Both EH 411, Capstone Internship, and EH 495, Honors Capstone Thesis, must be approved. Students should complete this requirement in their final year.

**Additional Requirements**

- Students majoring in English must achieve a grade of C or higher in all courses applied toward the major requirement.
- Fifteen semester hours of English courses at the 300 and 400 levels must be taken at UAB.
- Eighteen semester hours of English courses must be at the 400 level.
- A single course may not count toward more than one departmental requirement.

**Bachelor of Arts with a Major in English and a Concentration in Linguistics**

Requirements	Hours
<b>Required Courses</b>	
EH 245 Introduction to the English Major	1
LING 350 Introduction to Linguistics	3
<b>Literature Sequence<sup>1</sup></b>	

Select one of the following two course sequences: 6

EH 212 & EH 213	Forms of Literature and Ideas in Literature
EH 217 & EH 218	World Literature I: Before 1660 and World Literature II: 1660-Present
EH 221 & EH 222	British and Irish Literature I: Before 1800 and British and Irish Literature II: 1800-Present
EH 223 & EH 224	American Literature I: Before 1865 and American Literature II: 1865-Present

#### African, African American, or African Diasporic Literature

Select one of the following: 3

EH 324	African-American Special Topics
EH 365	African American Literature, 1746-1954
EH 366	African American Literature, 1954-Present
EH 422	African Literature
EH 423	African Women's Literature
EH 424	African-American Special Topics
EH 446	African American Autobiography
EH 447	African American Dramatic Tradition
EH 448	African American Poetry Tradition
EH 466	The Slave Narrative and Its Literary Expressions
EH 467	Black Women Writers
EH 468	The Harlem Renaissance

#### Literature Pre-1800

Select one of the following: 3

EH 326	Pre-1800 Literature: Special Topics
EH 329	Literature of the Vikings
EH 376	Shakespeare
EH 426	Pre-1800 Literature: Special Topics
EH 441	Literary Theory and Criticism, the Ancients to the Nineteenth Century
EH 461	American Literature, 1620 - 1820
EH 469	Medieval Culture: Literature and Society
EH 470	Arthurian Legend
EH 471	Beowulf in Context
EH 472	Introduction to Old English
EH 473	Chaucer: Pilgrimage to Canterbury
EH 474	English Renaissance Drama (Excluding Shakespeare)
EH 475	English Renaissance Poetry and Prose
EH 476	Shakespeare
EH 478	Milton
EH 480	The Restoration
EH 481	The Eighteenth Century: Literature and Culture
EH 482	The Eighteenth Century: Theory and Interpretation
EH 486	Eighteenth-Century British Novel

#### Literature Post-1800

Select one of the following: 3

EH 327	Post-1800 Literature: Special Topics
EH 339	Twentieth Century Theater
EH 365	African American Literature, 1746-1954
EH 366	African American Literature, 1954-Present
EH 414	Modern British and European Drama
EH 416	Modern American Poetry
EH 427	Post-1800 Literature: Special Topics
EH 431	Special Topics in Film
EH 442	Literary Theory and Criticism, the Twentieth Century to the Present
EH 444	Women's Literature and Theory

EH 462 American Literature, 1820 - 1870

EH 463 American Literature, 1870 - 1914

EH 464 American Literature, 1914 - 1945

EH 465 American Literature, 1945-Present

EH 466 The Slave Narrative and Its Literary Expressions

EH 468 The Harlem Renaissance

EH 483 British Romanticism

EH 485 British Victorian Poetry

EH 487 Nineteenth-Century British Novel

EH 488 British Novel: The Modern Age

EH 489 James Joyce

#### Professional Writing <sup>2</sup>

Select one of the following: 3

EH 304	Editing in Professional Contexts
EH 315	Introduction to Professional Writing
EH 335	Public Writing
EH 340	Developing Digital Documents
EH 403	Business Writing
EH 404	Technical Writing
EH 455	Digital Publishing
EH 458	Science Writing

#### Study of English as a Language <sup>3</sup>

Select four of the following: 12

LING 351	Structure of English
LING 352	The Structure of English Words
LING 355	Introduction to Sociolinguistics
LING 356	Semantics
LING 360	Phonology
LING 393	Special Topics in Linguistics
LING 450	Advanced Grammar
LING 451	Generative Grammar
LING 452	Grammar and Usage for English Teachers
LING 453	History of the English Language
LING 454	The Biology of Language
LING 493	Special Topics in Linguistics
LING 494	Special Problems in Linguistics
LING 495	Special Problems in Linguistics

#### English Electives

Select two of the following: 6

EH 203	Writing in Birmingham
EH 205	Introduction to Creative Writing
EH 210	Interpreting Film
EH 214	Introduction to Literature: Special Topics
EH 303	Advanced Composition
EH 304	Editing in Professional Contexts
EH 305	Beginning Poetry Writing Workshop
EH 307	Beginning Creative Nonfiction Writing Workshop
EH 309	Beginning Fiction Writing Workshop
EH 311	English Internship
EH 315	Introduction to Professional Writing
EH 318	Science Fiction
EH 324	African-American Special Topics
EH 326	Pre-1800 Literature: Special Topics
EH 327	Post-1800 Literature: Special Topics
EH 328	English Elective: Special Topics
EH 329	Literature of the Vikings
EH 330	Professional Writing: Special Topics

EH 332	Public Discourse: Special Topics
EH 335	Public Writing
EH 339	Twentieth Century Theater
EH 340	Developing Digital Documents
EH 345	Topics in Rhetoric
EH 365	African American Literature, 1746-1954
EH 366	African American Literature, 1954-Present
EH 367	Southern Literature
EH 369	The American Dream
EH 376	Shakespeare
EH 389	Bible as Literature
EH 401	Tutoring Writing
EH 402	Writing in Popular Periodicals
EH 403	Business Writing
EH 404	Technical Writing
EH 405	Poetry Writing Workshop (Seminar)
EH 407	Creative Nonfiction Writing Workshop (Seminar)
EH 409	Fiction Writing Workshop (Seminar)
EH 411	Capstone Internship
EH 412	Forms of Poetry Writing Workshop
EH 413	Forms of Creative Nonfiction
EH 414	Modern British and European Drama
EH 415	Forms of Fiction
EH 416	Modern American Poetry
EH 419	Young Adult Literature
EH 420	World Literature
EH 421	World Literature
EH 422	African Literature
EH 423	African Women's Literature
EH 424	African-American Special Topics
EH 426	Pre-1800 Literature: Special Topics
EH 427	Post-1800 Literature: Special Topics
EH 428	English Elective: Special Topics
EH 429	Creative Writing: Special Topics
EH 430	Professional Writing: Special Topics
EH 431	Special Topics in Film
EH 432	Public Discourse: Special Topics
EH 433	Academic Writing
EH 435	Teaching Creative Writing
EH 436	Workshop in Writing for Young People
EH 441	Literary Theory and Criticism, the Ancients to the Nineteenth Century
EH 442	Literary Theory and Criticism, the Twentieth Century to the Present
EH 443	Archetype and Myth
EH 444	Women's Literature and Theory
EH 446	African American Autobiography
EH 447	African American Dramatic Tradition
EH 448	African American Poetry Tradition
EH 455	Digital Publishing
EH 456	Visual Rhetoric
EH 457	Writing and Medicine
EH 458	Science Writing
EH 459	Discourse Analysis
EH 460	American Women Writers Before 1900
EH 461	American Literature, 1620 - 1820
EH 462	American Literature, 1820 - 1870

EH 463	American Literature, 1870 - 1914
EH 464	American Literature, 1914 - 1945
EH 465	American Literature, 1945-Present
EH 466	The Slave Narrative and Its Literary Expressions
EH 467	Black Women Writers
EH 468	The Harlem Renaissance
EH 469	Medieval Culture: Literature and Society
EH 470	Arthurian Legend
EH 471	Beowulf in Context
EH 472	Introduction to Old English
EH 473	Chaucer: Pilgrimage to Canterbury
EH 474	English Renaissance Drama (Excluding Shakespeare)
EH 475	English Renaissance Poetry and Prose
EH 476	Shakespeare
EH 478	Milton
EH 480	The Restoration
EH 481	The Eighteenth Century: Literature and Culture
EH 482	The Eighteenth Century: Theory and Interpretation
EH 483	British Romanticism
EH 485	British Victorian Poetry
EH 486	Eighteenth-Century British Novel
EH 487	Nineteenth-Century British Novel
EH 488	British Novel: The Modern Age
EH 489	James Joyce
EH 491	Eng Honors Research for Non-Concentrators
EH 494	English Honors Research
EH 495	Honors Capstone Thesis
EH 496	Capstone Seminar
EH 497	Individual Studies
LING 260	Language and Culture
LING 351	Structure of English
LING 352	The Structure of English Words
LING 355	Introduction to Sociolinguistics
LING 356	Semantics
LING 360	Phonology
LING 393	Special Topics in Linguistics
LING 450	Advanced Grammar
LING 451	Generative Grammar
LING 452	Grammar and Usage for English Teachers
LING 453	History of the English Language
LING 454	The Biology of Language
LING 466	Computational Linguistics
LING 493	Special Topics in Linguistics
LING 494	Special Problems in Linguistics
LING 495	Special Problems in Linguistics
EDR 441	Literature for Adolescents

**Capstone<sup>4</sup>**

Select one of the following:

3

EH 411	Capstone Internship
EH 495	Honors Capstone Thesis
EH 496	Capstone Seminar

Total Hours

43

<sup>1</sup> Completing this requirement will automatically satisfy the Core Curriculum Area II: Literature requirement.

<sup>2</sup> ELA (Education Language Arts) students may take EH 401 to fulfill this requirement.

<sup>3</sup> Note that students may petition the Program Director to have one relevant, non-Linguistics course in English or another discipline count toward this requirement.

<sup>4</sup> EH 411 and EH 495 must be approved. This requirement should be fulfilled in the student's final year.

## Additional Requirements

- Students majoring in English must achieve a grade of C or higher in all courses applied toward the major requirement.
- Fifteen semester hours of English courses at the 300 and 400 levels must be taken at UAB.
- Eighteen semester hours of English courses must be at the 400 level.
- A single course may not count toward more than one departmental requirement.

## Bachelor of Arts with a Major in English and a Concentration in Professional Writing

Requirements	Hours
<b>Required Courses</b>	
EH 245 Introduction to the English Major	1
<b>Literature Sequence <sup>1</sup></b>	
Select one of the following two course sequences:	6
EH 212 Forms of Literature & EH 213 and Ideas in Literature	
EH 217 World Literature I: Before 1660 & EH 218 and World Literature II: 1660-Present	
EH 221 British and Irish Literature I: Before 1800 & EH 222 and British and Irish Literature II: 1800-Present	
EH 223 American Literature I: Before 1865 & EH 224 and American Literature II: 1865-Present	
<b>African, African American, or African Diasporic Literature</b>	
Select one of the following:	3
EH 324 African-American Special Topics	
EH 365 African American Literature, 1746-1954	
EH 366 African American Literature, 1954-Present	
EH 422 African Literature	
EH 423 African Women's Literature	
EH 424 African-American Special Topics	
EH 446 African American Autobiography	
EH 447 African American Dramatic Tradition	
EH 448 African American Poetry Tradition	
EH 466 The Slave Narrative and Its Literary Expressions	
EH 467 Black Women Writers	
EH 468 The Harlem Renaissance	
<b>Literature pre-1800</b>	
Select one of the following:	3
EH 326 Pre-1800 Literature: Special Topics	
EH 329 Literature of the Vikings	
EH 376 Shakespeare	
EH 426 Pre-1800 Literature: Special Topics	
EH 441 Literary Theory and Criticism, the Ancients to the Nineteenth Century	
EH 461 American Literature, 1620 - 1820	
EH 469 Medieval Culture: Literature and Society	
EH 470 Arthurian Legend	

EH 471	Beowulf in Context
EH 472	Introduction to Old English
EH 473	Chaucer: Pilgrimage to Canterbury
EH 474	English Renaissance Drama (Excluding Shakespeare)
EH 475	English Renaissance Poetry and Prose
EH 476	Shakespeare
EH 478	Milton
EH 480	The Restoration
EH 481	The Eighteenth Century: Literature and Culture
EH 482	The Eighteenth Century: Theory and Interpretation
EH 486	Eighteenth-Century British Novel
<b>Literature post-1800 <sup>2</sup></b>	
Select one of the following:	
EH 327	Post-1800 Literature: Special Topics
EH 339	Twentieth Century Theater
EH 365	African American Literature, 1746-1954
EH 366	African American Literature, 1954-Present
EH 414	Modern British and European Drama
EH 416	Modern American Poetry
EH 427	Post-1800 Literature: Special Topics
EH 431	Special Topics in Film
EH 442	Literary Theory and Criticism, the Twentieth Century to the Present
EH 444	Women's Literature and Theory
EH 462	American Literature, 1820 - 1870
EH 463	American Literature, 1870 - 1914
EH 464	American Literature, 1914 - 1945
EH 465	American Literature, 1945-Present
EH 466	The Slave Narrative and Its Literary Expressions
EH 468	The Harlem Renaissance
EH 483	British Romanticism
EH 485	British Victorian Poetry
EH 487	Nineteenth-Century British Novel
EH 488	British Novel: The Modern Age
EH 489	James Joyce
<b>Study of English as a Language</b>	
Select one of the following:	
LING 350	Introduction to Linguistics
LING 351	Structure of English
LING 352	The Structure of English Words
LING 355	Introduction to Sociolinguistics
LING 356	Semantics
LING 360	Phonology
LING 393	Special Topics in Linguistics
LING 450	Advanced Grammar
LING 451	Generative Grammar
LING 452	Grammar and Usage for English Teachers
LING 453	History of the English Language
LING 454	The Biology of Language
LING 493	Special Topics in Linguistics
LING 494	Special Problems in Linguistics
LING 495	Special Problems in Linguistics
<b>Required Course in Professional Writing</b>	
EH 315	Introduction to Professional Writing
<b>Professional Writing Electives <sup>2</sup></b>	
Select five of the following:	
EH 203	Writing in Birmingham

3

3

3

15

EH 303	Advanced Composition
EH 304	Editing in Professional Contexts
EH 311	English Internship
EH 330	Professional Writing: Special Topics
EH 332	Public Discourse: Special Topics
EH 335	Public Writing
EH 340	Developing Digital Documents
EH 345	Topics in Rhetoric
EH 401	Tutoring Writing
EH 402	Writing in Popular Periodicals
EH 403	Business Writing
EH 404	Technical Writing
EH 411	Capstone Internship
EH 430	Professional Writing: Special Topics
EH 432	Public Discourse: Special Topics
EH 433	Academic Writing
EH 455	Digital Publishing
EH 456	Visual Rhetoric
EH 457	Writing and Medicine
EH 458	Science Writing
EH 459	Discourse Analysis
EH 494	English Honors Research

**English Elective**

Select one of the following: 3

EH 203	Writing in Birmingham
EH 205	Introduction to Creative Writing
EH 210	Interpreting Film
EH 214	Introduction to Literature: Special Topics
EH 301	Reading, Writing, and Research for Literature Classes
EH 303	Advanced Composition
EH 304	Editing in Professional Contexts
EH 305	Beginning Poetry Writing Workshop
EH 307	Beginning Creative Nonfiction Writing Workshop
EH 309	Beginning Fiction Writing Workshop
EH 311	English Internship
EH 315	Introduction to Professional Writing
EH 318	Science Fiction
EH 324	African-American Special Topics
EH 326	Pre-1800 Literature: Special Topics
EH 327	Post-1800 Literature: Special Topics
EH 328	English Elective: Special Topics
EH 329	Literature of the Vikings
EH 330	Professional Writing: Special Topics
EH 332	Public Discourse: Special Topics
EH 335	Public Writing
EH 339	Twentieth Century Theater
EH 340	Developing Digital Documents
EH 345	Topics in Rhetoric
EH 365	African American Literature, 1746-1954
EH 366	African American Literature, 1954-Present
EH 367	Southern Literature
EH 369	The American Dream
EH 376	Shakespeare
EH 389	Bible as Literature
EH 401	Tutoring Writing
EH 402	Writing in Popular Periodicals
EH 403	Business Writing

EH 404	Technical Writing
EH 405	Poetry Writing Workshop (Seminar)
EH 407	Creative Nonfiction Writing Workshop (Seminar)
EH 409	Fiction Writing Workshop (Seminar)
EH 411	Capstone Internship
EH 412	Forms of Poetry Writing Workshop
EH 413	Forms of Creative Nonfiction
EH 414	Modern British and European Drama
EH 415	Forms of Fiction
EH 416	Modern American Poetry
EH 419	Young Adult Literature
EH 420	World Literature
EH 421	World Literature
EH 422	African Literature
EH 423	African Women's Literature
EH 424	African-American Special Topics
EH 426	Pre-1800 Literature: Special Topics
EH 427	Post-1800 Literature: Special Topics
EH 428	English Elective: Special Topics
EH 429	Creative Writing: Special Topics
EH 430	Professional Writing: Special Topics
EH 431	Special Topics in Film
EH 432	Public Discourse: Special Topics
EH 433	Academic Writing
EH 435	Teaching Creative Writing
EH 436	Workshop in Writing for Young People
EH 441	Literary Theory and Criticism, the Ancients to the Nineteenth Century
EH 442	Literary Theory and Criticism, the Twentieth Century to the Present
EH 443	Archetype and Myth
EH 444	Women's Literature and Theory
EH 446	African American Autobiography
EH 447	African American Dramatic Tradition
EH 448	African American Poetry Tradition
EH 455	Digital Publishing
EH 456	Visual Rhetoric
EH 457	Writing and Medicine
EH 458	Science Writing
EH 459	Discourse Analysis
EH 460	American Women Writers Before 1900
EH 461	American Literature, 1620 - 1820
EH 462	American Literature, 1820 - 1870
EH 463	American Literature, 1870 - 1914
EH 464	American Literature, 1914 - 1945
EH 465	American Literature, 1945-Present
EH 466	The Slave Narrative and Its Literary Expressions
EH 467	Black Women Writers
EH 468	The Harlem Renaissance
EH 469	Medieval Culture: Literature and Society
EH 470	Arthurian Legend
EH 471	Beowulf in Context
EH 472	Introduction to Old English
EH 473	Chaucer: Pilgrimage to Canterbury
EH 474	English Renaissance Drama (Excluding Shakespeare)
EH 475	English Renaissance Poetry and Prose
EH 476	Shakespeare

EH 478	Milton
EH 480	The Restoration
EH 481	The Eighteenth Century: Literature and Culture
EH 482	The Eighteenth Century: Theory and Interpretation
EH 483	British Romanticism
EH 485	British Victorian Poetry
EH 486	Eighteenth-Century British Novel
EH 487	Nineteenth-Century British Novel
EH 488	British Novel: The Modern Age
EH 489	James Joyce
EH 491	Eng Honors Research for Non-Concentrators
EH 494	English Honors Research
EH 495	Honors Capstone Thesis
EH 496	Capstone Seminar
EH 497	Individual Studies
LING 260	Language and Culture
LING 350	Introduction to Linguistics
LING 351	Structure of English
LING 352	The Structure of English Words
LING 355	Introduction to Sociolinguistics
LING 356	Semantics
LING 360	Phonology
LING 393	Special Topics in Linguistics
LING 450	Advanced Grammar
LING 451	Generative Grammar
LING 452	Grammar and Usage for English Teachers
LING 453	History of the English Language
LING 454	The Biology of Language
LING 466	Computational Linguistics
LING 493	Special Topics in Linguistics
LING 494	Special Problems in Linguistics
LING 495	Special Problems in Linguistics
EDR 441	Literature for Adolescents
<b>Capstone<sup>3</sup></b>	
Select one of the following:	
EH 411	Capstone Internship
EH 495	Honors Capstone Thesis
EH 496	Capstone Seminar

Total Hours 43

<sup>1</sup> Completing this requirement will automatically satisfy the Core Curriculum Area II: Literature requirement.

<sup>2</sup> Students may petition the Director of Professional Writing to have one relevant course in English or another discipline count toward this requirement.

<sup>3</sup> EH 411 and EH 495 must be approved. This requirement should be satisfied in the student's final year.

## Additional Requirements

- Students majoring in English must achieve a grade of C or higher in all courses applied toward the major requirement.
- Fifteen semester hours of English courses at the 300 and 400 levels must be taken at UAB.
- Eighteen semester hours of English courses must be at the 400 level.
- A single course may not count toward more than one departmental requirement.

## Proposed Program of Study for a Major in English with a Concentration in Literature

### Sophomore

First Term	Hours	Second Term	Hours
First course in literature sequence (EH 212, 217, 221, or 223)		3 Second course in literature sequence (EH 213, 218, 222, or 224)	3
EH 245	1	EH 301	3
	4		6

### Junior

First Term	Hours	Second Term	Hours
African, African-American, African Diasporic Literature		3 English as a Language	3
Literature pre-1800		3 Literature pre-1800 (not previously taken)	3
Professional Writing		3 Literature post-1800	3
	9		9

### Senior

First Term	Hours	Second Term	Hours
Literature post-1800 (not previously taken)		3 English Elective	3
Literary Theory		3 Capstone <sup>1</sup>	3
English Elective	3		
	9		6

Total credit hours: 43

<sup>1</sup> Capstone: EH 411, EH 495 or EH 496. This requirement should be satisfied in the student's final year.

**Please Note:** EH 411 and EH 495 require approval.

## Proposed Program of Study for a Major in English with a Concentration in Creative Writing

### Sophomore

First Term	Hours	Second Term	Hours
First course in literature sequence (EH 212, 217, 221, or 223)		3 Second course in literature sequence (EH 213, 218, 222, or 224)	3
EH 245	1	Beginning Creative Writing Workshop	3
	4		6

### Junior

First Term	Hours	Second Term	Hours
African, African-American or African-Diasporic Literature		3 Professional Writing	3
Literature pre-1800		3 English as a Language	3
Beginning Creative Writing Workshop		3 Advanced Creative Writing Workshop	3
	9		9

### Senior

First Term	Hours	Second Term	Hours
Literature post-1800		3 English Elective	3
Advanced Creative Writing Workshop		3 Capstone <sup>1</sup>	3

Creative Writing Elective	3	
	9	6
Total credit hours: 43		

<sup>1</sup> Capstone: EH 411, EH 495 or EH 496. This requirement should be satisfied in the student's final year.

**Please Note:** EH 411 and EH 495 require approval.

## Proposed Program of Study for a Major in English with a Concentration in Linguistics

### Sophomore

First Term	Hours	Second Term	Hours
First course in literature sequence (EH 212, 217, 221, or 223)		3 Second course in literature sequence (EH 213, 218, 222, or 224)	3
EH 245		1 LING 350	3
	4		6

### Junior

First Term	Hours	Second Term	Hours
African, African-American or African-Diasporic Literature		3 Literature post-1800	3
Literature pre-1800		3 Professional Writing	3
English as a Language		3 English as a Language	3
	9		9

### Senior

First Term	Hours	Second Term	Hours
English as a Language		3 English as a Language	3
English Electives		6 Capstone <sup>1</sup>	3
	9		6

Total credit hours: 43

<sup>1</sup> Capstone: EH 411, EH 495 or EH 496. This requirement should be satisfied in the student's final year.

**Please Note:** EH 411 and EH 495 require approval.

## Proposed Program of Study for a Major in English with a Concentration in Professional Writing

### Sophomore

First Term	Hours	Second Term	Hours
First course in literature sequence (EH 212, 217, 221, or 223)		3 Second course in literature sequence (EH 213, 218, 222, or 224)	3
EH 245		1 EH 315	3
	4		6

### Junior

First Term	Hours	Second Term	Hours
African, African-American or African Diasporic Literature		3 English as a Language	3
Literature pre-1800		3 Literature post-1800	3
Professional Writing Elective		3 Professional Writing Elective	3
	9		9

### Senior

First Term	Hours	Second Term	Hours
Professional Writing Electives		6 Professional Writing Elective	3
English Elective		3 Capstone <sup>1</sup>	3
	9		6

Total credit hours: 43

<sup>1</sup> Capstone: EH 411, EH 495 or EH 496. This requirement should be satisfied in the student's final year.

**Please Note:** EH 411 and EH 495 require approval.

## Minor in English Literature

Requirements	Hours
<b>Required Courses</b> <sup>1</sup>	
EH 301 Reading, Writing, and Research for Literature Classes	3
<b>Literature Pre-1800</b>	
Select one of the following:	3
EH 326 Pre-1800 Literature: Special Topics	
EH 329 Literature of the Vikings	
EH 376 Shakespeare	
EH 426 Pre-1800 Literature: Special Topics	
EH 441 Literary Theory and Criticism, the Ancients to the Nineteenth Century	
EH 461 American Literature, 1620 - 1820	
EH 469 Medieval Culture: Literature and Society	
EH 470 Arthurian Legend	
EH 471 Beowulf in Context	
EH 472 Introduction to Old English	
EH 473 Chaucer: Pilgrimage to Canterbury	
EH 474 English Renaissance Drama (Excluding Shakespeare)	
EH 475 English Renaissance Poetry and Prose	
EH 476 Shakespeare	
EH 478 Milton	
EH 480 The Restoration	
EH 481 The Eighteenth Century: Literature and Culture	
EH 482 The Eighteenth Century: Theory and Interpretation	
EH 486 Eighteenth-Century British Novel	
<b>Literature Post-1800</b>	
Select one of the following:	3
EH 327 Post-1800 Literature: Special Topics	
EH 339 Twentieth Century Theater	
EH 365 African American Literature, 1746-1954	
EH 366 African American Literature, 1954-Present	
EH 414 Modern British and European Drama	
EH 416 Modern American Poetry	
EH 427 Post-1800 Literature: Special Topics	
EH 431 Special Topics in Film	
EH 442 Literary Theory and Criticism, the Twentieth Century to the Present	
EH 444 Women's Literature and Theory	
EH 462 American Literature, 1820 - 1870	
EH 463 American Literature, 1870 - 1914	
EH 464 American Literature, 1914 - 1945	
EH 465 American Literature, 1945-Present	
EH 466 The Slave Narrative and Its Literary Expressions	
EH 468 The Harlem Renaissance	

EH 483	British Romanticism
EH 485	British Victorian Poetry
EH 487	Nineteenth-Century British Novel
EH 488	British Novel: The Modern Age
EH 489	James Joyce
<b>English Electives <sup>2</sup></b>	
Select three of the following:	
EH 203	Writing in Birmingham
EH 205	Introduction to Creative Writing
EH 210	Interpreting Film
EH 214	Introduction to Literature: Special Topics
EH 303	Advanced Composition
EH 304	Editing in Professional Contexts
EH 305	Beginning Poetry Writing Workshop
EH 307	Beginning Creative Nonfiction Writing Workshop
EH 309	Beginning Fiction Writing Workshop
EH 315	Introduction to Professional Writing
EH 318	Science Fiction
EH 324	African-American Special Topics
EH 326	Pre-1800 Literature: Special Topics
EH 327	Post-1800 Literature: Special Topics
EH 328	English Elective: Special Topics
EH 329	Literature of the Vikings
EH 330	Professional Writing: Special Topics
EH 332	Public Discourse: Special Topics
EH 335	Public Writing
EH 339	Twentieth Century Theater
EH 340	Developing Digital Documents
EH 345	Topics in Rhetoric
EH 365	African American Literature, 1746-1954
EH 366	African American Literature, 1954-Present
EH 367	Southern Literature
EH 369	The American Dream
EH 376	Shakespeare
EH 389	Bible as Literature
EH 401	Tutoring Writing
EH 402	Writing in Popular Periodicals
EH 403	Business Writing
EH 404	Technical Writing
EH 405	Poetry Writing Workshop (Seminar)
EH 407	Creative Nonfiction Writing Workshop (Seminar)
EH 409	Fiction Writing Workshop (Seminar)
EH 411	Capstone Internship
EH 412	Forms of Poetry Writing Workshop
EH 413	Forms of Creative Nonfiction
EH 414	Modern British and European Drama
EH 415	Forms of Fiction
EH 416	Modern American Poetry
EH 419	Young Adult Literature
EH 420	World Literature
EH 421	World Literature
EH 422	African Literature
EH 423	African Women's Literature
EH 424	African-American Special Topics
EH 426	Pre-1800 Literature: Special Topics
EH 427	Post-1800 Literature: Special Topics
EH 428	English Elective: Special Topics

EH 429	Creative Writing: Special Topics
EH 430	Professional Writing: Special Topics
EH 431	Special Topics in Film
EH 432	Public Discourse: Special Topics
EH 433	Academic Writing
EH 435	Teaching Creative Writing
EH 436	Workshop in Writing for Young People
EH 441	Literary Theory and Criticism, the Ancients to the Nineteenth Century
EH 442	Literary Theory and Criticism, the Twentieth Century to the Present
EH 443	Archetype and Myth
EH 444	Women's Literature and Theory
EH 446	African American Autobiography
EH 447	African American Dramatic Tradition
EH 448	African American Poetry Tradition
EH 455	Digital Publishing
EH 456	Visual Rhetoric
EH 457	Writing and Medicine
EH 458	Science Writing
EH 459	Discourse Analysis
EH 460	American Women Writers Before 1900
EH 461	American Literature, 1620 - 1820
EH 462	American Literature, 1820 - 1870
EH 463	American Literature, 1870 - 1914
EH 464	American Literature, 1914 - 1945
EH 465	American Literature, 1945-Present
EH 466	The Slave Narrative and Its Literary Expressions
EH 467	Black Women Writers
EH 468	The Harlem Renaissance
EH 469	Medieval Culture: Literature and Society
EH 470	Arthurian Legend
EH 471	Beowulf in Context
EH 472	Introduction to Old English
EH 473	Chaucer: Pilgrimage to Canterbury
EH 474	English Renaissance Drama (Excluding Shakespeare)
EH 475	English Renaissance Poetry and Prose
EH 476	Shakespeare
EH 478	Milton
EH 480	The Restoration
EH 481	The Eighteenth Century: Literature and Culture
EH 482	The Eighteenth Century: Theory and Interpretation
EH 483	British Romanticism
EH 485	British Victorian Poetry
EH 486	Eighteenth-Century British Novel
EH 487	Nineteenth-Century British Novel
EH 488	British Novel: The Modern Age
EH 489	James Joyce
EH 494	English Honors Research
EH 495	Honors Capstone Thesis
EH 496	Capstone Seminar
EH 497	Individual Studies
LING 350	Introduction to Linguistics
LING 351	Structure of English
LING 352	The Structure of English Words
LING 355	Introduction to Sociolinguistics
LING 356	Semantics

LING 360	Phonology
LING 393	Special Topics in Linguistics
LING 450	Advanced Grammar
LING 451	Generative Grammar
LING 452	Grammar and Usage for English Teachers
LING 453	History of the English Language
LING 454	The Biology of Language
LING 493	Special Topics in Linguistics
EDR 441	Literature for Adolescents

Total Hours 18

<sup>1</sup> Required except where already taken as part of a concentration in PW, CW, or Ling

<sup>2</sup> Students may not use EH 311 to satisfy this requirement. Only three hours may be satisfied by a Creative Writing course (EH 305, EH 307, EH 309, EH 405, EH 407, EH 409, EH 412, EH 413, EH 415, EH 436 ).

## Additional Requirements

- Students minoring in English Literature must achieve a grade of C or higher in all courses applied toward the minor.
- English courses at the 300 and 400 levels must be taken at UAB.
- At least nine of the eighteen hours required for the minor must be taken at the 400 level.
- A single course may not count toward more than one departmental requirement.

## Minor in Professional Writing

Requirements	Hours
<b>Required Course</b>	<b>3</b>
EH 315 Introduction to Professional Writing	
<b>Professional Writing Electives</b>	
Select five of the following:	15
EH 203 Writing in Birmingham	
EH 303 Advanced Composition	
EH 304 Editing in Professional Contexts	
EH 311 English Internship	
EH 330 Professional Writing: Special Topics	
EH 332 Public Discourse: Special Topics	
EH 335 Public Writing	
EH 340 Developing Digital Documents	
EH 345 Topics in Rhetoric	
EH 401 Tutoring Writing	
EH 402 Writing in Popular Periodicals	
EH 403 Business Writing	
EH 404 Technical Writing	
EH 411 Capstone Internship	
EH 430 Professional Writing: Special Topics	
EH 432 Public Discourse: Special Topics	
EH 433 Academic Writing	
EH 455 Digital Publishing	
EH 456 Visual Rhetoric	
EH 457 Writing and Medicine	
EH 458 Science Writing	
EH 459 Discourse Analysis	

Total Hours 18

## Additional Requirements

- Students minoring in Writing must achieve a grade of C or higher in all courses applied toward the minor.
- English courses at the 300 and 400 levels must be taken at UAB.
- At least nine of the eighteen hours required for the minor must be taken at the 400 level.
- A single course may not count toward more than one departmental requirement.

## Minor in Creative Writing

Requirements	Hours
<b>Creative Writing Workshops</b>	
Select 9 hours of the following (you may take one of these workshops twice):	9
EH 305 Beginning Poetry Writing Workshop	
EH 307 Beginning Creative Nonfiction Writing Workshop	
EH 309 Beginning Fiction Writing Workshop	
<b>Advanced Creative Writing Workshops</b>	
Select 6 hours of the following (you may take one of the workshops twice):	6
EH 405 Poetry Writing Workshop (Seminar)	
EH 407 Creative Nonfiction Writing Workshop (Seminar)	
EH 409 Fiction Writing Workshop (Seminar)	
EH 415 Forms of Fiction	
EH 429 Creative Writing: Special Topics	
EH 436 Workshop in Writing for Young People	
<b>Creative Writing Elective</b>	
Select one of the following:	3
EH 205 Introduction to Creative Writing	
EH 305 Beginning Poetry Writing Workshop	
EH 307 Beginning Creative Nonfiction Writing Workshop	
EH 309 Beginning Fiction Writing Workshop	
EH 311 English Internship	
EH 405 Poetry Writing Workshop (Seminar)	
EH 407 Creative Nonfiction Writing Workshop (Seminar)	
EH 409 Fiction Writing Workshop (Seminar)	
EH 412 Forms of Poetry Writing Workshop	
EH 413 Forms of Creative Nonfiction	
EH 415 Forms of Fiction	
EH 429 Creative Writing: Special Topics	
EH 436 Workshop in Writing for Young People	
Total Hours	18

## Additional Requirements

- Students minoring in Creative Writing must achieve a grade of C or higher in all courses applied toward the minor.
- English courses at the 300 and 400 levels must be taken at UAB.
- At least six of the eighteen hours required for the minor must be taken at the 400 level.
- A single course may not count toward more than one departmental requirement.

## Minor in Linguistics

Requirements	Hours
<b>Required Courses</b>	
<u>EH/LING 350</u> Introduction to Linguistics	3
<u>EH/LING 451</u> Generative Grammar	3
<b>Linguistics Electives</b> <sup>1, 2</sup>	
Select four of the following:	12
<u>EH/LING 351</u> Structure of English	
<u>EH/LING 352</u> The Structure of English Words	
<u>EH/LING 355</u> Introduction to Sociolinguistics	
<u>EH/LING 356</u> Semantics	
<u>EH/LING 360</u> Phonology	
<u>EH/LING 393</u> Special Topics in Linguistics	
<u>EH/LING 450</u> Advanced Grammar	
<u>EH/LING 452</u> Grammar and Usage for English Teachers	
<u>EH/LING 453</u> History of the English Language	
<u>EH/LING 454</u> The Biology of Language	
<u>EH/LING 493</u> Special Topics in Linguistics	
<u>LING/CS 466</u> Computational Linguistics	
<u>LING/ANTH 494</u> Special Problems in Linguistics	
<u>LING/ANTH 495</u> Special Problems in Linguistics	
Total Hours	18

<sup>1</sup> Must be approved: LING 393/EH 393, LING 493/EH 493, LING 494/ANTH 494 & LING 495/ANTH 495.

<sup>2</sup> Students may petition the Program Director to have one relevant non-Linguistics course in English or another discipline that does not appear on this list count toward this requirement.

## Additional Requirements

- Students minoring in Linguistics must achieve a grade of C or higher in all courses applied toward the minor.
- English courses at the 300 and 400 levels must be taken at UAB.
- At least nine of the eighteen hours required for the minor must be taken at the 400 level.
- A single course may not count toward more than one departmental requirement.

## Honors in English

### Purpose

The English Honors program is designed for outstanding English majors. In their senior year, qualified students write a Senior Thesis under the supervision of an Honors Thesis Committee.

## Benefits

Benefits of participating in the Honors Program in English include individual mentoring by exceptional faculty and useful practice in undertaking extended work in the area of English, American, African American, and world literatures; creative writing; linguistics; or professional writing and rhetoric. Writing the thesis gives students the chance to work one-on-one with outstanding research faculty in all fields of English study. Our honors students thus gain valuable writing and critical experience, personalized writing instruction, and the opportunity to acquire especially strong letters of recommendation from committee members. Students completing the program are recognized at the English Department Awards Reception and will graduate from UAB "With Honors in English" at their UAB commencement.

## Eligibility

To be eligible for the Honors Program in English, a student must be enrolled as a UAB English major, and have earned a 3.5 GPA in English courses taken and a 3.0 GPA overall.

## Requirements

Qualified students electing to enter and complete the Honors Program in English must submit a completed English Honors Program application form to the Director of Departmental Honors for approval. Once approved, students complete the Honors thesis over two consecutive terms; generally, they take EH 494 in the first term and EH 495 in the second. (However, if the student is writing a thesis in an area \*different\* from his or her concentration -- for instance, if the student is a Creative Writing concentrator writing a thesis in Literature -- the student replaces EH 494 with EH 491.) At the end of the process, students will present their work at a departmental symposium. Students who earn an A in EH 495 will graduate with Departmental Honors. Students who earn a B or C will not graduate with Departmental Honors but will still fulfill the capstone requirement.

## Contact

Program descriptions are available from the department website ([www.uab.edu/cas/english](http://www.uab.edu/cas/english)) or the department office.

## Internships in English

The English Department, in cooperation with university-wide and off-campus partners, offers its majors and minors internship experiences that enhance their attractiveness to prospective employers. Many internships have resulted in part-time or full-time employment after the semester has concluded. Within the English department, opportunities include assisting the editors of PMS: poemmemoirstory and Birmingham Poetry Review. Students also intern in other parts of the university; past collaborations have included the School of Education and UAB Health Systems Marketing. Organizations within the Birmingham community specializing in magazine and book publishing, non-profit fund raising, and business communications round out possibilities for acquiring the practical experience that will enhance students' resumes while helping them to build a professional portfolio demonstrating their knowledge and skills.

English majors interested in internships should meet with Dr. Jeff Bacha, Director of Internships, to discuss eligibility requirements and available internship opportunities. Students accepted for internships enroll in either EH 311 or EH 411. EH 311 requirements include at least the following: performance of 10-15 hours of research or publications activities per week, as defined by the on-site supervisor, completion of journal entries

that draw on the intern's experiences, and completion of a written report addressing an aspect of the internship approved by Dr. Bacha in consultation with the student. On-site supervisors also provide written evaluations of interns, feedback that can assist students as they pursue careers following graduation. EH 411 satisfies the Capstone requirement for the major and involves more academic work, including more extensive journal assignments, regular meetings with the Director and other EH 411 students, participation in discussion sessions with scheduled speakers, and a final professional portfolio and exit interview. Students who wish to enroll in EH 411 should be late-term juniors or seniors. Internships are graded classes, and final grades are based on the student's work ethic and written work and are determined by the Director in consultation with the student's on-site internship supervisor.

## Eligibility and Procedures

Students must meet the following requirements to be eligible for an English internship:

- Must be enrolled full-time as English majors or minors at UAB.
- Normally must have a minimum overall GPA of 3.0 or higher for an off-campus internship or an on-campus research internship, and a 2.5 overall GPA or higher for a publications Internship. This requirement may be waived with the approval of the Director of Internships.
- Must have at least junior standing or the equivalent course credits.
- Must be approved for the internship by the Director of Internships.
- Must be able to work the required number of hours (10-15) to fulfill commitments to the employer.
- If awarded an internship, must enroll in EH 311 or EH 411 for the internship semester and—under the supervision of the Internship Director—must fulfill all requirements for that course.

Students who qualify for English internships should follow these procedures:

- Make an appointment with the Director of Internships, Dr. Jeff Bacha, at the beginning of the semester prior to the semester in which you hope to hold an internship.
- Following the meeting, complete the Internship Application Form, available from the Director of Internships or from <http://www.uab.edu/cas/english/student-resources/undergraduate-students/internships>
- Stay in contact with the Internship Director for information about scheduling interviews with potential employers and prepare -- with the assistance of the Internship Director -- for interviews.
- Once accepted by the on-site supervisor for an internship, contact the Internship Director to enroll in EH 311 or EH 411.

## Questions:

For more information about the Internship program in English, contact Dr. Jeff Bacha at [jbacha@uab.edu](mailto:jbacha@uab.edu). UH 5053, (205) 934-4250.

## EH-English Courses

### EH 091. Introduction to College English. 5 Hours.

Focuses on connections between reading and writing, especially as they relate to a writer's purpose and development of academic writing. Includes review of grammar, punctuation, and usage, with emphasis on editing skills and writing effective paragraphs and expository essays. Required for students who score below 20 on the English or Reading portions of the ACT test. Prepares students for EH 101; may not be used for fulfillment of any degree requirement.

### EH 096L. Introduction to Freshman Writing I. 1 Hour.

EH 096L provides individualized, hands-on support to students in EH 106 through writing studio sessions with their EH 106 instructor and tutors in the University Writing Center. Graded pass/fail. Co-requisite with EH 106. Students must pass EH 096L in order to make a C or above in EH 106.

### EH 097L. Introduction to Freshman Writing II. 1 Hour.

EH 097L provides individualized, hands-on support to students in EH 107 through writing studio sessions with their EH 107 instructor and tutors in the University Writing Center. Graded pass/fail. Co-requisite with EH 107. Students must pass EH 097L in order to make a C or above in EH 107.

**Prerequisites:** EH 106 [Min Grade: C] and EH 096L [Min Grade: P]

### EH 101. English Composition I. 3 Hours.

Process and final product of expository and analytical essays. Research and documentation required on most essays. Students must receive grade of C or higher in EH 101 and 102 to complete Core Curriculum requirement in English language. (Also see CLEP examinations and AP examinations.).

**Prerequisites:** EH 091 [Min Grade: C] or ELI 205 [Min Grade: C] or ELI 206 [Min Grade: C](Can be taken Concurrently) or ELI 054 [Min Grade: C] or (A01 20 and A03 20) or (S01 480 or SATR 26) or (EHWS 29 and EHRS 18) or (TCW 23 or TIW 23) or IEW 6.0 or TEW 7.0 or EPL

### EH 102. English Composition II. 3 Hours.

Process and final product of argumentative essays. Research and documentation required on most essays. Students must receive grade of C or higher in EH 101 or EH 102 to complete Core Curriculum requirement in English Language. (Also see CLEP examinations and AP examinations.).

**Prerequisites:** EH 101 [Min Grade: C] or EH 101 [Min Grade: P]

### EH 105. Ada Long Creative Writing Workshop. 1 Hour.

Introductory course in creative writing for high school students with demonstrated creative writing abilities.

### EH 106. Introduction to Freshman Writing I. 3 Hours.

English 106 provides a hands-on, individualized study of expository and analytical writing, including developing strong processes of drafting, revising and editing. Co-requisite with EH 096L. EH 106 and EH 096L are required for students who score below 20 on the English or Reading portions of the ACT test. Students must receive grade of C or higher in EH 106 and grade P for EH 096L and grade of C or higher in EH 107 and grade P for EH 097L to complete Core Curriculum in English Language. (Also see CLEP examinations and AP examinations).

### EH 107. Introduction to Freshman Writing II. 3 Hours.

English 107 provides a hands-on, individualized study of research, academic writing, and argumentation, including developing strong processes of drafting, revising and editing. Co-requisite with EH 097L. EH 107 and EH 097L are required for students who score below 20 on the English or Reading portions of the ACT test. Students must receive grade of C or higher in EH 106 and grade P for EH 096L and grade of C or higher in EH 107 and grade P for EH 097L to complete Core Curriculum in English Language.(Also see CLEP examinations and AP examinations).

**Prerequisites:** EH 106 [Min Grade: C] and EH 096L [Min Grade: P]

**EH 108. English Composition I for Second Language Writers. 3 Hours.**

Process and final product of expository and analytical essays with support for second language writers. Research and documentation required on most essays. Students must receive grade of C or higher in EH 108 and 109 to complete core curriculum requirement in English language. (Also see CLEP examinations and AP examinations.).  
**Prerequisites:** IEW 5.5 or TIW 16 or TCW 16 or TEW 6.5 or ELI 205 [Min Grade: B](Can be taken Concurrently) and ELI 101 [Min Grade: B])

**EH 109. English Composition II for Second Language Writers. 3 Hours.**

Process and final product of argumentative essays with support for second language writers. Research and documentation required on most essays. Students must receive grade of C or higher in EH 108 and EH 109 to complete Core Curriculum requirement in English Language. (Also see CLEP examinations and AP examinations.).  
**Prerequisites:** EH 108 [Min Grade: C]

**EH 202. English Composition II: Scientific and Technical Communication. 3 Hours.**

This course will be paired with EH 102, enrolling students from the Science and Technology Honors Program who have already completed (or received credit for) EH 102. In addition to covering material required for all sections of EH 102, this course introduces students to the specific rhetorical elements of scientific and technical discourse.  
**Prerequisites:** EH 101 [Min Grade: C] and (EH 102 [Min Grade: C] or EH 107 [Min Grade: C]) or EH 109 [Min Grade: C]

**EH 203. Writing in Birmingham. 3 Hours.**

Improvement of skills for public writing, using Birmingham as geographical, historical, and institutional context. Emphasis on issues related to Birmingham's past and present, including the ethics and civic responsibilities of Birmingham residents. Ethics and Civic Responsibility and Writing are significant components of this course.  
**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 205. Introduction to Creative Writing. 3 Hours.**

An introduction to the writing of fiction, poetry, and the creative essay. Emphasis on fundamentals of writing creatively, with students producing original work in each of the three genres.  
**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 206. Writing for Health Professions. 3 Hours.**

Teaches students the skills and conventions required for clear and effective writing in health professions.  
**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 210. Interpreting Film. 3 Hours.**

Introduction to film analysis, surveying the language of film, the structure of film narrative, major genres, and the relationship between film and its social context.  
**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 212. Forms of Literature. 3 Hours.**

Study of literary forms and genres such as poems, short stories, novels, plays, films, and other kinds of literature. Emphasis on techniques of each form. Writing is a significant component of this course.  
**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 213. Ideas in Literature. 3 Hours.**

Investigation of an idea or theme as it appears in a diverse set of literary works. Themes vary by section: consult the English Department website for a list of section themes. Emphasis on the ways in which works of literature engage with and interrogate broader cultural ideas. Writing is a significant component of this course.  
**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 214. Introduction to Literature: Special Topics. 3 Hours.**

Study of an individual author, a specific genre, or an important literary movement. Selections will vary according to instructor. Writing is a significant component of this course.  
**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 216. Introduction to Literature. 3 Hours.**

Short stories, novellas, poems, and plays from variety of historical periods and cultures. Emphasis on techniques of each genre. Writing is a significant component of this course. This course meets the Core Curriculum requirements for Area II: Literature.  
**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 217. World Literature I: Before 1660. 3 Hours.**

World literature before 1660. Emphasis on writing and literary analysis. Writing is a significant component of this course. This course meets the Core Curriculum requirements for Area II: Literature.  
**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 218. World Literature II: 1660-Present. 3 Hours.**

World literature since 1660. Emphasis on writing and literary analysis. Writing is a significant component of this course. This course meets the Core Curriculum requirements for Area II: Literature.  
**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 221. British and Irish Literature I: Before 1800. 3 Hours.**

British/Irish literature from Anglo-Saxon period to end of eighteenth century with emphasis on writing and literary analysis. Writing is a significant component of this course. This course meets the Core Curriculum requirements for Area II: Literature.  
**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 222. British and Irish Literature II: 1800-Present. 3 Hours.**

British/Irish literature from end of eighteenth century into twentieth century with emphasis on writing and literary analysis. Writing is a significant component of this course. This course meets the Core Curriculum requirements for Area II: Literature.  
**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 223. American Literature I: Before 1865. 3 Hours.**

American literature from 1620 to 1865 with emphasis on writing and literary analysis. Writing is a significant component of this course. This course meets the Core Curriculum requirements for Area II: Literature.  
**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 224. American Literature II: 1865-Present. 3 Hours.**

American literature 1865 to present with emphasis on writing and literary analysis. Writing is a significant component of this course. This course meets the Core Curriculum requirements for Area II: Literature.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 245. Introduction to the English Major. 1 Hour.**

Orientation to the English major at UAB, emphasizing the aims of English as a discipline, the different concentrations offered at UAB, special opportunities students can pursue within the program, and typical career paths for English majors.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 300. Engineering Communication. 2 Hours.**

Introduces engineering students to the theory and practice of communicating effectively in various organizational contexts. Subjects covered include managing and producing professional reports, proposals, and feasibility studies; communicating ethically in the workplace; and presenting ideas to multiple audiences in written and oral formats.

Required for most undergraduate engineering majors.

**Prerequisites:** (EGR 110 [Min Grade: C] and EGR 111 [Min Grade: C]) or EGR 200 [Min Grade: C] or EGR 100 [Min Grade: C] or HC 111 [Min Grade: C] and (EH 102 [Min Grade: C] or EH 107 [Min Grade: C]) or EH 109 [Min Grade: C]

**EH 301. Reading, Writing, and Research for Literature Classes. 3 Hours.**

Designed to improve skills for critical writing about literary texts. Strong emphasis on analytical thinking and on the ethics of argumentation. Required for English majors; recommended prior to taking 400-level courses.

**Prerequisites:** (EH 212 [Min Grade: C] or EH 213 [Min Grade: C]) or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 302. Intermediate Writing. 3 Hours.**

This course is designed for non-English majors who wish to improve the quality of their writing.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 303. Advanced Composition. 3 Hours.**

Improvement of skills for academic and public writing, focusing on analysis and critique. Writing is a significant component of this course.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 304. Editing in Professional Contexts. 3 Hours.**

Theory and practice of editorial/rhetorical concerns throughout writing process, particularly as related to professional contexts. Writing is a significant component of this course.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 305. Beginning Poetry Writing Workshop. 3 Hours.**

Fundamentals for beginners; emphasis on techniques and style through readings and student's own writing.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 307. Beginning Creative Nonfiction Writing Workshop. 3 Hours.**

Seminar teaching fundamentals for beginners; emphasis on techniques and style through readings and student's own writing.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 309. Beginning Fiction Writing Workshop. 3 Hours.**

Fundamentals for beginners; emphasis on techniques and style through readings and student's own writing.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 311. English Internship. 3 Hours.**

On-campus and off-campus training positions in fields utilizing language and writing skills, with some positions offering external funding. Students should contact the Director of Internships to discuss available positions and application procedures. May be counted as elective only in professional writing concentration and writing minor with approval of the Undergraduate Director.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 315. Introduction to Professional Writing. 3 Hours.**

Introduces students to professional writing as a discipline and teaches them to compose professional documents. Recommended prior to taking 400-level courses.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 318. Science Fiction. 3 Hours.**

Modern science fiction, including novels and short stories by Asimov, Heinlein, LeGuin, and others.

**Prerequisites:** (EH 212 [Min Grade: C] or EH 213 [Min Grade: C]) or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 324. African-American Special Topics. 3 Hours.**

See Class Schedule for Topic. May be repeated.

**Prerequisites:** (EH 212 [Min Grade: C] or EH 213 [Min Grade: C]) or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 326. Pre-1800 Literature: Special Topics. 3 Hours.**

See class schedule for topic. May be repeated.

**Prerequisites:** (EH 212 [Min Grade: C] or EH 213 [Min Grade: C]) or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 327. Post-1800 Literature: Special Topics. 3 Hours.**

See Class Schedule for Topic. May be repeated.

**Prerequisites:** (EH 212 [Min Grade: C] or EH 213 [Min Grade: C]) or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 328. English Elective: Special Topics. 3 Hours.**

See class schedule for topic. May be repeated.

**Prerequisites:** (EH 212 [Min Grade: C] or EH 213 [Min Grade: C]) or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 329. Literature of the Vikings. 3 Hours.**

Old Norse mythology, poetry, and sagas in translation. Background for Beowulf.

**Prerequisites:** (EH 212 [Min Grade: C] or EH 213 [Min Grade: C]) or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 330. Professional Writing: Special Topics. 3 Hours.**

See class schedule for topic. May be repeated.

**EH 332. Public Discourse: Special Topics. 3 Hours.**

See class schedule for topic. May be repeated.

**EH 335. Public Writing. 3 Hours.**

Instruction in concepts of public communities and the kinds of writing that public institutions, such as non-profit organizations, require. Public writing includes ethnographic research, problem-solving proposals, grant applications, and social media campaigns.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 339. Twentieth Century Theater. 3 Hours.**

Study of major works in 20th century drama.

**Prerequisites:** (EH 212 [Min Grade: C] or EH 213 [Min Grade: C]) or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 340. Developing Digital Documents. 3 Hours.**

Provides students the opportunity to plan, write, and design documents using computer aided publishing technologies.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 345. Topics in Rhetoric. 3 Hours.**

Introduction to the foundational texts and key concepts in the theory and practice of rhetoric. Each section emphasizes a specific topic within the larger subject of rhetoric.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 350. Introduction to Linguistics. 3 Hours.**

Introduction to the scientific study of language with a main focus on principles underlying phonology morphology, syntax and semantics. Relationship between language and society, psycholinguistics and language typology may also be addressed.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 351. Structure of English. 3 Hours.**

Description and analysis of present-day English grammar with particular attention paid to the structure of phrases, clauses and sentences, including parts of speech, coordination, subordination, tense, aspect, voice, grammatical functions, agreement and clause types.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 352. The Structure of English Words. 3 Hours.**

Introduction to English vocabulary elements and word formation, including topics in history of English and sound patterns as these topics relate to word formation. Does not count as literature for Core Curriculum requirement.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 355. Introduction to Sociolinguistics. 3 Hours.**

Social factors that play role in language usage and learning; emphasis on American English.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 356. Semantics. 3 Hours.**

Meaning in language with reference to questions of synonymy, ambiguity, and language use.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 360. Phonology. 3 Hours.**

Sound patterning of languages.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 365. African American Literature, 1746-1954. 3 Hours.**

Cultural values from colonial writer Lucy Terry, through slavery and emancipation, to Ralph Ellison and writers of early 1950s. Emphasis on role of diversity and how historical issues of race relate to modern contexts. Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** (EH 212 [Min Grade: C] or EH 213 [Min Grade: C]) or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 366. African American Literature, 1954-Present. 3 Hours.**

Cultural values from James Baldwin in 1950s, through black nationalist, civil rights, and black feminist movements, to contemporary writers such as Ishmael Reed, Charles Johnson, and Toni Morrison. Emphasis on role of diversity and how historical issues of race relate to modern contexts. Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** (EH 212 [Min Grade: C] or EH 213 [Min Grade: C]) or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 367. Southern Literature. 3 Hours.**

Literature of American South: Faulkner, Jefferson, Douglass, Chopin, O'Connor, and others.

**Prerequisites:** (EH 212 [Min Grade: C] or EH 213 [Min Grade: C]) or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 369. The American Dream. 3 Hours.**

Literature expressing values and ideals of American people from Hawthorne and Thoreau to Richard Wright and Adrienne Rich.

**Prerequisites:** (EH 212 [Min Grade: C] or EH 213 [Min Grade: C]) or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 376. Shakespeare. 3 Hours.**

Five or six plays: one history, one comedy, three major tragedies. Intensive study of two or more tragedies.

**Prerequisites:** (EH 212 [Min Grade: C] or EH 213 [Min Grade: C]) or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 389. Bible as Literature. 3 Hours.**

Literary themes and styles of Old and New Testaments.

**Prerequisites:** (EH 212 [Min Grade: C] or EH 213 [Min Grade: C]) or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 393. Special Topics in Linguistics. 3 Hours.**

See class schedule for topic.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 401. Tutoring Writing. 3 Hours.**

Seminar focusing on the improvement of writing skills through understanding theories of tutoring. Preparation of future teachers for tutor training and writing center development. Writing is a significant component of this course.

**Prerequisites:** (EH 212 [Min Grade: C] or EH 213 [Min Grade: C]) or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C] or EH 203 [Min Grade: C] or EH 205 [Min Grade: C] or EH 210 [Min Grade: C] or EH 214 [Min Grade: C]

**EH 402. Writing in Popular Periodicals. 3 Hours.**

Current theory regarding production, distribution, and consumption of popular periodicals, with extensive practice contributing to these sources. Writing is a significant component of this course.

**Prerequisites:** EH 203 [Min Grade: C] or EH 205 [Min Grade: C] or EH 210 [Min Grade: C] or EH 214 [Min Grade: C] or EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 403. Business Writing. 3 Hours.**

Advanced writing course focusing on writing clearly and ethically in professional business contexts, with particular emphasis on memos, letters, resumes, and reports. Writing, Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** EH 203 [Min Grade: C] or EH 204 [Min Grade: C] or EH 210 [Min Grade: C] or EH 214 [Min Grade: C] or EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 404. Technical Writing. 3 Hours.**

Advanced writing concentrating on short informal and long formal reports. Quantitative literacy is a significant component of the course.

**Prerequisites:** EH 203 [Min Grade: C] or EH 205 [Min Grade: C] or EH 210 [Min Grade: C] or EH 214 [Min Grade: C] or EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 405. Poetry Writing Workshop (Seminar). 3 Hours.**

Intermediate poetry seminar conducted through critique of student writing.

**Prerequisites:** EH 305 [Min Grade: C] or EH 306 [Min Grade: C]

**EH 407. Creative Nonfiction Writing Workshop (Seminar). 3 Hours.**

Intermediate creative nonfiction seminar conducted through critique of student writing.

**Prerequisites:** EH 307 [Min Grade: C] or EH 308 [Min Grade: C]

**EH 409. Fiction Writing Workshop (Seminar). 3 Hours.**

Intermediate prose fiction seminar conducted through critique of student writing.

**Prerequisites:** EH 309 [Min Grade: C] or EH 310 [Min Grade: C]

**EH 411. Capstone Internship. 3 Hours.**

This course is available to qualified English majors who wish to apply their knowledge and skills to a work setting. Students will fulfill the requirements for a university capstone course by reflecting on the applicability of disciplinary knowledge to internship responsibilities. Students should contact the Director of Internships to discuss available positions and application procedures.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 412. Forms of Poetry Writing Workshop. 3 Hours.**

Study of prosody and works of major formalist poets. Includes writing poems in received forms and modes and critiquing those in workshop setting.

**Prerequisites:** EH 405 [Min Grade: C] or EH 406 [Min Grade: C]

**EH 413. Forms of Creative Nonfiction. 3 Hours.**

Intensive study of one or more major nonfiction forms such as memoir, essay, or literary journalism. Includes writing nonfiction forms and critiquing them in a workshop setting.

**Prerequisites:** EH 407 [Min Grade: C] or EH 408 [Min Grade: C] or EH 409 [Min Grade: C] or EH 410 [Min Grade: C]

**EH 414. Modern British and European Drama. 3 Hours.**

Techniques and problems of modern European drama: Ibsen, Shaw, Chekhov, Synge, Pirandello, Brecht, Beckett, and others.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 415. Forms of Fiction. 3 Hours.**

Intensive study of one or more aspects of fiction. Includes writing and critique in a workshop setting.

**Prerequisites:** EH 407 [Min Grade: C](Can be taken Concurrently) or EH 408 [Min Grade: C] or EH 409 [Min Grade: C] or EH 410 [Min Grade: C]

**EH 416. Modern American Poetry. 3 Hours.**

Selections from Frost, Stein, Stevens, Pound, Eliot, Williams, Doolittle, Jeffers, Moore, McKay, Loy, Toomer, Crane, Hughes, and others.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 419. Young Adult Literature. 3 Hours.**

Close reading of young adult literature and study of its form and history, its assumptions about adolescent psychology, and its literary relationship to the traditional canon.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 420. World Literature. 3 Hours.**

Selections in translation from Greek, Roman, and Hebrew classics, other literature, and oral tradition.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 421. World Literature. 3 Hours.**

Selections in translation from European, African, and South American writers.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 422. African Literature. 3 Hours.**

Selected novels, short stories, autobiographies, folk tales, drama, essays, films, songs from pre-colonial Africa to the present, including works by Emecheta, wa Thiong'o'o, Head, Achebe, Ba, Armah, Laye, Salih, Soyinka, and Abrahams.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 423. African Women's Literature. 3 Hours.**

Writing in all genres by African women from pre-colonial Africa to the present.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 424. African-American Special Topics. 3 Hours.**

See Class Schedule for topic. May be repeated.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 426. Pre-1800 Literature: Special Topics. 3 Hours.**

See Class Schedule for topic. May be repeated.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 427. Post-1800 Literature: Special Topics. 3 Hours.**

See class schedule for topic. May be repeated.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 428. English Elective: Special Topics. 3 Hours.**

See class schedule for topic. May be repeated.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 429. Creative Writing: Special Topics. 3 Hours.**

Seminar in creative writing: see class schedule for topic. May be repeated.

**Prerequisites:** EH 305 [Min Grade: C](Can be taken Concurrently) or EH 306 [Min Grade: C] or EH 307 [Min Grade: C] or EH 308 [Min Grade: C] or EH 309 [Min Grade: C] or EH 310 [Min Grade: C]

**EH 430. Professional Writing: Special Topics. 3 Hours.**

See Class Schedule for topic. May be repeated.

**Prerequisites:** EH 203 [Min Grade: C] or EH 205 [Min Grade: C] or EH 210 [Min Grade: C] or EH 214 [Min Grade: C] or EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 431. Special Topics in Film. 3 Hours.**

In-depth study of a specialized topic in film, for example, a particular national cinema, one or more directors, a development in film history or genre, or issues in visual representation.

**Prerequisites:** EH 210 [Min Grade: C](Can be taken Concurrently) or EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 432. Public Discourse: Special Topics. 3 Hours.**

See course schedule for topics. Counts as Public Discourse in the English major concentration in Professional Writing and the English minor in Writing.

**Prerequisites:** EH 203 [Min Grade: C] or EH 205 [Min Grade: C] or EH 214 [Min Grade: C] or EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 433. Academic Writing. 3 Hours.**

Introduction for students in all disciplines, to the processes of scholarly inquiry and the most common genres of academic writing, including critiques, bibliographies, proposals, conference presentations, and articles. Writing is a significant component of this course.

**Prerequisites:** EH 203 [Min Grade: C] or EH 205 [Min Grade: C] or EH 210 [Min Grade: C] or EH 214 [Min Grade: C] or EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 435. Teaching Creative Writing. 3 Hours.**

Examines current theory and practice in teaching creative writing particularly in secondary schools and introductory college-level classes.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 436. Workshop in Writing for Young People. 3 Hours.**

Intermediate workshop in writing for young people through critique of student writing.

**Prerequisites:** EH 307 [Min Grade: C] or EH 308 [Min Grade: C] or EH 309 [Min Grade: C] or EH 310 [Min Grade: C]

**EH 441. Literary Theory and Criticism, the Ancients to the Nineteenth Century. 3 Hours.**

Introduction to theories of art and literary production in the contexts of aesthetics and culture from Plato to the end of the nineteenth century.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 442. Literary Theory and Criticism, the Twentieth Century to the Present. 3 Hours.**

Introduction to theories of art and literary production in the contexts of aesthetics and culture from Russian formalism to the present.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 443. Archetype and Myth. 3 Hours.**

Recurring images, underlying patterns, and shapes-of-meaning in poetry, fiction, and fairy tales.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 444. Women's Literature and Theory. 3 Hours.**

Literary works and theoretical perspectives of Angelou, Chopin, Hong, Kingston, Hurston, Walker, Woolf, Plath, and others.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 446. African American Autobiography. 3 Hours.**

Personal narratives by African Americans, including texts by Wheatley, Douglass, Jacobs, Wilson, DuBois, Johnson, Hurston, Hughes, Wright, Baldwin, Angelou, and Moody.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 447. African American Dramatic Tradition. 3 Hours.**

Development of African American dramatic tradition from the nineteenth century through the Harlem Renaissance and Black Arts movement to contemporary postmodernism, including Brown, Hurston, Baraka, and Wilson.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 448. African American Poetry Tradition. 3 Hours.**

Development of African American poetry from its early works to the present, including Wheatley, Dunbar, Hughes, Brooks, and Angelou.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 450. Advanced Grammar. 3 Hours.**

Present-day English grammar.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 451. Generative Grammar. 3 Hours.**

Introduction to Chomskian linguistic theory. Knowing a language involves knowing an intricate set of rules; this course gives one approach to modeling this linguistic knowledge.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 452. Grammar and Usage for English Teachers. 3 Hours.**

Overview of English grammar and usage, focusing on those topics that are presented in the classroom. Topics will include the difference between prescriptive and descriptive grammar, parts of speech, types of verbs, grammatical functions, agreements, sentence structure, tense, aspect, voice finite clauses, nonfinite clauses, clause types, Focus also on Reed-Kellogg sentence diagramming.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 453. History of the English Language. 3 Hours.**

Overview of language evolution from Proto-Indo-European to modern English dialects, including phonological shifts, dialectal distinctions, language families, and orthographical and syntactical changes.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 454. The Biology of Language. 3 Hours.**

Vocal tract and neuroanatomical specializations for language, language acquisition, genetic language disorders, language and other primates, and evolution of language.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 455. Digital Publishing. 3 Hours.**

Introduces students to new technologies for digital communication and the ways in which these technologies influence how people read, write, interact with, and share information.

**Prerequisites:** EH 203 [Min Grade: C] or EH 205 [Min Grade: C] or EH 210 [Min Grade: C] or EH 214 [Min Grade: C] or EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 456. Visual Rhetoric. 3 Hours.**

Analysis of the rhetorical characteristics of texts that incorporate both images and words in order to persuade audiences. Writing is a significant component of this course.

**Prerequisites:** EH 203 [Min Grade: C] or EH 205 [Min Grade: C] or EH 210 [Min Grade: C] or EH 214 [Min Grade: C] or EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 457. Writing and Medicine. 3 Hours.**

This course examines how the realm of medical knowledge and practice is written or constructed according to particular social and ethical values. Overarching institutional assumptions and norms as well as specific texts and practices will be considered in our study of medical discourse. Writing, Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** EH 203 [Min Grade: C] or EH 205 [Min Grade: C] or EH 210 [Min Grade: C] or EH 214 [Min Grade: C] or EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 458. Science Writing. 3 Hours.**

Instruction in the research methods and writing genres characteristic of science writing. Emphasis on understanding scientific language and composing documents about science in multiple formats and for multiple audiences.

**Prerequisites:** (PH 103 [Min Grade: D] or PHS 101 [Min Grade: D] or AST 101 [Min Grade: D] or AST 102 [Min Grade: D] or AST 104 [Min Grade: D] or AST 105 [Min Grade: D] or BY 101 [Min Grade: D] or BY 108 [Min Grade: D] or BY 111 [Min Grade: D] or BY 123 [Min Grade: D] or BY 124 [Min Grade: D] or CH 105 [Min Grade: D] or CH 107 [Min Grade: D] or CH 115 [Min Grade: D] or CH 117 [Min Grade: D] or CH 125 [Min Grade: D] or CH 127 [Min Grade: D] or ES 101 [Min Grade: D] or ES 103 [Min Grade: D]) and (EH 203 [Min Grade: C] or EH 205 [Min Grade: C] or EH 210 [Min Grade: C] or EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 214 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C])

**EH 459. Discourse Analysis. 3 Hours.**

Advanced practice in the analysis and writing of public discourse, with emphasis on the social politics of linguistic choices. Writing is a significant component of this course.

**Prerequisites:** EH 203 [Min Grade: C] or EH 205 [Min Grade: C] or EH 210 [Min Grade: C] or EH 214 [Min Grade: C] or EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 460. American Women Writers Before 1900. 3 Hours.**

Survey of American women's writing before 1900.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 461. American Literature, 1620 - 1820. 3 Hours.**

Representative American writing from colonial period to Washington Irving.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 462. American Literature, 1820 - 1870. 3 Hours.**

Representative writers such as Alcott, Cooper, Poe, Hawthorne, Melville, Emerson, Fuller, Fern, Harper, Thoreau, Jacobs, Whitman, Stowe, and Dickinson.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 463. American Literature, 1870 - 1914. 3 Hours.**

Realism and naturalism: Twain, James, Howells, Crane, Jewett, Wharton, Dreiser, Norris, and Chopin, among others.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 464. American Literature, 1914 - 1945. 3 Hours.**

Selected fiction, poetry, and drama of major American writers such as Eliot, Faulkner, Hemingway, Hurston, O'Neill, and Wright.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 465. American Literature, 1945-Present. 3 Hours.**

Selected fiction, poetry, and drama in context of post-war cultural trends and literary movements.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 466. The Slave Narrative and Its Literary Expressions. 3 Hours.**

Genre of slave narrative, its critical theories, and its nineteenth- and twentieth-century literary expressions. Includes Equiano, Jacobs, Wilson, Douglass, DuBois, Wright, Angelou, and Morrison.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 467. Black Women Writers. 3 Hours.**

Evolution of Afrocentric feminist consciousness through early and contemporary writings including works by Aiddo, Conde, Cooper, Chase-Riboud, Marshall, Morrison and Naylor.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 468. The Harlem Renaissance. 3 Hours.**

Black writers during Harlem Renaissance movement. Includes Johnson, Toomer, Murray, Larsen, McKay, Thurman, Reed, and Morrison.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 469. Medieval Culture: Literature and Society. 3 Hours.**

Exploration through art, literature, and history of dominant themes of Middle Ages, from Germans to Dante and Chaucer.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 470. Arthurian Legend. 3 Hours.**

King Arthur and his knights in literature from sixth-century history and formulation of legend in Middle Ages to its use in twentieth century.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 471. Beowulf in Context. 3 Hours.**

Beowulf and various texts that bear upon it (including modern literary and film adaptations), as well as a close study of the Norse analogues of the Old English epic. All texts in Modern English translation. Not appropriate for those who have taken EH 649.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 472. Introduction to Old English. 3 Hours.**

An introduction to the language and literature of early medieval England (pre-1100), culminating in analyses of *The Dream of the Rood* and *The Battle of Maldon* in the original alliterative verse.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 473. Chaucer: Pilgrimage to Canterbury. 3 Hours.**

Selections from *Canterbury Tales* and Chaucer's fourteenth-century milieu.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 474. English Renaissance Drama (Excluding Shakespeare). 3 Hours.**

Plays by Marlowe, Kyd, Jonson, Tourneur, Webster, Middleton, and Ford.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 475. English Renaissance Poetry and Prose. 3 Hours.**

Topics vary. Broad survey of period or close analysis of genre, theme, or author.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 476. Shakespeare. 3 Hours.**

Study of several major plays.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 478. Milton. 3 Hours.**

Selected prose and poetry, including *Paradise Lost*.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 480. The Restoration. 3 Hours.**

Interdisciplinary exploration of selected poems, plays, and essays by Restoration authors. Authors and topics vary.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 481. The Eighteenth Century: Literature and Culture. 3 Hours.**

Interdisciplinary exploration of texts that focuses on social, economic, and political backgrounds. Topics and authors vary.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 482. The Eighteenth Century: Theory and Interpretation. 3 Hours.**

Interdisciplinary exploration of selected texts by 18th-century authors that focuses on their formal and philosophical contexts. Authors and topics vary.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 483. British Romanticism. 3 Hours.**

Blake, Wordsworth, Coleridge, Byron, Shelley, Keats, Hazlitt, Lamb, and DeQuincy.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 485. British Victorian Poetry. 3 Hours.**

Selected works by Tennyson, Browning, Arnold, and others.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 486. Eighteenth-Century British Novel. 3 Hours.**

Selected works by Fielding, Defoe, Sterne, Smollet, Richardson.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 487. Nineteenth-Century British Novel. 3 Hours.**

Selected works by Austen, Dickens, Thackeray, Bronte, Trollope, Eliot, or other novelists.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 488. British Novel: The Modern Age. 3 Hours.**

Selected works by Conrad, Lawrence, Joyce, Woolf, Ford, and others.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 489. James Joyce. 3 Hours.**

Joyce's fiction through *Ulysses*.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 491. Eng Honors Research for Non-Concentrators. 3 Hours.**

This is an individual studies course for outstanding students beginning their work on an honors capstone thesis \*outside of their concentration\*. (Thesis writers writing a thesis within their area of concentration should take EH 494 instead.) During the first course of a two-course sequence, students will conduct research for that thesis and write a full-length prospectus for that thesis with an extended bibliography.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 493. Special Topics in Linguistics. 3 Hours.**

See class schedule for topic.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**EH 494. English Honors Research. 3 Hours.**

This is an individual studies course for outstanding students beginning their work on an honors capstone thesis. During the first course of a two-course sequence, students will conduct research for that thesis and write a full-length prospectus for that thesis with an extended bibliography.

**Prerequisites:** EH 301 [Min Grade: C]

**EH 495. Honors Capstone Thesis. 3 Hours.**

This is an individual studies course for outstanding students completing their work on an honors capstone thesis. During this second course of a two-course sequence, students will write and defend that thesis.

**Prerequisites:** EH 491 [Min Grade: C] or EH 494 [Min Grade: C]

**EH 496. Capstone Seminar. 3 Hours.**

Specific topics vary. This seminar will provide an opportunity for students to reflect upon and to use the knowledge, skills, and dispositions developed in previous English coursework. Required of all English majors. EH 496 is ideally taken in the final undergraduate semester.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**EH 497. Individual Studies. 1-3 Hour.**

Student and faculty member work together to define project; student conducts research and presents results as written report.

**LING-Linguistics Courses****LING 221. Introductory Descriptive Linguistics. 3 Hours.**

Description and analysis of non-Western languages.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C]

**LING 260. Language and Culture. 3 Hours.**

Nonverbal communication; language origins and acquisition; universals; language classification and processes of change; language as expression of cultural values and social structures; beginning componential and structural analysis.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**LING 350. Introduction to Linguistics. 3 Hours.**

Introduction to the scientific study of language with a main focus on principles underlying phonology, morphology, syntax and semantics. Relationship between language society, psycholinguistics and language typology may also be addressed.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**LING 351. Structure of English. 3 Hours.**

Description and analysis of present-day English grammar with particular attention paid to the structure of phrases, clauses and sentences, including parts of speech, coordination, subordination, tense, aspect, voice, grammatical functions, agreement and clause types.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**LING 352. The Structure of English Words. 3 Hours.**

Introduction to English vocabulary elements and word formation, including topics in history of English and sound patterns as these topics relate to word formation. Does not count as literature for Core Curriculum requirement.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**LING 355. Introduction to Sociolinguistics. 3 Hours.**

Social factors that play role in language usage and learning; emphasis on American English.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**LING 356. Semantics. 3 Hours.**

Meaning in language with reference to questions of synonymy, ambiguity, and language use.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**LING 360. Phonology. 3 Hours.**

Sound patterning of languages.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**LING 393. Special Topics in Linguistics. 3 Hours.**

See class schedule for topic.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**LING 450. Advanced Grammar. 3 Hours.**

Present-day English grammar.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**LING 451. Generative Grammar. 3 Hours.**

Introduction to Chomskian linguistic theory. Knowing a language involves knowing an intricate set of rules; this course gives one approach to modeling this linguistic knowledge.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**LING 452. Grammar and Usage for English Teachers. 3 Hours.**

Overview of English grammar and usage, focusing on those topics that are presented in the classroom. Topics will include the difference between prescriptive and descriptive grammar, parts of speech, types of verbs, grammatical functions, agreement, sentence structure, tense, aspect, voice, finite clauses, nonfinite clauses, clause types. Focus also Reed-Kellogg sentence diagramming.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**LING 453. History of the English Language. 3 Hours.**

Overview of language evolution from Proto-Indo European to modern English dialects, including phonological shifts, dialectal distinctions, language families, and orthographical and syntactical changes.

**Prerequisites:** EH 212 [Min Grade: C] or EH 213 [Min Grade: C] or EH 217 [Min Grade: C] or EH 218 [Min Grade: C] or EH 221 [Min Grade: C] or EH 222 [Min Grade: C] or EH 223 [Min Grade: C] or EH 224 [Min Grade: C]

**LING 454. The Biology of Language. 3 Hours.**

Vocal tract and neuroanatomical specializations for language, language acquisition, genetic language disorders, language and other primates, and evolution of language.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**LING 466. Computational Linguistics. 3 Hours.**

Computational Linguistics.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**LING 493. Special Topics in Linguistics. 3 Hours.**

See class schedule for topic.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**LING 494. Special Problems in Linguistics. 3 Hours.**

Supervised in-depth study of specified topic area in linguistics. Topics determined by student and instructor interest.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

**LING 495. Special Problems in Linguistics. 3 Hours.**

Supervised in-depth study of specified topic area in linguistics. Topics determined by student and instructor interest.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C] or EH 109 [Min Grade: C]

## Department of History

**Chair:** Dr. Jonathan Wiesen

The Department offers the Bachelor of Arts degree and the Master of Arts degree in History. The department also includes the Media Studies program (formerly known as Digital Community Studies Program) which offers a minor.

In its broadest sense, the discipline of history provides the background for all other subjects and disciplines. The classical goal of self-knowledge can be enhanced through the study of history. The analytical study of history provides an understanding of "why we are what we are" and "how we came to be where we are today." The purpose of historical study is not only an understanding of our own past and present, but an appreciation of the evolution of other cultures, civilizations, and nations.

Students interested in careers in the fields of law, teaching, public service, international affairs, business, journalism, and a variety of other areas involving the social sciences and humanities will find the history major beneficial and rewarding.

The Media Studies Program offers a minor for students interested in opportunities for applied research in local communities through the use of new media technology. The minor provides students a solid grounding in the history, theory and practice of documentary film, film history, oral history, ethnography, community studies, and media theory. Students

will gain experience in community-based research, as well as attain proficiency in various new media technologies.

## Bachelor of Arts with a Major in History

A grade of C or better is required in all History (HY) courses.

Requirements		Hours
<b>History Sequence <sup>1</sup></b>		
Select four of the following courses: <sup>2</sup>		12
HY 101	Western Civilization I	
HY 102	Western Civilization II	
HY 104	World History to 1600	
HY 105	World History 1600 to the Present	
HY 106	World History and Technology I	
HY 107	World History and Technology II	
HY 120	The United States To 1877	
HY 121	The United States Since 1877	
<b>Capstone</b>		
HY 497	History Capstone	3
<b>History Electives</b>		
Select seven courses in History (HY) not listed above, including three at the 400-level and two at the 300-level or above. Students must take two of their electives in U.S. history and two in non-U.S. history; one of the two non-U.S. history electives must be a non-Western history.		21
Total Hours		36

- <sup>1</sup> Completion of this requirement will automatically satisfy Core Curriculum Area IV: History.
- <sup>2</sup> Students may take only one course from HY 101, HY 104, HY 106, and one course from HY 102, HY 105, HY 107.
- <sup>3</sup> Students may take no more than a total of 6 semester hours of the following independent studies courses: Directed Readings in History (HY 491/HY 492) or Internship in Public History (HY 482).
- <sup>4</sup> Students must take 18 semester hours in 300- and 400-level courses at UAB.

## Proposed Program of Study for a Major in History

Freshman			
First Term	Hours	Second Term	Hours
EH 101	3	EH 102	3
MA 110		3 Core Curriculum Area IV: History <sup>1</sup>	6
Core Curriculum Area IV: History <sup>1</sup>		3 Core Curriculum Area II: Humanities	3
Core Curriculum Area II: Fine Art <sup>2</sup>		3 Core Curriculum Area IV: Social and Behavioral Sciences	3
Core Curriculum Area IV: Social and Behavioral Science	3		
	15		15
Sophomore			
First Term	Hours	Second Term	Hours
Core Curriculum Area II: Literature <sup>3</sup>		3 HY 300	3
Core Curriculum Area III: Natural Science with Laboratory		4 Core Curriculum Area III: Natural Science with Laboratory	4

History Survey	3 Core Curriculum Area II: Humanities	3
Elective	3 Elective	3
General Elective	3 General Elective	3
		16

Junior

First Term	Hours	Second Term	Hours
History (300 level and above)	3	History (400 level)	3
History (200 level and above)	3	History (300 level and above)	3
Elective	3	Elective	3
General Elective	6	General Elective	3
		General Elective	3
		15	15

Senior

First Term	Hours	Second Term	Hours
HY 497	3	History (400 level)	3
History (400 level)	3	History (300 level and above)	3
History (200 level and above)	3	Elective	3
Elective	3	General Elective	3
General Elective	3	General Elective	1-3
		15	13-15

Total credit hours: 120-122

- <sup>1</sup> Select one: HY 101, HY 102, HY 104, HY 105, HY 120 or HY 121.
- <sup>2</sup> Select One: ARH 101, ARH 203, ARH 204, ARH 206, MU 120, THR 100, THR 105 or THR 200.
- <sup>3</sup> Select One: EH 216, EH 217, EH 218, EH 221, EH 222, EH 223 or EH 224

Minor in History

A grade of C or better is required in all courses applied to the minor.

Requirements	Hours
Introductory History courses	
Select one of the following:	3
HY 101 Western Civilization I <sup>1</sup>	
HY 104 World History to 1600	
HY 106 World History and Technology I	
HY 120 The United States To 1877 <sup>1</sup>	
And one of the following:	3
HY 102 Western Civilization II <sup>1</sup>	
HY 105 World History 1600 to the Present	
HY 107 World History and Technology II	
HY 121 The United States Since 1877 <sup>1</sup>	
Select four additional courses (12 credit hours) at the 200-level or above.	12
Total Hours	18

<sup>1</sup> May also apply toward Core Curriculum Area IV.

**Note:** At least 3 semester hours in history above the 300 level must be taken at UAB. No grade below C may be counted toward the history minor.

Honors Program in History

Purpose

The History Honors Program is designed for outstanding history majors at UAB and allows qualified students to write a Honor’s Thesis based on

original research. Faculty-led independent research for the senior thesis provides students with experience in applying historical methods and analytical writing techniques. This more advanced study helps prepare undergraduate history majors for graduate work in the field or for post-graduate training in other areas such as law, theology, and medicine. Students who complete the program will graduate “With Honors in History.”

Eligibility

To be eligible for the History Honors Program, students must complete at least 60 semester hours with a minimum 3.0 overall GPA and a minimum 3.5 GPA in history courses. At least 24 semester hours in the history major (including HY 300 Historian’s Craft ) must be completed prior to acceptance in the Honors Program.

Interested students must apply for the program which includes submitting a prospectus with bibliography. The application must include the signature of a History Department faculty member who has agreed to direct the Honor’s Thesis. If the student is accepted to the program, the student and the thesis director will choose two additional faculty members to make up the student’s thesis committee. The thesis committee will determine whether the student’s completed thesis qualifies for honors.

Requirements

The History Honors Program requires 39 total semester hours in history and maintenance of an overall 3.0 GPA and a 3.5 GPA in history courses through graduation.

Additional requirements include:

Requirements	Hours
Select four from the following:	12
HY 101 Western Civilization I	
HY 102 Western Civilization II	
HY 104 World History to 1600	
HY 105 World History 1600 to the Present	
HY 120 The United States To 1877	
HY 121 The United States Since 1877	
HY 300 The Historian’s Craft <sup>1</sup>	3
HY 497 History Capstone <sup>2</sup>	3
Select two courses at the 300 or 400 level <sup>2</sup>	6
Select two courses at the 400 level or above <sup>2</sup>	6
Select two electives <sup>2</sup>	6
HY 401 Honors Thesis	3
Total Hours	39

- <sup>1</sup> The department recommends that this course be taken after completion of the lower-division survey requirement and before taking upper-division courses.
- <sup>2</sup> These courses may not be transferred from another institution and must be taken at UAB.

Honors students may take one or two graduate seminars in history for undergraduate credit with permission of the Director of the History Undergraduate Program. This credit may not be used for graduate credit.

## Contact

For additional information on the History Honors Program, contact the Department of History, Director of History Undergraduate Program or Chair; Telephone (205) 934-5634.

## Courses

### HY 101. Western Civilization I. 3 Hours.

This course examines the diverse cultures which are included in what is commonly referred to as the West. Students develop an understanding of the evolution of religious, political, social, military and economic structures and relationships in Europe and the Middle East up to 1600. Students develop an appreciation of how individuals have influenced and been influenced by time and place. Ethics and Civic Responsibility are significant components to this course. This course meets the Core Curriculum requirements for Area IV: History.

### HY 102. Western Civilization II. 3 Hours.

This course examines developments in the Western World since 1600. Since for most of this period, European culture dominated the world the course will also examine interactions between the West and non-European cultures. The course focuses on political, economic, social and cultural developments and stresses change and continuity over time as well as the various ideas and debates which have marked the modern West. Ethics and Civic Responsibility are significant components of this course. This course meets the Core Curriculum requirements for Area IV: History.

### HY 104. World History to 1600. 3 Hours.

This course is designed to provide students with an understanding of the development of major world civilizations from pre history to the early modern era (ca. 1600 CE). The principal characteristics of these civilizations such as political development, social structure, gender relations, religious beliefs and philosophies, will be examined. The ultimate goal is for students to see the world around them with an increased understanding and appreciation for the societies, traditions, and ideas that existed in the past and in many cases still exist and influence us today. Ethics and Civic Responsibility are significant components of this course. This course meets the Core Curriculum requirements for Area IV: History.

### HY 105. World History 1600 to the Present. 3 Hours.

This course will examine many significant world historical developments from the beginning of the early modern era (approximately 1600 CE) to the present. These historical developments include: intellectual movements, political revolutions and nationalism, industrialization, cultural changes, and the relationship between Western and non-Western societies. The ultimate goal of this course is for students to perceive the world around them with an increased understanding and appreciation for the diverse societies, traditions, and ideas that existed in the past and in many cases still exist and influence us today. Ethics and Civic Responsibility are significant components of this course. This course meets the Core Curriculum requirements for Area IV: History.

### HY 106. World History and Technology I. 3 Hours.

Survey of the role of technology in history from prehistoric times to the beginning of the Scientific Revolution. The first of a two-course sequence, it begins in the Paleolithic and Neolithic Eras and ends with the era of European global expansion. Students will consider not only about the great advances of humankind but also the scientific principles behind them, focusing on major themes such as power, water, transportation, and materials. The course uses tech as a lens through which to study humans' increasing control of the environment and interactions with the world around them.

### HY 107. World History and Technology II. 3 Hours.

Survey of the role of technology in history from the Enlightenment to the present day. It is the second of a two-course sequence. The course moves through the British Industrial Revolution in the 17th century and ends in the 21st century with examination of current issues and trends. Both the positive and negative impacts of technology development, including imperialism and Third World development, will be addressed.

### HY 120. The United States To 1877. 3 Hours.

This course provides an introduction to some of the main political, social, cultural, and economic developments in American history from the era of exploration and colonial settlement through the end of the Civil War. Central themes of the course will include the cross-cultural encounters (and clashes) in the Americas between various European and native peoples; the spectacular growth of European settlements in North America; the creation (always contested) of an American national identity; the emergence of a market economy and the question of American ideas of success and happiness. Ethics and Civic Responsibility are significant components of this course. This course meets the Core Curriculum requirements for Area IV: History.

### HY 121. The United States Since 1877. 3 Hours.

This course assists students in gaining a sophisticated understanding of the development of modern America - its politics, economics and social fabric together with how these have helped shape its foreign involvement. In the process, this course helps students understand the big idea of "change over time" and how all people face the choice of using change to help themselves and others - or not do this with resultant consequences. Finally, this course offers "lessons" out of our past about civic engagement, cultural diversity, and emerging globalism - "values" for productive citizenship on the contemporary scene. Ethics and Civic Responsibility are significant components of this course. This course meets the Core Curriculum requirements for Area IV: History.

### HY 201. Economic History of the United States. 3 Hours.

Economic developments of U.S. from colonial times to present, focusing on business organization, technology and innovation.

### HY 202. Reacting to the Past. 3 Hours.

Reacting to the Past" is an award-winning pedagogy involving complex, collaborative role-playing games in which students seek to attain "victory objectives" while grappling with central texts in the history of ideas. The class will conduct several Reacting games that will allow students to explore key moments in intellectual and cultural history.

### HY 203. History of American Technology. 3 Hours.

History of civilization of new technology in the United States emphasizing role of inventors and engineers.

### HY 206. Introduction to Film and History. 3 Hours.

This course will examine fiction and non-fiction films as socially significant documents. Students will receive an introduction to the techniques of film analysis in the class.

### HY 207. The American Film. 3 Hours.

Creation and development of motion pictures in the United States, including how films are made, American film industry, and impact of Hollywood on American culture.

### HY 208. Women in Film. 3 Hours.

This course will provide a history of women in film, focusing on both women working in the film industry and the representation of women on screen. The course will focus on American film history, 1930's Hollywood to the present.

### HY 210. History of American Medicine. 3 Hours.

Survey of patterns and trends in American medicine.

**HY 214. Roman Republic. 3 Hours.**

Survey of Roman history, society, and culture from the founding of the city of Rome in 753 BCE to the death of Julius Caesar in 44 BCE. Course covers the conquest of Italy, the Punic wars, and the conquest of the Hellenistic kingdoms. Emphasis on the impact of military success on the lifestyle and culture of the Roman people.

**HY 217. History of Ancient Greece. 3 Hours.**

Ancient Greece from prehistory to Alexander and the Hellenistic age.

**HY 218. History of the Roman Empire. 3 Hours.**

Survey of Roman history, society, and culture from the death of Julius Caesar in 44 BCE to the reign of Constantine in the early fourth century CE, with an emphasis on how the Roman empire ruled.

**HY 219. Late Antiquity and Early Middle Ages. 3 Hours.**

This course explores the transition from the Classical Greco-Roman Mediterranean world to the Middle Ages. It begins with the conversion of the Roman Empire to Christianity. Then it explores the collapse of the Western Roman Empire and the continuation of the Eastern Empire (known to historians as the Byzantine Empire). It places Mohammad and the rise of Islam in its historical context and explores the impact of the early Islamic conquests. The course will finish around the year 800 with the reign of Charlemagne in the West and Islamic Abbasid Dynasty ruling in Baghdad.

**HY 223. African-American History to 1865. 3 Hours.**

Ancient African civilizations and their demise, the slave trade and slavery in New World to the Civil War.

**HY 224. African-American History Since 1865. 3 Hours.**

Survey of late 19th century to present African American history.

**HY 225. History of Alabama. 3 Hours.**

Social, economic, and political survey of state from prehistory to present.

**HY 226. History and Development of Birmingham. 3 Hours.**

Social, economic, and political survey of the Birmingham area.

**HY 227. Technology and Society. 3 Hours.**

Relationship of machines and people in modern industrial society. Topics from recent American history and from contemporary problems.

**HY 228. Southern Industrial History. 3 Hours.**

Provides an overview of the major social, economic, and political developments behind the numerous attempts to industrialize the South from the post Civil War period to the present. Attention will be paid to Birmingham's Industrial District, the impact of World War I and World War II on Southern Industry, Labor Music, Women in Industry, Organized Labor and Unions, as well as the impact of the Space and Automobile Industry on the Modern South.

**HY 230. Middle East 550 BCE to 1453 CE. 3 Hours.**

Survey course on the history of the Middle East from the rise of the Persian Empire to the Ottoman conquest of Constantinople. Course covers the Persian Empire, Alexander the Great's conquests, Rome in the Middle East, the early Islamic Conquests, and the impact of the Crusades. The development of Judaism, Christianity, and Islam are emphasized.

**HY 234. The World Since 1945. 3 Hours.**

Events and trends from the end of the Second World War to the present, emphasizing the origins of the Cold War, decolonization, European integration, globalization, the rise of China, India and Japan, the revolutions in Eastern Europe in 1989 and the collapse of communism in the Soviet Union, the third wave of democratization, Islamic fundamentalism, 9/11, and the international financial crisis of 2008-2009.

**HY 235. War in the Modern World. 3 Hours.**

American military history from colonial times to present, including impact of Western ideas and technology on national defense policy.

**HY 236. Europe Since 1945. 3 Hours.**

After the Nazi catastrophe, what was to be the future of Europe? After sketching the context of unparalleled death and destruction, this course focuses on European reconstruction on both sides of the Iron Curtain. While contrasting Eastern and Western regimes, course will also seek to compare postwar recovery plans, cultural aesthetics, and shared legacies borne out of the experience of World War II. Strong emphasis is given to questions of memory and national identity, the history of European integration in the West, and socialist interdependence in the East. After 1989, course will focus on the expansion of the European Union, alongside transnational cultural phenomena such as European soccer, environmentalism, spaces of memory, and the loaded question of Europe's "boundaries" in the east and southeast.

**HY 239. The Holocaust in History and Literature. 3 Hours.**

This course introduces students to Nazi Germany's systematic mass murder of Europe's Jews and other minorities during the Second World War. While its primary focus is the history of these genocides and the historical discussions and debates that have arisen since 1945, it also attempts to present the students with a literary perspective on the Holocaust. Topics to be covered include the history of anti-Semitism, the debate over the role of Hitler in the Holocaust, the mindset of the perpetrators, Jewish reactions to the Holocaust, Holocaust denial, the "uniqueness" of the Holocaust, and memory after Auschwitz. We will read documents from the time period, contemporary historical studies on the Holocaust, and survivor accounts of their experiences.

**HY 245. Introduction to Latin American History. 3 Hours.**

A sweeping survey of Latin American history from colonial times through the contemporary era focusing on forces and patterns that have shaped the region as a whole, making it broadly distinct from our own "Anglo" America.

**HY 247. Indians, Spaniards & Creoles. 3 Hours.**

A history of Latin American society and civilization in the formative era of Iberian (Spanish & Portuguese) colonialism, 1492 through c. 1810. The course looks at major precolumbian civilizations; the Spanish Conquest; and nature of Spanish-Indian relations. It stresses the impact of Iberian values, norms, and institutions, i.e. Church and State, on the emergence of unique new hybrid or Creole societies by the end of the period.

**HY 248. Modern Latin America. 3 Hours.**

A survey of Latin American history from c. 1810 to the present. Covers the vital era of political independence and, through "case studies" of major countries, examines key trends and developments that have shaped the region and its 21 nations since then. Major topics include 19th century nation-state formation and economic modernization; 20th century urbanization, nationalism, social revolution, military dictatorships, and democratization, including the rise of influential women's (and feminist) movements.

**HY 251. Nineteenth-Century Europe. 3 Hours.**

National consolidation, imperialist adventure, and European society and politics from 1815 to 1914.

**HY 252. Twentieth Century Europe. 3 Hours.**

Europe as transformed by total war, economic dislocation, rise of totalitarian movements, and post-1945 integration from 1914 to present.

**HY 258. Britain and the Third World. 3 Hours.**

This course examines the relations between Great Britain, the modern world's first superpower and non-European peoples all over the world. In addition to examining issues of Empire, the course stresses the cultural interactions that were critical in the development of the modern world and the problems and opportunities of multi-ethnic societies. The course emphasizes those areas in Africa, Asia and the Middle East where the encounters between the British and the native culture created situations which are still major issues for the twentieth century world. Parallels to American experiences are also discussed. Ethics and Civic Responsibility are significant components of this course.

**HY 259. Social History of Crime. 3 Hours.**

This course examines the various approaches historians have made to the social and cultural history of criminal violence. While the topic is one that applies to every human society, most of the material deals with Europe and the United States.

**HY 260. History of Afro-Latin America. 3 Hours.**

This course surveys the history of those countries of Latin America, e.g. Cuba, Brazil and Colombia, that comprise the heart of the New World's African diaspora, having received most of the roughly 10 million Africans brought to Latin American shores during the centuries-long transatlantic slave trade. It explores the dramatic experiences of Afro-Latin Americans including their roles in the destruction of slave systems, creation of nations based on democratic principles, and rise of vibrant multicultural societies.

**HY 262. Introduction to Early Modern Spanish History. 3 Hours.**

Survey of the history of Spain from the 15th to the 18th centuries with emphases on the social and cultural effects of European expansion, race and religion, the Inquisitions, and Spain's contribution to European art and literature.

**HY 263. History of the Russian Empire. 3 Hours.**

Russian history from prehistory to 1917, focusing on development of Russian state and its social and political character.

**HY 264. Russian Revolution: 1917-1921. 3 Hours.**

Russian Revolution with emphasis on political, social, and national conflicts in cities, in countryside, and in non-Russian areas.

**HY 265. History of the Soviet Union 1917-1991. 3 Hours.**

Bolshevik Revolution and role of Soviet Union as world power.

**HY 270. Topics in History. 3 Hours.**

Special studies of historical topics. May be repeated.

**HY 271. Traditional East Asian History and Culture. 3 Hours.**

An introduction to the histories and cultures of East Asia (China, Japan, Korea, and Southeast Asia) from ancient times to 1800.

**HY 272. Modern East Asia. 3 Hours.**

A political and social history of East Asia and East Asia's relations with the West from 1800 to present.

**HY 273. The Black Power Movement. 3 Hours.**

The Black Power Movement remains one of the most compelling—and misunderstood—elements of African American History. Since the 1960s, critics have—at best—accused Black Power of distracting attention from more productive endeavors, betraying the promise of civil rights, and dividing an interracial coalition of sympathetic liberals. At worst, opponents have attacked Black Power as a foolish, racist, and violent threat to white America, the state, and the Black Freedom Struggle itself. Participants and scholars, however, tell a different story. Rather than divisive and destructive, the Black Power Movement was unifying and creative. Rather than betraying a winning civil rights coalition, Black Power exposed and challenged the limitations of white allies and liberal reform. Rather than a radical break with the past, Black Power represented a new articulation of old traditions of race pride and self-determination. Accordingly, this course favors a deep historical context.

**HY 274. LGBT History. 3 Hours.**

This course examines the social, cultural, political, and sexual history of LGBT Americans from the colonial period to the present. The course explores how historians have recovered the LGBT past to show how queer people have profoundly shaped American history. Key themes include the boundaries of same-sex friendship, desire, and community; the emergence and evolving meanings of heterosexuality and homosexuality as categories of identity, as well as other categories of sexuality and personhood; the medicalization of sexuality; modern queer cultures before and after the emergence of the post-World War II liberation movements; LGBT rights and politics; and other topics.

**HY 275. Perspectives on Science & Mathematics. 3 Hours.**

This course explores the intellectual, social, and cultural history of science and mathematics from the Renaissance to the present. It is designed for students in UABTeach and for general education students in order to put this broader history and context to work in science and mathematics education and to improve your writing, research, and information analysis skills.

**HY 278. Untold Stories: Oral History. 3 Hours.**

This course teaches the techniques and theories of oral history as a primary way to uncover untold or "hidden" histories of ordinary people. Students will conduct interviews of persons who participated in an aspect of history or who witnessed an important era.

**HY 279. Women Rogues, Radicals and Reformers. 3 Hours.**

This course looks at women as agents of their own history in the United States and of American society as a whole. It concentrates on how women have defined and used sexual politics, political radicalism, and reform agendas from the 1600s to the 1960s.

**HY 280. Historic Preservation and Public Policy. 3 Hours.**

Ways to research, assess, and use historic buildings and architecture as a way to study history and inform public policy.

**HY 285. Mapping Our World. 3 Hours.**

This course will focus on the historical applications of mapping and map-making. It will provide a background to geometric mapping and Geography using aerial photography, satellite remote sensing, Geographic Information Systems (GIS), and historical maps and related datasets. Students will be taught the importance of maps to a wide range of fields from a number of academic specialists. This will include the physical sciences (NASA atmospheric applications), biological sciences (environmental mapping), social sciences (crime mapping and archaeological mapping), health sciences (disease mapping), and humanities (religious mapping). Students will work in UAB labs and in broader Birmingham on learning ArcGIS and mapmaking skills, and will submit an e-Portfolio by the end of the semester. Quantitative Literacy is a significant component of this course.

**HY 289. Topics in African American History. 3 Hours.**

Special studies in African American historical topics.

**HY 290. Topics in History. 3 Hours.**

Special studies of historical topics. May be repeated.

**HY 291. Topics in History. 3 Hours.**

Special studies of historical topics. May be repeated.

**HY 292. Topics in History/SL. 3 Hours.**

Special studies of historical topics. May be repeated. Service Learning.

**HY 300. The Historian's Craft. 3 Hours.**

This course examines the values, methodology, and materials of historical analysis. During the semester students will develop their writing skills, study the quantitative aspects of historical scholarship and examine the ethical and civic responsibilities historians bear towards the profession and the larger community.

**HY 303. Women in American History. 3 Hours.**

Changing economic, political, and social roles of women from colonial period to present.

**HY 304. U.S. Civil Rights Movement. 3 Hours.**

History of civil rights from late 19th century to present; significance of movement to those involved and to rest of American society.

**HY 305. Popular Culture in American History. 3 Hours.**

Mass culture of U.S. through films and recorded sound, from creation of entertainment industry in 19th century to television and counterculture of 1960s.

**HY 307. The American Film. 3 Hours.**

Creation and development of motion pictures in the United States, including how films are made, American film industry, and the impact of Hollywood on American culture.

**HY 308. History of Popular Music in the United States. 3 Hours.**

Creation of musical entertainment, the changing audience, and diffusion of recordings from earliest recordings of music hall songs to rap and hip hop.

**HY 309. American Independent Film. 3 Hours.**

Focuses on the rise of the independent film in the 1980s and the struggle with mainstream Hollywood studios for dominance of cinema in the 1990s. Covers independent film makers, finance, scripts and what it takes to make a personal film.

**HY 310. Film in the 1960s. 3 Hours.**

The sixties were a revolutionary time for films and the film industry, and this course surveys film from Europe and Asia but with special emphasis on American film and the way it reflected the counter culture.

**HY 311. History of the Documentary Film. 3 Hours.**

Studies the development of the film documentary and the issues of representing reality on film. Deals with film aesthetic and the techniques of making films. Looks at American and European documentaries.

**HY 312. Rock n Roll and Race Relations. 3 Hours.**

Looks at popular music as a part of American Culture. Concentrates on the rise of R and B and rock n roll as the signifiers of a new youth culture in the United States with special emphasis on music in Birmingham.

**HY 313. Indie Rock from Punk to Post Modern. 3 Hours.**

Covers the rise of indie rock from the punks of the 1970s to the Seattle Sound of the 1990s, and its impact on popular culture. Also examines the influence of sampling, electronica and dance music on the alternative culture of the 1980s.

**HY 314. Roman Republic. 3 Hours.**

Survey of Roman history, society, and culture from the founding of the city of Rome in 753 BCE to the death of Julius Caesar in 44 BCE. Course covers the conquest of Italy, the Punic wars, and the conquest of the Hellenistic kingdoms. Emphasis on the impact of military success on the lifestyle and culture of the Roman people.

**HY 317. History of Ancient Greece. 3 Hours.**

Ancient Greece from prehistory to Alexander and the Hellenistic age.

**HY 318. History of the Roman Empire. 3 Hours.**

Survey of Roman history, society, and culture from the death of Julius Caesar in 44 BCE to the reign of Constantine in the early fourth century CE, with an emphasis on how the Roman Empire ruled.

**HY 319. Late Antiquity and Early Middle Ages. 3 Hours.**

This course explores the transition from the Classical Greco-Roman Mediterranean world to the Middle Ages. It begins with the conversion of the Roman Empire to Christianity. Then it explores the collapse of the Western Roman Empire and the continuation of the Eastern Empire (known to historians as the Byzantine Empire). It places Mohammad and the rise of Islam in its historical context and explores the impact of the early Islamic conquests. The course will finish around the year 800 with the reign of Charlemagne in the West and Islamic Abbasid Dynasty ruling in Baghdad.

**HY 320. Political History From Roosevelt to Roosevelt. 3 Hours.**

History of the period between 1900 and 1945, with emphasis on national politics.

**HY 321. Political History Since FDR. 3 Hours.**

A History of United States since 1945, with a special emphasis on national politics; includes Cold War domestic and foreign policy, the rights revolutions, changing political ideologies and identities, globalization and its effects.

**HY 322. The Great Depression in Film. 3 Hours.**

Examines the causes and effects of the Great Depression using both fictional and documentary films and required readings; students will analyze how Hollywood interpreted the lives of Americans during that period.

**HY 325. Southern Politics in the 20th Century. 3 Hours.**

The social and economic bases of Southern politics.

**HY 326. Mansions, Mines, and Jim Crow. 3 Hours.**

This course will study the history of Birmingham (1871-1950) by examining the few men who owned the mines and mills, the masses of men who worked for them, and the way that Jim Crow segregation kept the system from working.

**HY 329. US Women's Labor History. 3 Hours.**

Role and influence of working women on American history as social and political force in creating work identity and culture.

**HY 330. Middle East 550 BCE to 1453 CE. 3 Hours.**

Survey course on the history of the Middle East from the rise of the Persian Empire to the Ottoman conquest of Constantinople. Course covers the Persian Empire, Alexander the Great's conquests, Roman in the Middle East, the early Islamic Conquests, and the impact of the Crusades. The development of Judaism, Christianity, and Islam are emphasized.

**HY 333. Resistance and Revolution in British America. 3 Hours.**

This course examines popular resistance in seventeenth and eighteenth-century British America—including wars for indigenous sovereignty, slave uprisings, piracy, and mass protests for political rights. The course ends with the American war for independence, focusing on how the conflict impacted the diverse peoples who called America home.

**HY 334. The World Since 1945. 3 Hours.**

Events and trends from the end of the Second World War to the present, emphasizing the origins of the Cold War, decolonization, European integration, globalization, the rise of China, India, and Japan, the revolutions in Eastern Europe in 1989 and the collapse of communism in the Soviet Union, the third wave of democratization, Islamic fundamentalism, 9/11, and the international financial crisis of 2008-2009.

**HY 336. Europe Since 1945. 3 Hours.**

After the Nazi catastrophe, what was to be the future of Europe? After sketching the context of unparalleled death and destruction, this course focuses on European reconstruction on both sides of the Iron Curtain. While contrasting Eastern and Western regimes, course will also seek to compare postwar recovery plans, cultural aesthetics, and shared legacies borne out of the experience of World War II. Strong emphasis is given to questions of memory and national identity, the history of European integration in the West, and socialist interdependence in the East. After 1989, course will focus on the expansion of the European Union, alongside transnational cultural phenomena such as European soccer, environmentalism, spaces of memory, and the loaded question of Europe's "boundaries" in the east and southeast.

**HY 339. The Holocaust in History and Literature. 3 Hours.**

This course introduces students to Nazi Germany's systematic mass murder of Europe's Jews and other minorities during the Second World War. While its primary focus is the history of these genocides and the historical discussions and debates that have arisen since 1945, it also attempts to present the students with a literary perspective on the Holocaust. Topics to be covered include the history of anti-Semitism, the debate over the role of Hitler in the Holocaust, the mindset of the perpetrators, Jewish reactions to the Holocaust, Holocaust denial, the "uniqueness" of the Holocaust, and memory after Auschwitz. We will read documents from the time period, contemporary historical studies on the Holocaust, and survivor accounts of their experiences.

**HY 340. Popular Culture in the 1960s. 3 Hours.**

Covers the music, film, sport, and fashion of the Swinging Sixties. Concentrates on teen culture--sex, drugs and rock'n'roll—and the challenges of growing up in a racially and politically divided country. We examine the sixties' distinct style and attitude against the violent background of Vietnam, civil rights and technological change.

**HY 341. The U.S. and Latin America. 3 Hours.**

A history of the multi-faceted, often troubled, relations between the U.S. and its nearest southern neighbors since the early nineteenth century. While touching on various aspects of those relations, it stresses the geopolitical aspect, focusing on conflicts that have arisen as a result of different interests and perceptions as well as basic power asymmetries.

**HY 342. Sex & Latin American Society. 3 Hours.**

A social history of Latin America that traces the evolution of relations between the sexes since the colonial period and focuses on the role of gender (socially-constructed rather than biological differences between men and women), along with race, class, and other factors, in shaping the experiences of women in particular.

**HY 343. Modern Latin America. 3 Hours.**

A survey of Latin American history from c. 1810 to the present. Covers the vital era of political independence and, through "case studies" of major countries, examines key trends and developments that have shaped the region and its 21 nations since then. Major topics include 19th century nation-state formation and economic modernization; 20th century urbanization, nationalism, social revolution, military dictatorships, and democratization, including the rise of influential women's (and feminist) movements.

**HY 344. Nazi Germany. 3 Hours.**

This course examines explores the society, culture, and politics of Nazi Germany. Seventy-five years after the collapse of the Third Reich, National Socialism still poses numerous questions for historians: Why did Germans turn to a dictator to solve their social and economic problems? To what extent did the "average citizen" support Adolf Hitler's brutal and racist policies? Over the semester, we will keep in mind not only the key historical debates about the Third Reich, but also the moral issues that Nazism raises.

**HY 345. History of Madness. 3 Hours.**

This course traces the social, cultural, and political history of mental illness in the West from the mid nineteenth century to the present. In this class, we will pay particular attention to how cultural and social perceptions of "madness" changed as the contemporary prison replaced the lunatic asylum as the primary location for housing our society's mentally ill. How have both the diagnosis and treatment of mental illness changed over the course of the twentieth century? How have these diagnoses and treatments been divided along axes of race, class, gender, and sexuality? How has "madness" been represented in popular culture? And finally, how have the mentally disabled themselves sought to intervene in discourses surrounding mental health and illness? These are among the questions we will be asking this semester.

**HY 351. Continental Enlightenment 1680-1790. 3 Hours.**

Ideas and politics during 18th century, focusing on Western Europe outside France; new ideas about society, religion, and government in Italian and German states.

**HY 353. The Christians in History. 3 Hours.**

Origins, development, and spread of Christianity from antiquity to the modern world.

**HY 355. The Reformation. 3 Hours.**

Issues and meanings of the Protestant and Catholic Reformations of the 16th and 17th centuries, with particular attention to intellectual, social, and political dimensions.

**HY 357. Religion in Early Modern European History. 3 Hours.**

Examines the theological, social and political upheavals that shaped religious life and how religion permeated early modern culture from the abstract philosophical debates to the most mundane daily activities.

**HY 358. British Origins of American Democracy. 3 Hours.**

This course examines the influence that British political ideas, traditions, and institutions had on the formation of American democratic politics. Students will learn about the origins of British political parties, theories of government, newspapers and political media, mass protests, and representative assemblies. They will also examine how Americans adopted—and adapted—these political ideas and organizations to create a new nation. The course covers the period 1603-1789.

**HY 359. Social History of Crime. 3 Hours.**

This course examines the various approaches historians have made to the social and cultural history of criminal violence. While the topic is one that applies to every human society, most of the material deals with Europe and the United States.

**HY 360. The Celtic Fringe: Ireland, Scotland, Wales. 3 Hours.**

History of other Britain nations: Irish, Scots, and Welsh. Internal development and relations with England.

**HY 361. Britain and the World. 3 Hours.**

British foreign policy, emphasizing Empire and British relations with peoples outside Europe.

**HY 370. End of the U.S.S.R.. 3 Hours.**

An analysis of Gorbachev's impact on the Soviet Union and the social and political forces he unleashed.

**HY 371. Traditional East Asian History and Culture. 3 Hours.**

An introduction to the histories and cultures of East Asia (China, Japan, Korea, and Southeast Asia) from ancient times to 1800.

**HY 372. Modern East Asia. 3 Hours.**

A political and social history of East Asia and East Asia's relations with the West from 1800 to present.

**HY 373. The Black Power Movement. 3 Hours.**

The Black Power Movement remains one of the most compelling—and misunderstood—elements of African American History. Since the 1960s, critics have—at best—accused Black Power of distracting attention from more productive endeavors, betraying the promise of civil rights, and dividing an interracial coalition of sympathetic liberals. At worst, opponents have attacked Black Power as a foolish, racist, and violent threat to white America, the state, and the Black Freedom Struggle itself. Participants and scholars, however, tell a different story. Rather than divisive and destructive, the Black Power Movement was unifying and creative. Each session will combine collective discussion of the readings and group analysis of primary sources with an abbreviated lecture.

**HY 374. LGBT History. 3 Hours.**

This course examines the social, cultural, political, and sexual history of LGBT Americans from the colonial period to the present. The course explores how historians have recovered the LGBT past to show how queer people have profoundly shaped American history. Key themes include the boundaries of same-sex friendship, desire, and community; the emergence and evolving meanings of heterosexuality and homosexuality as categories of identity, as well as other categories of sexuality and personhood; the medicalization of sexuality; modern queer cultures before and after the emergence of the post-World War II liberation movements; LGBT rights and politics; and other topics. Cross-listed with HY274.

**HY 375. The Pacific War, 1931-1945. 3 Hours.**

The military and political conflict between Japan, China, and the United States from the Manchurian Incident to the atomic bombings of Hiroshima and Nagasaki.

**HY 378. Untold Stories: Oral History. 3 Hours.**

This course teaches the techniques and theories of oral history as a primary way to uncover untold or "hidden" histories of ordinary people. Students will conduct interviews of persons who participated in an aspect of history or who witnessed an important era.

**HY 379. Women Rogues, Radicals and Reformers. 3 Hours.**

This course looks at women as agents of their own history in the United States and of American society as a whole. It concentrates on how women have defined and used sexual politics, political radicalism, and reform agendas from the 1600s to the 1960s.

**HY 384. Health & Illness in Modern America. 3 Hours.**

This course will explore the history of health and illness in modern U.S. history from the Progressive Era to the present. Since the early twentieth century, public debates about health and illness have encompassed questions about identity and selfhood, the shifting relationship between government and society, gender and race relations, evolving definitions of sexuality, and widening social and class inequalities. In this course, we will look at how conceptions of both health and illness have changed over time in ways that reflect transformations in the broader social, economic, cultural, and political landscape. Topics to be explored include the AIDS crisis, the war on drugs, fitness and diet culture, vaccination scares, breastfeeding, the obesity epidemic, and the opioid crisis.

**HY 385. History of Haiti. 3 Hours.**

The dominant narrative of Haiti paints the country and people as poor, politically unstable, corrupt, violent, "Voodoo" worshippers, and plagued with zombies and "boat people" fleeing to the shores of Miami. In this course, we will examine the history of Haiti from slavery through the twentieth century and seek to gain a broader understanding of the country and to develop the tools to critically challenge these dominant narratives. We will consider the impact of colonialism, slavery, the Haitian Revolution, the ostracism of the first black republic in the nineteenth century, meanings of freedom, the Dominican Republic, relationship with foreign powers, immigration, U.S. intervention, and the Haitian diaspora among other topics.

**HY 388. History of American Medicine. 3 Hours.**

Survey of patterns and trends in American medicine.

**HY 389. Topics in African American History. 3 Hours.**

Special studies of African American historical topics. May be repeated.

**HY 390. Topics in History. 3 Hours.**

Special studies of historical topics. May be repeated.

**HY 391. Topics in History. 3 Hours.**

Special studies of historical topics. May be repeated.

**HY 392. Topics in History/SL. 3 Hours.**

Special studies of historical topics. May be repeated. Service Learning.

**HY 393. Topics in History. 3 Hours.**

Special studies of historical topics. May be repeated.

**HY 401. Honors Thesis. 3 Hours.**

Independent research project for honors students in history, directed by faculty advisor.

**HY 402. Reacting to the Past. 3 Hours.**

Reacting to the Past" is an award winning pedagogy involving complex, collaborative role-playing games in which students seek to attain "victory objectives" while grappling with central tests in the history of ideas. This class will conduct several Reacting games that will allow students to explore key moments in European intellectual and cultural history.

**HY 403. Colonial American History to 1765. 3 Hours.**

Examines colonial North America, especially Britain's colonies, their social and cultural development, and the emergence of distinctive British American and African American identities.

**Prerequisites:** HY 120 [Min Grade: D]

**HY 404. American Revolution. 3 Hours.**

This course provides an introduction to the history and historiography of the American Revolution and the emergence of the United States as a nation-state with emphasis on the origins of the Revolution, the progress of the War for Independence, the social consequences of the Revolution, the creation of the American Republic, and the contested memories and meanings of the Revolution and American identity.

**HY 405. War and Society in Early America. 3 Hours.**

Examination of the history of warfare in colonial North America and the impact of war on colonial and native societies. Topics will include the "military revolution" and colonial America, war and culture, and wars for empire.

**Prerequisites:** HY 120 [Min Grade: C]

**HY 406. Age of Jackson and the Market Revolution. 3 Hours.**

Examines the first 50 years of the 19th Century, commonly known as the Age of Jackson or the Market Revolution, as an era of profound economic, political and cultural revolutions that overwhelmed America as it became recognizably modern, industrial and democratic.

**HY 408. Early Republic, 1789-1828. 3 Hours.**

Intellectual, political, and social origins and aspects of decades and the search for a national culture and identity.

**Prerequisites:** HY 120 [Min Grade: C]

**HY 409. U.S. Constitutional History to 1877. 3 Hours.**

Landmark cases in interpretation of Constitution against background of American history.

**Prerequisites:** HY 120 [Min Grade: C]

**HY 410. U. S. Constitutional History Since 1877. 3 Hours.**

Landmark cases in interpretation of Constitution against background of American history.

**Prerequisites:** HY 121 [Min Grade: C]

**HY 411. The Antebellum South. 3 Hours.**

South from post-revolutionary era through 1860, emphasizing social and cultural developments and myths.

**Prerequisites:** HY 120 [Min Grade: C]

**HY 412. The American Civil War. 3 Hours.**

Origins of secession and political, social, military, and diplomatic developments during war.

**Prerequisites:** HY 120 [Min Grade: C]

**HY 413. Reconstruction in America. 3 Hours.**

Myths and realities of Reconstruction from 1865 to 1877.

**Prerequisites:** HY 120 [Min Grade: C]

**HY 414. The New South, 1877 to 1945. 3 Hours.**

Political, economic, and urban development of South from Reconstruction to end of World War II.

**HY 415. The Modern South, 1945 to Present. 3 Hours.**

Social, political, and cultural developments of post-World War II South, including urbanization, civil rights, political party transformations, ethnic diversification, and federal public policy.

**HY 416. The Fifties in America. 3 Hours.**

Examines the decade that was the 1950's using documentaries and movies to identify major events and trend which includes the Korea War, political change, civil rights, teen culture and changing sexual mores.

**HY 417. The Making of Modern America 1877-1920. 3 Hours.**

Changing forms of industrialism and social problems created; Populism, Progressivism, and other reform movements of era.

**HY 418. America in the 1920s and 1930s. 3 Hours.**

American popular culture, political development, and economic change in period between two World Wars.

**Prerequisites:** HY 121 [Min Grade: C]

**HY 419. The Second World War. 3 Hours.**

Diplomatic and military history, with emphasis on world-historical changes brought about by World War II.

**HY 420. Recent America 1945 to the Present. 3 Hours.**

Economic, social, and political trends; history of Cold War.

**HY 421. The Vietnam Wars, 1945-1975. 3 Hours.**

A social, political, and military history of the French and American wars in Vietnam during the Cold War era.

**HY 422. Ethnic Cleansing & Genocide 1912-2012. 3 Hours.**

With strong attention to definitions and critical approaches to comparative history, this course examines the varied forms of forced population movements in recent European history, moving from precedents during and after World War I through the era of upheaval during and after World War II. A significant portion of the course examines the legacy of these movements after 1945 and then broadens discussion to examine global forced population movements in the postwar period (India/Pakistan, Palestine/Israel, Rwanda, etc.) and contemporary cases. Alongside intensive readings, it incorporates a critical research paper devoted to an instance or aspect of forced population movement.

**HY 423. Southern Women: Image and Reality. 3 Hours.**

Southern women's lives from colonial period into 20th century. Contrasts myths, particularly myth of belle on pedestal, with realities of women's lives.

**Prerequisites:** HY 120 [Min Grade: C]

**HY 424. Emergence of Modern American 1877-1945. 3 Hours.**

Focused study of the final appearance of an industrial economy and the different approaches to the government it generated, including the various reform movements (populism, socialism, progressivism, latent civil rights, women's movement, New Deal) that spun out of this experience.

**Prerequisites:** HY 121 [Min Grade: C]

**HY 427. History of American Technology. 3 Hours.**

Development and impact of new technology in U.S. from colonial period to present.

**HY 428. Technology and American Life. 3 Hours.**

Impact of technology on modern American life and culture; automobile, television, and computer.

**HY 429. Workers in American Society. 3 Hours.**

Seventeenth century artisans to contemporary factory and office workers, organized and unorganized; effect of industrial and technological revolution on American labor, society, and politics.

**HY 430. U. S. Labor History. 3 Hours.**

Examines the multi-faceted lives of American workers from the colonial period to the late 20th Century with emphasis on their changing lives as economics changed.

**HY 431. American Film and Violent Society. 3 Hours.**

History of violent movies in the United States from earliest silent films to new gangster films of Quentin Tarantino. Meaning of these films and what they say about American society.

**HY 432. Labor History in Film. 3 Hours.**

Examines and contrasts the imagery of working class life with documentary and film.

**HY 435. American Urban History. 3 Hours.**

Major patterns of urbanization and urban life in American history.

**HY 436. Money and Capitalism. 3 Hours.**

The primary objective of this course is to acquaint students with the development of fundamental concepts in economic theory and major economic thinkers, their works and ideas from the late 18th century up to the recent past. There will be an emphasis on the evolution and synthesis of ideas basic to current economic theory. Written research, oral discussion, and critical analysis will make up a significant part of this course. Students will have ample opportunity to read, analyze, and discuss various issues and to consider, in a respectful but rigorous manner, the arguments, reasoning, and viewpoints of others. Significant weight will be given to participation in class discussions.

**HY 437. Resistance and Revolution in British America. 3 Hours.**

This course examines popular resistance in seventeenth and eighteenth-century British America—including wars for indigenous sovereignty, slave uprisings, piracy, and mass protests for political rights. The course ends with the American war for independence, focusing on how the conflict impacted the diverse peoples who called America home.

**HY 439. American Environmental History. 3 Hours.**

Changing perspectives on American environment and major issues in environmental history.

**HY 440. The Holocaust on Film. 3 Hours.**

We remember the Holocaust through film, and this class takes students on a journey that covers many films from many countries with many different viewpoints. Film not only tries to answer the How? And Why? questions but also seeks meaning and redemption in mankind's greatest crime. This class is taught in conjunction with the Birmingham Holocaust Education Center film series, and also gives students the opportunity to participate in remembrance events.

**HY 444. Nazi Germany. 3 Hours.**

This course examines explores the society, culture, and politics of Nazi Germany. Seventy-five years after the collapse of the Third Reich, National Socialism still poses numerous questions for historians: Why did Germans turn to a dictator to solve their social and economic problems? To what extent did the "average citizen" support Adolf Hitler's brutal and racist policies? Over the semester, we will keep in mind not only the key historical debates about the Third Reich, but also the moral issues that Nazism raises.

**HY 445. History of Madness. 3 Hours.**

This course traces the social, cultural, and political history of mental illness in the West from the mid nineteenth century to the present. In this class, we will pay particular attention to how cultural and social perceptions of "madness" changed as the contemporary prison replaced the lunatic asylum as the primary location for housing our society's mentally ill. How have both the diagnosis and treatment of mental illness changed over the course of the twentieth century? How have these diagnoses and treatments been divided along axes of race, class, gender, and sexuality? How has "madness" been represented in popular culture? And finally, how have the mentally disabled themselves sought to intervene in discourses surrounding mental health and illness? These are among the questions we will be asking this semester.

**HY 446. Nations of the Andes. 3 Hours.**

A study of the vital Andean region of South America since the time of the Inca Empire, with special focus on the rise of the modern-day countries of Peru, Chile, Ecuador and Colombia. Explores their struggles, starting in the 19th century, to transform their ethnically diverse, highly stratified societies into modern and more inclusive nations. Major topics include the impact of 19th century liberal nation-building and agro-export economies as well as 20th century nationalism, "indigenismo", social conflict, populism, revolutionary movements and contemporary ethnic rights movements; also, the rise of illicit drug-production and trafficking.

**HY 447. Modern Mexico. 3 Hours.**

Examines the evolution of the Mexican nation and its relations with the rest of the world from c.1800 to the present. This includes the country's dramatic 19th century struggles for political unity and survival; the U.S.-Mexican War and origins of Mexicans' Yankeeophobia; the epic Mexican Revolution of 1910 and its impact; and rise of modern Mexican nationalism as well as contemporary trends such as the restoration of electoral democracy since c. 2000.

**HY 448. Topics in History. 3 Hours.**

Special studies of historical topics. May be repeated.

**HY 449. Topics in History. 3 Hours.**

Special studies of historical topics. May be repeated.

**HY 450. Topics in Ancient History. 3 Hours.**

Special studies in ancient historical topics. May be repeated.

**HY 451. History of Greece. 3 Hours.**

Ancient Greece from prehistory to Alexander and Hellenistic Age.

**HY 452. History of Rome. 3 Hours.**

Ancient Rome from time of Etruscans through Republic and Empire until decline in the 4th century A.D.

**HY 453. Clash of Civilizations. 3 Hours.**

This course critically analyzes the conception of a clash between "eastern" and "western" civilizations through historical based case studies. Possible topics include the Greco-Persian wars, the early Islamic conquests, the Crusades, the Israeli-Palestinian Conflict, and the War on Terror.

**HY 454. Topics in Middle Eastern History. 3 Hours.**

Special studies in Middle Eastern historical topics.

**HY 455. Renaissance and Reformation. 3 Hours.**

From background of medieval society to birth of commercial, urban society; individualism; development of centralized territorial state; popular piety; humanism and art.

**Prerequisites:** HY 101 [Min Grade: D]

**HY 456. Seventeenth-Century Europe: Absolutism, Revolution and Science. 3 Hours.**

Evaluation of Seventeenth century through a study of the economy and society, statecraft and politics, warfare and the military revolution, the English civil war, the scientific revolution, and court life and absolutism.

**HY 457. Nineteenth-Century Europe. 3 Hours.**

National consolidation, imperialist adventure, and European society and politics, 1815-1914.

**HY 458. Modern Europe. 3 Hours.**

Europe as transformed by total war, economic dislocation, and rise of totalitarian movements; 1914 to present.

**HY 459. Spain and the Spanish Inquisition. 3 Hours.**

Examines early modern Spanish history covering the breakdown of the Spanish "convivencia," the rise of the Catholic kings and the absolutist state, the establishment of a Spanish colonial empire and its ultimate decline of power, as well as an examination of the Spanish Inquisition and its institutional development and function as a tool of the Spanish state.

**HY 460. Ancient and Medieval Britain. 3 Hours.**

Celtic, Anglo-Saxon, Roman, and Viking influences and evolution of kingdom from Norman Conquest to reign of Edward III.

**HY 461. English History: 1307-1660. 3 Hours.**

Social and political history of England from peasant uprisings of the late 14th century through Wars of the Roses, Tudor years, and civil war of the 17th century.

**HY 462. Early Modern Britain. 3 Hours.**

History of the nations of the British Isles from the civil wars of the 16th century to the beginning of the Victorian Age.

**HY 463. Victorian Britain. 3 Hours.**

Social and political history of 19th century Britain.

**HY 464. Modern Great Britain. 3 Hours.**

History of the British Isles from 1689 to the present, with a focus on transformations in British power and identity. The course covers the imperial conflicts of the eighteenth and nineteenth centuries, the industrial revolution and reform movements of the nineteenth century, and the problems Britain faced in the twentieth century, including world wars, the end of empire, and Britain's relationship to Europe.

**HY 465. French Enlightenment. 3 Hours.**

French Enlightenment as intellectual and social phenomenon.

**HY 466. The French Revolution. 3 Hours.**

Revolution as social, political, and cultural event and its place in modern European history and historiography.

**HY 467. Modern France 1815 - Present. 3 Hours.**

Economic, social and political history of France and the contentious issues of equality, democracy, and liberty between the Napoleonic era and the present.

**HY 468. Modern German History. 3 Hours.**

This course considers the important historical and moral questions posed by modern German history. Since the late 1800s, Germans have experienced two democracies, two dictatorships, the rise and fall of an empire, and two world wars. We will ask how Germans understood and adapted to rapid political, social, and cultural changes during this period. The course begins with the unification of Germany and explores such themes as World War I, the Weimar Republic, Nazism, the Holocaust, World War II, communism in East Germany, reunification, and the place of immigrants and minorities in the Modern Germany.

**HY 469. Stalin and Stalinism. 3 Hours.**

The life and times of Joseph Stalin (1878-1953) and his impact on the development of the Soviet Union after Lenin's death in 1924.

**Prerequisites:** HY 102 [Min Grade: C] or HY 105 [Min Grade: C] or HY 121 [Min Grade: C]

**HY 470. The Soviet Union Since 1953. 3 Hours.**

Soviet economic, political, and social trends since Stalin's death in 1953.

**Prerequisites:** HY 102 [Min Grade: C] or HY 105 [Min Grade: C] or HY 121 [Min Grade: C]

**HY 471. Russian Intellectual History. 3 Hours.**

The emergence of modern Russian intellectual thought from Peter the Great (1682-1725) to the outbreak of the First World War with special emphasis on philosophy, literature, history and the issue of the Russian identity, as formulated by those who claim that Russia is part of the West and those who claim that it is a completely exceptional political and culture entity.

**HY 472. Terror and Terrorism from French Revolution to Present. 3 Hours.**

History of terrorism from its advent during the French Revolution of 1789 to the global war of present time reviewing three main instances of terrorism in history; French Revolution from 1793 through 1794, Russia in the 1870s and 1880s and their civil war between 1918 and 1921, and the present-day conflicts involving the United States and the Middle East.

**HY 473. The Cold War. 3 Hours.**

A survey and assessment of the dynamic relationship between the United States and its allies and the Soviet Union and the People's Republic of China from the Second World War to 1991 and the collapse of the USSR. This course emphasizes the domestic as well as the international sources of this conflict, starting with the Second World War and communist ideology. It will cover the rise and fall of the international communist order, highlighting the differences between Soviet and Chinese efforts to reform their post-Stalinist and post-Mao systems in the 1980s, and the US role in this process.

**HY 475. Modern China. 3 Hours.**

China's political, social and cultural history from the final decades of the Qing dynasty in the 19th century to its re-emergence as a major world power in the late 20th century.

**HY 476. Japan to the 19th Century. 3 Hours.**

Japan's political and cultural history from its legendary beginnings to the final decades of the Tokugawa shogunate.

**HY 477. Modern Japan. 3 Hours.**

Japan's political and cultural history from the Meiji Restoration to the present.

**HY 478. Topics in European History. 3 Hours.**

Special Studies in European History. May be repeated.

**HY 480. Historic Preservation and Public Policy. 3 Hours.**

Ways to research, assess, and use historic buildings and architecture as a way to study history and inform public policy.

**HY 481. Public History. 3 Hours.**

Various approaches to interest and inform general public of local and state history. Visits to public history sites around Birmingham area.

**HY 482. Internship in Public History. 1-3 Hour.**

Individually designed program that allows students to work in local historic museums, archives, or other sites to gain professional experience in public history.

**HY 483. Internship in Environmental Studies. 1-3 Hour.**

Individually designed program that places students in local environmental organizations, divisions of local businesses or government, or special projects to gain professional experience in preparation for an environmental career.

**HY 484. Health & Illness in Modern America. 3 Hours.**

This course will explore the history of health and illness in modern U.S. history from the Progressive Era to the present. Since the early twentieth century, public debates about health and illness have encompassed questions about identity and selfhood, the shifting relationship between government and society, gender and race relations, evolving definitions of sexuality, and widening social and class inequalities. In this course, we will look at how conceptions of both health and illness have changed over time in ways that reflect transformations in the broader social, economic, cultural, and political landscape. Topics to be explored include the AIDS crisis, the war on drugs, fitness and diet culture, vaccination scares, breastfeeding, the obesity epidemic, and the opioid crisis.

**HY 489. Topics in African American History. 3 Hours.**

Special studies in African American historical topics. May be repeated.

**HY 490. Undergraduate Seminar in History. 3-6 Hours.**

Topic varies depending on professor.

**HY 491. Directed Readings in History. 3 Hours.**

Individually designed course of reading in various fields.

**HY 492. Directed Readings in History. 1-3 Hour.**

Individually designed course of reading in various fields.

**HY 497. History Capstone. 3 Hours.**

The History Capstone teaches students the skills and methodologies commonly used in the historical profession. This includes learning how to access and use archives and other primary sources. Students will be required to complete a research project based on primary sources.

**HY 498. Topics in History. 3 Hours.**

Special studies of historical topics. May be repeated.

**HY 499. Topics in History. 3 Hours.**

Special studies in historical topics. May be repeated.

# Department of Mathematics

**Chair:** Dr. Milena Stanislavova

The Department of Mathematics offers courses in pure and applied mathematics and a major and minor in mathematics leading to employment in education, government, business, and industry. In addition, mathematics courses are offered to support programs in the physical, social, biological, and health sciences and in engineering, business, and education. Students considering a major or minor in mathematics should consult the undergraduate advisor, Dr. Hutchison, at (205) 934-2154 to arrange for counseling on career and academic objectives and program planning.

The Department of Mathematics Web site (<https://www.uab.edu/cas/mathematics/>) summarizes information about the Departmental programs.

For the major there are four distinct B.S. degree tracks in mathematics:

1. Mathematics (traditional track)
2. Mathematics with Honors
3. Applied Mathematics and Scientific Computation
4. Mathematical Reasoning

Students interested in secondary teaching certification in mathematics normally take the traditional track. Students interested in middle school teaching normally take the mathematical reasoning track. Certification courses are part of the [UABTeach](#) program.

## Mathematics Fast-Track Program

The Department of Mathematics has an accelerated program for qualified students. Through this Fast-Track option, a mathematics major can earn a BS degree and an MS degree in mathematics in four to five years (depending upon whether summer terms are included). As another option, students can pursue a BS in mathematics and an MS in biostatistics by choosing the biostatistics track at the end of the third year. Each individual Fast-Track student works with a mentor from the graduate faculty on a mathematics research project during every term. Fast-Track students will usually begin taking graduate mathematics courses after the third year, and are automatically admitted to the graduate program in the fourth year, if performing satisfactorily. Students who complete this program will be prepared for continued graduate work in mathematics and the sciences, or for careers in industry. Fast-Track scholarships are available. For more information, contact the Honors Program Director, Dr. Oversteegen, at (205) 934-2154.

## Course Numbering System

Mathematics course numbers indicate both the level and area of the course. The first digit (0, 1, 2, 3, or 4) indicates developmental (no degree credit), freshman, sophomore, junior, or senior level, respectively. The second and third digits indicate area, according to this scheme:

- 00–10 — Pre-calculus
- 11–19 — History of mathematics and mathematical reasoning
- 20–29 — Logic and foundations
- 30–39 — Algebra
- 40–49 — Analysis
- 50–59 — Differential equations
- 60–69 — Applications-oriented courses
- 70–79 — Geometry and topology
- 80–89 — Probability and statistics
- 90–99 — Special topics, seminars, and independent research

For example, MA 454 Intermediate Differential Equations is an advanced level differential equations course. Calculus courses (MA 125, MA 225 , MA 126, MA 226 and MA 227) are exceptions to the area numbering scheme.

## Graduate Programs

The Department of Mathematics offers graduate study leading to the degrees of Master of Science in mathematics (thesis or non-thesis option) and Doctor of Philosophy in applied mathematics. Further information may be obtained from the Graduate Program Director, or the UAB Graduate School Catalog.

See the UAB Graduate School Catalog for descriptions of graduate courses.

## Bachelor of Science with a Major in Mathematics

Requirements		Hours
Required Mathematics Courses <sup>1</sup>		
Thirty-nine semester hours with twenty-one at the 300 level or above		
MA 125	Calculus I	4
or MA 225	Calculus I - Honors	
MA 126	Calculus II	4

or MA 226	Calculus II - Honors	
MA 227	Calculus III	4
MA 252	Introduction to Differential Equations	3
MA 260	Introduction to Linear Algebra	3
or MA 434	Algebra I: Linear	
MA 440	Advanced Calculus I	3
MA 441	Advanced Calculus II	3
Select one of the following:		3
MA 360	Scientific Programming	
CS 380	Matrix Computation	
MA 361	Mathematical Modeling	
MA 461	Modeling with Partial Differential Equations	
MA 468	Numerical Analysis I	

#### Mathematics Electives and Advanced Mathematics Sequence 12

Four electives selected from courses numbered 300 or above, each of which must have at least a calculus (MA 125) prerequisite. MA 313 counts toward the major only for students in UABTeach. MA 411 or MA 480 does not count toward the major.

Choose one of the following Advanced Mathematics sequences as electives:

MA 434 & MA 435	Algebra I: Linear and Algebra II: Modern	
MA 454 & MA 455	Intermediate Differential Equations and Partial Differential Equations I	
MA 455 & MA 461	Partial Differential Equations I and Modeling with Partial Differential Equations	
MA 474 & MA 475	Introduction to Topology I and Introduction to Topology II	
MA 485 & MA 486	Probability and Mathematical Statistics	
MA 485 & MA 587	Probability and Advanced Probability	

Total Hours 39

<sup>1</sup> Completion of MA 125 or MA 225 automatically satisfies the Core Curriculum Area III: Math requirement. MA 126 or MA 226, MA 252 and MA 361 are all quantitative literacy (QL) and writing (W) courses. In addition, MA 125 or MA 225 is a QL course. UAB requires that all students complete a capstone requirement. For this track the capstone requirement is MA 441.

## Grade Requirement

A grade of C or better is required in each course counted toward the major.

## Minor

- A minor is required for this degree. Those interested in secondary education can select the STEM Education minor offered by the School of Education.

## General Electives

Students must take general electives to reach the 120 semester hour requirement

## Bachelor of Science with a Major in Mathematics and an Applied Mathematics and Scientific Computation Track

This track aims to provide graduates with the mathematical and computational skills needed to develop and maintain mathematical models from the Sciences, Engineering, Medicine and the Biosciences, Business, and elsewhere.

A mathematical model is a rendering of some real-world system into the language of mathematics, usually taking the form of a single partial differential equation, or a system of such equations. The development of effective mathematical models is a fundamental need of our society, based as it is upon science and technology, and these models act as the indispensable link between us humans and the multitude of machines that we use to manage and investigate our world.

Requirements	Hours	
<b>Required Mathematics Courses <sup>1</sup></b>		
39 semester hours with 21 hours at the 300 level or above		
MA 125	Calculus I	4
or MA 225	Calculus I - Honors	
MA 126	Calculus II	4
or MA 226	Calculus II - Honors	
MA 227	Calculus III	4
MA 252	Introduction to Differential Equations	3
MA 260	Introduction to Linear Algebra	3
or MA 434	Algebra I: Linear	
MA 360	Scientific Programming	3
or CS 380	Matrix Computation	
MA 455	Partial Differential Equations I	3
or MA 461	Modeling with Partial Differential Equations	
or MA 486	Mathematical Statistics	
<b>Mathematics Electives</b>		<b>6</b>
Two additional electives selected from courses numbered 300 or above, and from areas 30-99 of the course numbering system for mathematics. MA 411 and MA 480 does not count toward the major.		
<b>Advanced Mathematics Electives</b>		<b>9</b>
Select three additional electives from the following courses:		
MA 434	Algebra I: Linear	
MA 435	Algebra II: Modern	
MA 444	Vector Analysis	
MA 445	Complex Analysis	
MA 454	Intermediate Differential Equations	
MA 455	Partial Differential Equations I	
MA 460	Mathematical Game Theory	
MA 461	Modeling with Partial Differential Equations	
MA 462	Intro to Stochastic Differential Equations	
MA 466	Introduction to Optimization	
MA 467	Gas Dynamics	
MA 468	Numerical Analysis I	
MA 484	Mathematical Finance	
MA 485	Probability	
MA 486	Mathematical Statistics	
MA 497	Research Methods in Mathematics	
MA 587	Advanced Probability	

<sup>1</sup> Completion of MA 125 or MA 225 automatically satisfies the Core Curriculum Area III: Math requirement. MA 126 or MA 226 and MA 252 are quantitative literacy (QL) and writing (W) courses. In addition, MA 125 or MA 225 is a QL course. UAB requires that all students must complete a capstone requirement. For this track the capstone requirement is one of MA 455, MA 461, and MA 486.

Grade Requirement

A grade of C or better is required in each course counted toward the major.

Minor

- A minor in the sciences, business, or engineering is required for this degree. Students in UABTeach may select the minor in STEM Education offered by the School of Education.

General Electives

Students must take general electives to reach the 120 semester hour requirement.

Bachelor of Science with a Major in Mathematics and a Mathematical Reasoning Track

The Mathematical Reasoning Track is designed to develop a deeper level of understanding of mathematical thinking, including a deepening knowledge of important mathematical ideas, understanding the role of inquiry and reflection in learning mathematics, understanding the role of cultivating a productive disposition in tackling mathematical problems, and developing the ability to communicate mathematics to audiences at different levels. In particular, this track is appropriate for students interested in pursuing certification in mathematics at the middle school level.

Requirements		Hours
Required Mathematics Courses <sup>1</sup>		
MA 125	Calculus I	4
or MA 225	Calculus I - Honors	
Select two courses from the following three groups:		6-7
MA 106	Pre-Calculus Trigonometry <sup>2</sup>	
or MA 107	Pre-Calculus Algebra and Trigonometry	
MA 110	Finite Mathematics	
or MA 418	Statistics for Teachers	
MA 126	Calculus II	
or MA 226	Calculus II - Honors	
Additional Required Mathematics Courses		
MA 311	History of Mathematics I	3
MA 313	Patterns, Functions and Algebraic Reasoning	3
MA 314	Geometric and Proportional Reasoning	3
MA 316	Numerical Reasoning	3
MA 361	Mathematical Modeling	3
MA 411	Integrating Mathematical Ideas	3
Mathematics Electives		
Two electives selected from the following courses: MA 260 or MA 434, MA 418, MA 419, MA 435, MA 460, MA 472, MA 485		6
Total Hours		34-35

<sup>1</sup> Completion of MA 106 or MA 107 automatically satisfies the Core Curriculum Area III: Math requirement. MA 106, MA 107, MA 110, MA 125 or MA 225, MA 361, MA 418 are all quantitative literacy courses. In addition, MA 361 is a QEP writing (W) course. UAB requires that all students complete a capstone requirement. The capstone requirement for this track is MA 411 . At least three courses in this major must be at the 400 level.

<sup>2</sup> Students cannot count both MA 106 and MA 107 toward their major.

<sup>3</sup> MA 419 cannot be repeated for credit toward this major.

Grade Requirements

A grade of C or better is required in each course counted toward the major. Requirements are 34-36 semester hours in mathematics with 24 at the upper level (courses numbered 300 and above). Nine hours must be taken at the 400 level.

Minor

- A minor is required for this degree. Those interested in middle school education can select the STEM Education minor offered by the School of Education.

General Electives

Students must take general electives to reach the 120 semester hour requirement

Proposed Program of Study for a Major in Mathematics with a Traditional Track

Freshman			
First Term	Hours	Second Term	Hours
MA 125		4 MA 126	4
EH 101		3 EH 102	3
HY 101		3 HY 102	3
ARH 101		3 CS 103	4
CAS 112 or EHS 125	1		
		14	14
Sophomore			
First Term	Hours	Second Term	Hours
MA 227		4 MA 252	3
MA 260		3 EH 216	3
PH 221		4 CS 250	3
CS 203		4 PH 222	4
		General Elective	3
		15	16
Junior			
First Term	Hours	Second Term	Hours
MA 361		3 MA 435	3
MA 472		3 EC 210	3
CMST 101		3 CS 330	3
CS 303		3 PHL 115	3
PY 101		3 General Electives	4
		15	16
Senior			
First Term	Hours	Second Term	Hours
MA 440		3 MA 441	3
MA 485		3 MA 486	3

General Elective	9 General Electives	9
	15	15

Total credit hours: 120

## Proposed Program of Study for a Major in Mathematics with a Traditional Track and Leading to Secondary Teaching Certification

### Freshman

First Term	Hours	Second Term	Hours
MA 125		4 MA 126	4
EH 101		3 EH 102	3
HY 101		3 HY 102	3
ARH 101		3 CS 103	4
EHS 125		1 EHS 126	1
	14		15

### Sophomore

First Term	Hours	Second Term	Hours
MA 227		4 MA 252	3
MA 361		3 PH 222	4
PH 221		4 EH 216	3
EHS 325		3 HY 275 or PHL 270	3
		PY 101	3
	14		16

### Junior

First Term	Hours	Second Term	Hours
MA 260		3 MA 435	3
MA 472		3 MA 486	3
MA 485		3 EC 210	3
CMST 101		3 PHL 115	3
EHS 326		3 Elective	4
	15		16

### Senior

First Term	Hours	Second Term	Hours
MA 440		3 MA 441	3
EHS 327		3 EHS 425	6
Elective		9 EHS 426	1
		Elective	5
	15		15

Total credit hours: 120

## Proposed Program of Study for a Major in Mathematics with an Applied Mathematics and Scientific Computation Track

### Freshman

First Term	Hours	Second Term	Hours
MA 125		4 MA 126	4
EH 101		3 EH 102	3
HY 101		3 HY 102	3
Core Area II or IV course		3 Core Area II or IV Course	3
CAS 112 or EHS 125		1 General Elective	3
	14		16

### Sophomore

First Term	Hours	Second Term	Hours
MA 227		4 MA 252	3
MA 260		3 Core Area II or IV Course	3
CS 103		4 Core Area III Science	4
Core Area III Science		4 Core EH Literature	3
		CS 203	4
	15		17

### Junior

First Term	Hours	Second Term	Hours
MA 360		3 MA 4XX elective	3
MA 4XX Elective		3 MA Elective	3
Core Area II or IV Courses		6 CS 303	3
CS 250		3 Core Area II or IV Course	3
		General Elective	3
	15		15

### Senior

First Term	Hours	Second Term	Hours
MA 4XX Elective		3 MA 4XX Elective	3
CS 330		3 MA Elective	3
MA Elective		3 General Electives	7
General Electives		6	
	15		13

Total credit hours: 120

## Proposed Program of Study for a Major in Mathematics with a Mathematical Reasoning Track

### Freshman

First Term	Hours	Second Term	Hours
MA 110 or 418		3 MA 106	3
EH 101		3 EH 102	3
HY 101		3 HY 102	3
Core Area II or IV Course		3 Core Area II or IV Course	3
EHS 125		1 EHS 126	1
General Elective		3 General Elective	3
	16		16

### Sophomore

First Term	Hours	Second Term	Hours
MA 125		4 MA 314	3
MA 313		3 Core Area II or IV Course	3
Core EH Literature		3 General Elective	3
Core Area II or IV Course		3 Core Area III Science	4
EHS 325		3 HY 275 or PHL 270	3
	16		16

### Junior

First Term	Hours	Second Term	Hours
MA 316		3 MA 361	3
EHS 326		3 MA 411	3
Core Area III Science		4 MA 4XX Approved Elective	3
Core Area II or IV Course		3 Core Area II or IV Course	3
General Elective		3 CS 103	4
	16		16

**Senior**

First Term	Hours	Second Term	Hours
MA 311		3 EHS 425	6
MA 4XX Approved Elective		3 EHS 426	1
EHS 327		3 General Elective	3
General Electives	5		
	14		10

Total credit hours: 120

The above schedule assumes the student is in UABTeach and is pursuing middle school certification. If not, EHS courses should be replaced by courses fulfilling requirements for a minor course of study.

## Minor in Mathematics

Requirements	Hours
<b>Required Mathematics Courses</b>	
MA 125 Calculus I <sup>1</sup>	4
or MA 225 Calculus I - Honors	
MA 126 Calculus II	4
or MA 226 Calculus II - Honors	
MA 227 Calculus III	4
<b>Mathematics Electives</b>	
Select nine hours from Mathematics courses numbered 200 or above. <sup>2</sup>	9
Total Hours	21

<sup>1</sup> MA 125 or MA 225 Calculus I may also satisfy the Core Curriculum Area III: Math requirement; check the Core Curriculum for your particular major.

<sup>2</sup> At least 6 semester hours of which must have a calculus (MA 125) prerequisite. MA 411 and MA 480 do not count toward the minor.

## GPA & Residency Requirement

A minimum grade of C is required in all courses applied to the minor. A minimum of six semester hours with a calculus (MA 125) prerequisite must be completed at UAB.

## Honors Program

The Mathematics Honors Program is designed for advanced, motivated students. Through a mentored research program format and seminars, research and communication skills are developed in preparation for a graduate or professional career.

The Mathematics Honors Program fosters a spirit of inquiry, independence, and initiative along with providing an overview of the relationships among the branches of mathematics studied. The student will have an early opportunity to tackle a mathematical research project while interacting one-on-one with faculty members in a research setting. The mentoring, the approved seminars, and the oral presentation or poster should all contribute to the student's development. Upon completion of the program, the student will graduate "With Honors in Mathematics."

## Acceptance into the Mathematics Honors Program requires the student:

- to be a mathematics major in the traditional track;
- to have earned a 3.5 GPA in mathematics courses attempted;
- to have earned a 3.0 GPA overall;

- to have arranged with one or more faculty mentors to work on undergraduate research projects for six semester hours distributed over two or more terms; and
- to have filled out and submitted the Mathematics Honors Program application form to the Undergraduate Program Director.

## Major requirements for the Mathematics Honors Program:

- to be a mathematics major in the traditional track;
- to complete an additional 9 hours of approved seminar (3 hours) and research (6 hours);
- to have earned a 3.5 GPA in mathematics courses and a 3.0 GPA overall; and
- to present an oral or poster presentation on mathematics in an academic setting

## Suggested Curriculum for the Honors Program:

**Freshman**

First Term	Hours	Second Term	Hours
MA 125 or 225		4 MA 126 or 226	4
EH 101		3 EH 102	3
HY 101		3 HY 102	3
ARH 101		3 CS 103	4
FYE/FLC Course (credit hours may vary)		2 PHL 115	3
	15		17

**Sophomore**

First Term	Hours	Second Term	Hours
MA 227		4 MA 252	3
MA 298		1 MA 361	3
MA 434		3 MA 298	1
EH 216		3 PH 221	4
EC 210		3 EC 211	3
Minor Course	3		
	17		14

**Junior**

First Term	Hours	Second Term	Hours
MA 398		1 MA 441	3
MA 440		3 MA Elective	3
MA 490		1 MA 398	1
PH 222		4 MA 490	1
MA Elective		3 CMST 101	3
CS 203		4 CS 303	3
	16		14

**Senior**

First Term	Hours	Second Term	Hours
MA 490		1 MA Sequence	3
MA sequence		3 MA 490	1
MA 498		1 MA 498	1
CS 330		3 General Electives	7
General Electives	7		
	15		12

Total credit hours: 120

## Courses

### MA 094. Basic Mathematics. 3 Hours.

Whole numbers, fractions, decimals, ratios and proportions, percentages, integers, basic geometry, and basic algebra including linear equations and applications. Designed to prepare students for MA 110, Finite Mathematics. Students preparing to take MA 102 should take MA 098. Attendance at the first meeting is mandatory. MA 094 section QL is an on-line version of MA 094 intended primarily for students who have job conflicts or live a long distance from the campus. There are no campus based meetings with the on-line class. However, students in the on-line version of MA 094 are required to interact with peers and the instructor through an on-line format and should be able to work independently and be motivated self-starters who are confident in their ability to master mathematics. Non-credit; does not contribute to any degree requirements. 0.000 Credit Hours.

### MA 094L. Basic Mathematics Lab. 2 Hours.

This course is a 2 credit hours co-requisite lab designed to supplement the introduction to finite mathematics course MA 108. The lab provides detailed and comprehensive review of whole numbers, fractions, decimals, ratios and proportions, percentages, integers, basic geometry, and basic algebra including linear equations and applications. The emphasis is on hands-on, individualized guidance for mastering the above concepts as well as problem solving and examples of applications in the topics discussed and presented in MA 108.

### MA 098. Basic Algebra. 3 Hours.

Arithmetic of integers, rational numbers, real numbers, exponents, polynomial algebra, factoring, rational functions, linear and quadratic equations, elementary geometry, verbal problems. Designed to prepare students for college level math courses. Attendance at the first meeting is mandatory. MA 098 section QL is an on-line version of MA 098 and is intended primarily for students who have job conflicts or live a long distance from the campus. There are no campus based meetings with the on-line class. However, students in the on-line version of MA 098 are required to interact with peers and the instructor through an on-line format and should be able to work independently and be motivated self-starters who are confident in their ability to master mathematics. Non-credit; does not contribute to any degree requirements. 0.000 Credit Hours.

### MA 102. Intermediate Algebra. 3 Hours.

Absolute values, Cartesian coordinates, graphs of linear equations, concept of a function, linear systems, algebra of polynomials, factoring of polynomials, algebra of rational expressions, literal equations, word problems involving linear, rational and quadratic models, integer and rational exponents, radical expressions, rational, radical and quadratic equations, complex numbers. 3 hours of mandatory class and lab meetings per week. Quantitative Literacy is a significant component of this course. MA 102 section QL is an on-line version of MA 102 and is intended primarily for students who have job conflicts or live a long distance from the campus. There are no campus based meetings with the on-line class. However, students in the on-line version of MA 102 are required to interact with peers and the instructor through an on-line format and should be able to work independently and be motivated self-starters who are confident in their ability to master mathematics.

**Prerequisites:** MA 098 [Min Grade: C] or MPL 30 or EMA E

### MA 105. Pre-Calculus Algebra. 3 Hours.

Functions from algebraic, geometric (graphical), and numerical points of view, including polynomial, rational, logarithmic, and exponential functions; inverse functions; systems of equations and inequalities; quadratic and rational inequalities; complex and real roots of polynomials; applications and modeling, both scientific and business. Supports development of quantitative literacy. Attendance at the first meeting is mandatory. May not be enrolled in Undergraduate Certificate. Lecture, online at least 80%. Quantitative Literacy is a significant component of this course. This course meets the Core Curriculum requirements for Area III: Mathematics.

**Prerequisites:** MA 102 [Min Grade: C] or MPL 46 or EMA E

### MA 106. Pre-Calculus Trigonometry. 3 Hours.

Trigonometric functions (circular functions) and their inverses, graphs, and properties; right triangle trigonometry and applications; analytical trigonometry, trigonometric identities and equations; polar coordinates; complex numbers; laws of sines and cosines; conic sections. Supports development of quantitative literacy. Attendance at the first meeting is mandatory. Quantitative Literacy is a significant component of this course. This course meets the Core Curriculum requirements for Area III: Mathematics.

**Prerequisites:** MA 105 [Min Grade: C] or MPL 61 or EMA E

### MA 107. Pre-Calculus Algebra and Trigonometry. 4 Hours.

Functions, their graphs and applications, including polynomial, rational, algebraic, exponential, logarithmic, and trigonometric functions. A fast-paced course designed as a review of the algebra and trigonometry needed in calculus. (MA107 is a combination of MA105 Pre-Calculus Algebra and MA106 Pre-Calculus Trigonometry taught in a single semester.) Satisfies core curriculum requirement in mathematics. Supports development of quantitative literacy. Attendance at the first meeting is mandatory. Quantitative literacy is a significant component of this course. This course meets the Core Curriculum requirements for Area III: Mathematics.

**Prerequisites:** MA 102 [Min Grade: B] or MPL 68 or EMA E

### MA 108. Introduction to Finite Mathematics. 3 Hours.

This course provides a hands on, individualized overview of finite mathematics and applications of mathematics for the liberal arts student. Topics include counting, permutations, combinations, basic probability, conditional probability, descriptive statistics, binomial and normal distributions, statistical inference, and additional selected topics. Students construct models of problem situations, translate verbal descriptions into mathematical form, interpret and create schematic representations of mathematical relationships, use quantitative evidence as a basis for reasoning, argument, and drawing conclusions, and communicate their results to an audience appropriately. This course is co-requisite with MA094L. May not be enrolled in Undergraduate Certificate. Quantitative Literacy is a significant component of this course.

**MA 110. Finite Mathematics. 3 Hours.**

An overview of topics of finite mathematics and applications of mathematics for the liberal arts student. Topics include counting, permutations, combinations, basic probability, conditional probability, descriptive statistics, binomial and normal distributions, statistical inference, and additional selected topics. Students construct models of problem situations, translate verbal descriptions into mathematical form, interpret and create schematic representations of mathematical relationships, use quantitative evidence as a basis for reasoning, argument, and drawing conclusions, and communicate their results to an audience appropriately. May not be enrolled in Undergraduate Certificate. Quantitative Literacy is a significant component of this course. This course meets the Core Curriculum requirements for Area III: Mathematics.

**Prerequisites:** MA 094 [Min Grade: C] or MA 098 [Min Grade: C] or MA 102 [Min Grade: C] or MTH1 75 or MTH2 75 or MTH3 75 or MTH4 75 or MTH5 75 or MPL 30 or EMA E

**MA 120. Introduction to Symbolic Logic. 3 Hours.**

Modern theory of deductive inference. Emphasis on recognizing valid forms of reasoning. Truth-function theory and some concepts of one-variable quantification theory. May not be used to satisfy Core Curriculum requirement in mathematics.

**MA 125. Calculus I. 4 Hours.**

Limit of a function; continuity, derivatives of algebraic, trigonometric exponential, and logarithmic functions, application of derivative to extremal problems, optimization, and graphing; Newton method; the definite integral and its application to area problems; fundamental theorem of integral calculus, average value, and substitution rule. Quantitative literacy is a significant component of this course. This course meets the Core Curriculum requirements for Area III: Mathematics.

**Prerequisites:** MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MTH4 75 or MTH5 75 or MPL 76 or EMA E or A02 29 or SAT2 680

**MA 125L. Calculus I Lab. 0 Hours.**

This course is a zero credit hours co-requisite lab designed to supplement the lectures. The emphasis will be on problem solving and examples of applications of the concepts discussed and presented during lectures. The laboratory will also use computer programs for problem-solving, visualization, plotting and simulation. The topics covered are: Limit of a function; continuity, derivatives of algebraic, trigonometric, exponential, and logarithmic functions, application of derivative to extremal problems, optimization, and graphing; Newton method; the definite integral and its application to area problems; fundamental theorem of integral calculus, average value, and substitution rule. Quantitative literacy is a significant component of this course.

**MA 126. Calculus II. 4 Hours.**

Techniques of integration; applications in integration such as volume, arc length and work; infinite series, Taylor series; polar coordinates; parametric equations; plane and space vectors; lines and planes in space. Quantitative Literacy is a significant components of this course. This course meets the Core Curriculum requirements for Area III: Mathematics.

**Prerequisites:** MA 125 [Min Grade: C] or MA 225 [Min Grade: C] or MTH5 75

**MA 160. Linear Algebra: Data and Models. 4 Hours.**

The course teaches linear algebra mostly from a process point of view with multiple examples to engender conceptual understanding through noting commonalities of the basic structures of finite-dimensional Euclidean spaces. Beginning with two and three dimensional Euclidean spaces where algebraic and geometric viewpoints can be seen to correspond, we extend processing and understanding to higher dimensional spaces through software. The lab will run prepackaged computer programs for determining some basic structures from others. Throughout the course development, applications in areas such as analysis of data sets, biological models, genetics, imaging science, page ranking, optimization, financial models, cryptography, and more will be presented. No background in matrix operations or computer programming is required.

**Prerequisites:** MA 105 [Min Grade: C] or MPL 70

**MA 168. Mathematics of Biological Systems I. 4 Hours.**

The course teaches mathematical modeling as a tool for understanding the dynamics of biological systems. We will begin with the fundamental concepts of single-variable calculus, and then develop single- and multi-variable differential equation models of dynamical processes in ecology, physiology and other applications in which quantities change with time. The laboratory will run prepackaged computer programs for problem-solving, visualization, plotting and simulation. Basic programming concepts like program flow control and data structures will be introduced. No background in computer programming is required.

**Prerequisites:** MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MPL 70

**MA 180. Introduction to Statistics. 3 Hours.**

Descriptive and inferential statistics, probability distributions, estimation, hypothesis testing, One-way ANOVA, and linear regression. Quantitative Literacy is a significant component of this course.

**Prerequisites:** MA 102 [Min Grade: C] or MA 105 [Min Grade: C] or MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 110 [Min Grade: C] or MA 125 [Min Grade: C] or MA 225 [Min Grade: C] or MPL 46

**MA 224. Intermediate Symbolic Logic. 3 Hours.**

Full development of quantification theory, including identity and definite description, and soundness and completeness proofs. Skill in formal proof emphasized, as well as ability to express arguments from natural language in artificial language.

**Prerequisites:** MA 120 [Min Grade: C] or PHL 220 [Min Grade: C]

**MA 225. Calculus I - Honors. 4 Hours.**

Limit of a function; continuity, derivatives of algebraic, trigonometric exponential, and logarithmic functions, application of derivative to extremal problems, optimization, and graphing; Newton method; the definite integral and its application to area problems; fundamental theorem of integral calculus, average value, and substitution rule. Students will be required to display an in-depth understanding of these topics through a complete justification of their work on tests and through participation in class projects. Quantitative literacy is a significant component of this course.

**Prerequisites:** MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MTH4 75 or MTH5 75 or MPL 76 or EMA E

**MA 226. Calculus II - Honors. 4 Hours.**

Techniques of integration; applications in integration such as volume, arc length and work; infinite series, Taylor series; polar coordinates; parametric equations; plane and space vectors; lines and planes in space. Quantitative Literacy is a significant component of this course.

**Prerequisites:** MA 225 [Min Grade: C] or MA 125 [Min Grade: C] or MTH5 75

**MA 227. Calculus III. 4 Hours.**

Vector functions, functions of two or more variables, partial derivatives, quadric surfaces, multiple integration and vector calculus, including Greens Theorem, curl and divergence, surface integrals, and Gauss' and Stokes' Theorem. This course meets the Core Curriculum requirements for Area III: Mathematics.

**Prerequisites:** MA 126 [Min Grade: C] or MA 226 [Min Grade: C]

**MA 252. Introduction to Differential Equations. 3 Hours.**

First order differential equations (separable, linear, exact, and additional non-linear examples using MAPLE), modeling with first order DE's, examples of systems of first order DE's, theory of higher order linear DE's (homogeneous and non-homogeneous, superposition of solutions, linear independence and general solutions, initial and boundary value problems), solution of constant coefficient homogeneous linear equations, variation of parameters and Green's functions with complicated cases done using MAPLE. Modeling projects in the course will emphasize the use of MAPLE to do the heavy lifting. Quantitative Literacy and Writing are significant components of this course. This course meets the Core Curriculum requirements for Area III: Mathematics.

**Prerequisites:** MA 126 [Min Grade: C] or MA 226 [Min Grade: C]

**MA 260. Introduction to Linear Algebra. 3 Hours.**

Linear equations and matrices; real vector spaces, basis, diagonalization, linear transformations; determinants, eigenvalues, and eigenvectors; inner product spaces, matrix diagonalization; applications and selected additional topics. This course meets the Core Curriculum requirements for Area III: Mathematics.

**Prerequisites:** MA 125 [Min Grade: C] or MA 225 [Min Grade: C]

**MA 265. Math Tools for Engineering Problem Solving. 4 Hours.**

An applied mathematics course designed to utilize the terminology and problem-solving approaches inherent to engineering, while completing the mathematical preparation of most engineering students. This course includes elements of MA 227 and MA 252.

**Prerequisites:** MA 126 [Min Grade: C] or MA 226 [Min Grade: C]

**MA 268. Introduction to Mathematical Biology. 3 Hours.**

This course, designed at the interface of several disciplines, targets undergraduate students in biology, mathematics, and engineering. We will review the biology of problems that arise in nature and medicine and study the mathematics that allows us to tackle these problems. This course serves as an introduction, by example, to multivariable calculus, discrete and continuous differential equations in one or more variables, vectors, matrices, linear and non-linear dynamical systems, and basic concepts of chaos. Biological topics may include single species and interacting population dynamics, modeling infectious and dynamic diseases, regulation of cell function, molecular interactions and receptor-ligand binding, biological oscillators, and an introduction to biological pattern formation. There will also be discussions of current topics of interest such as tumor growth and angiogenesis, HIV and AIDS, and control of the mitotic clock.

**Prerequisites:** MA 126 [Min Grade: C] or MA 226 [Min Grade: C]

**MA 298. Research in Mathematics. 1-12 Hour.**

This course covers special topics in mathematics and the applications of mathematics. May be repeated for credit when topics vary. Prerequisites vary with topics. Freshman or sophomore standing recommended.

**Prerequisites:** Permission of instructor.

**MA 311. History of Mathematics I. 3,4 Hours.**

Development of mathematical principles and ideas from an historical viewpoint, and their cultural, educational and social significance.

**Prerequisites:** MA 125 [Min Grade: C] or MA 225 [Min Grade: C]

**MA 312. History of Mathematics II. 3 Hours.**

Development of mathematical principles and ideas from an historical viewpoint, and their cultural, educational and social significance.

**Prerequisites:** MA 311 [Min Grade: C]

**MA 313. Patterns, Functions and Algebraic Reasoning. 3 Hours.**

Problem solving experiences, inductive and deductive reasoning, patterns and functions, some concepts and applications of geometry for elementary and middle school teachers. Topics include linear and quadratic relations and functions and some cubic and exponential functions. Number sense with the rational number system including fractions, decimals, and percents will be developed in problem contexts. An emphasis will be on developing algebraic thinking and reasoning.

**Prerequisites:** MA 102 [Min Grade: C] or MA 105 [Min Grade: C] or MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 110 [Min Grade: C] or MA 125 [Min Grade: C] or MA 225 [Min Grade: C]

**MA 314. Geometric and Proportional Reasoning. 3 Hours.**

Problem solving experiences, inductive and deductive reasoning, concepts and applications of geometry and proportional reasoning. Topics include analysis of one-, two- and three-dimensional features of real objects, ratio and proportionally, similarity, and congruence, linear, area, and volume measurement, and the development of mathematically convincing arguments. An emphasis will be on developing geometric and proportional thinking and reasoning.

**Prerequisites:** MA 313 [Min Grade: C]

**MA 315. Probabilistic and Statistical Reasoning. 3 Hours.**

Descriptive and inferential statistics, probability, estimation, hypothesis testing. Reasoning with probability and statistics is emphasized.

**Prerequisites:** MA 313 [Min Grade: C]

**MA 316. Numerical Reasoning. 3 Hours.**

Develop an understanding of number and improve numerical reasoning skills specifically with regard to place value, number relationship that build fluency with basis facts, and computational proficiency; developing a deep understanding of numerous diverse computational algorithms; mathematical models to represent fractions, decimals and percents, equivalencies and operations with fractions, decimals and percents; number theory including order of operations, counting as a big idea, properties of number, primes and composites, perfect, abundant and significant numbers, and figurate numbers; inductive and deductive reasoning with number.

**Prerequisites:** MA 313 [Min Grade: C]

**MA 317. Extending Algebraic Reasoning. 3 Hours.**

Extension of algebraic and functional reasoning to polynomials, rational, exponential, and logarithmic functions; problem-solving involving transfer among representations (equation, graph, table); proof via symbolic reasoning, contradiction, and algorithm; interpretation of key points on graphs (intercepts, slope, extrema); development of facility and efficiency in manipulating symbolic representations with understanding; appropriate use of technology and approximate versus exact solutions; functions as models.

**Prerequisites:** MA 313 [Min Grade: C]

**MA 360. Scientific Programming. 3 Hours.**

Programming and mathematical problem solving using Matlab, Python, FORTRAN or C++. Emphasizes the systematic development of algorithms and numerical methods. Topics include computers, floating point arithmetic, iteration, GNU/Linux operating system, functions, arrays, Matlab graphics, image processing, robotics, solving linear systems and differential equation arising from practical situations, use of debuggers and other debugging techniques, and profiling; use of callable subroutine packages like LAPACK and differential equation routines; parallel programming. Assignments and projects are designed to give the students a computational sense through complexity, dimension, inexact arithmetic, randomness, simulation and the role of approximation.

**Prerequisites:** MA 126 [Min Grade: C] or MA 226 [Min Grade: C]

**MA 361. Mathematical Modeling. 3 Hours.**

Mathematical modeling using computer software, including spreadsheets, systems dynamics software, and computer algebra systems; connections to calculus and functions are emphasized. Students make presentations to the class; justification of mathematical claims and quality of student presentations are assessed. Quantitative Literacy is a significant component of this course.

**Prerequisites:** MA 125 [Min Grade: C] or MA 225 [Min Grade: C]

**MA 398. Research in Mathematics. 1-12 Hour.**

This course covers special topics in mathematics and the applications of mathematics. May be repeated for credit when topics vary. Junior standing recommended. Permission of instructor required.

**MA 411. Integrating Mathematical Ideas. 3 Hours.**

This course will integrate ideas from algebra, geometry, probability, and statistics. Emphasis will be on using functions as mathematical models, becoming fluent with multiple representations of functions, and choosing the most appropriate representations for solving a specific problem. Students will be expected to communicate mathematics verbally and in writing through small group, whole group, and individual interactions.

**Prerequisites:** (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and MA 314 [Min Grade: C](Can be taken Concurrently) or MA 316 [Min Grade: C]

**MA 418. Statistics for Teachers. 3 Hours.**

Descriptive and inferential statistics, probability distributions, estimation, hypotheses testing, regression. Writing assignment on a project drawing from the above topics. Quantitative Literacy is a significant component of this course.

**Prerequisites:** MA 102 [Min Grade: C] or MA 105 [Min Grade: C] or MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 110 [Min Grade: C] or MA 125 [Min Grade: C] or MA 225 [Min Grade: C] or MPL 46

**MA 419. Special Topics. 1-4 Hour.**

Topics vary; may be repeated for credit.

**Prerequisites:** MA 125 [Min Grade: C] or MA 225 [Min Grade: C]

**MA 434. Algebra I: Linear. 3 Hours.**

Abstract vector spaces. Linear transformations: ranges and null spaces; matrix representation; invertibility and isomorphism; the change of coordinate matrix; transformation of a matrix of a linear map under a change of basis. Elementary matrix operations and elementary matrices; column and row spaces of a matrix; rank. Theory of systems of linear equations. Inner product spaces: inner products and norms; orthogonal bases; Gram-Schmidt orthogonalization process and orthogonal complements; self-adjoint operators; spectral theorem. Generalized eigenvectors; Jordan form. Applications.

**Prerequisites:** MA 260 [Min Grade: C]

**MA 435. Algebra II: Modern. 3 Hours.**

Rings, including the rings of integers and of polynomials, integral domains, fields and groups. Homomorphism, isomorphism. As time permits, Galois theory, semi-groups, quotient groups, models, or other areas of algebra may be included. Students present proofs from a list of pre-assigned theorems to the class. Logical correctness and proper mathematical proof-writing style are assessed.

**Prerequisites:** MA 434 [Min Grade: C] or MA 260 [Min Grade: C]

**MA 440. Advanced Calculus I. 3 Hours.**

Real numbers, sequences and series, continuity, differential and integral calculus, exponential and logarithm functions, sine and cosine functions. Students present proofs from a list of pre-assigned theorems to the class. Written versions of the proofs are posted for easy access in subsequent proofs. Logical correctness and proper mathematical proof-writing style are assessed. Writing and Quantitative Literacy are significant components of the course.

**Prerequisites:** MA 227 [Min Grade: C]

**MA 441. Advanced Calculus II. 3 Hours.**

Real numbers, sequences and series, continuity, differential and integral calculus, exponential and logarithm functions, sine and cosine functions. Students present proofs from a list of pre-assigned theorems to the class. Written versions of the proofs are posted for easy access in subsequent proofs. Logical correctness and proper mathematical proof-writing style are assessed. Writing and Quantitative Literacy are significant components of the course.

**Prerequisites:** MA 440 [Min Grade: C]

**MA 444. Vector Analysis. 3 Hours.**

Review and application of multiple integrals; Jacobians and change of variables in multiple integrals; line and surface integrals; Green, Gauss, and Stokes theorems, with applications to physical sciences and computation in spherical and cylindrical coordinates.

**Prerequisites:** MA 227 [Min Grade: C]

**MA 445. Complex Analysis. 3 Hours.**

Analytic functions, complex integration and Cauchy's theorem, Taylor and Laurent series, calculus of residues and applications, conformal mappings.

**Prerequisites:** MA 227 [Min Grade: C]

**MA 453. Fourier Analysis. 3 Hours.**

Fourier series, including odd/even functions expansions, complex power series, generalized Fourier series. Convergence, applications to partial differential equations. Fourier transform: basic properties, inversion of the FT, windowing, relation to the Laplace transform. Applications to partial differential equations. Wavelets and signal processing basic functions, transforming wavelets, short time Fourier transform.

**Prerequisites:** MA 252 [Min Grade: C]

**MA 454. Intermediate Differential Equations. 3 Hours.**

Topics from among Frobenius series solutions, Sturm-Liouville systems, nonlinear equations, and stability theory.

**Prerequisites:** MA 252 [Min Grade: C]

**MA 455. Partial Differential Equations I. 3 Hours.**

Classification of second order partial differential equations; background on eigenfunction expansions and Fourier series; integrals and transforms; solutions of the wave equations, reflection of waves; solution of the heat equations in bounded and unbounded media; Laplace's equation, Dirichlet and Neumann problems. Written project reports required. Quantitative Literacy and Writing are significant components of this course.

**Prerequisites:** MA 252 [Min Grade: C]

**MA 456. Partial Differential Equations II. 3 Hours.**

Classification of second order partial differential equations; background on eigenfunction expansions and Fourier series; integrals and transforms; solution of the wave equations, reflection of waves; solution of the heat equation in bounded and unbounded media; Laplace's equation, Dirichlet and Neumann problems.

**Prerequisites:** MA 455 [Min Grade: C]

**MA 460. Mathematical Game Theory. 3 Hours.**

This course is an introduction to mathematical game theory for those that have good understanding of calculus. Unlike calculus and optimization, where one learns how to maximize functions when the payoff depends only on your own choices, game theory deals with situations in which payoff depends not only on your own choices but also on the choices of others. Like optimization, game theory is defined by the problems it deals with, not by the mathematical techniques that are used to solve them. These problems come from diverse fields ranging from evolutionary biology and animal behavior to political science and economics. Examples are drawn from scenarios such as traffic accidents, crime-control strategies, climate change negotiations etc. The course provides substantial treatment of evolutionary game theory, where strategies are not chosen through rational analysis, but emerge by virtue of being successful. This part of game theory requires understanding of calculus and some differential equations and is the most relevant to biology. It also explains how human societies evolve. Problem sets to help develop the ability necessary to master game theory tools will be discussed and assigned at the end of each chapter. Quantitative literacy is a significant component of this course.

**Prerequisites:** MA 125 [Min Grade: C] or MA 225 [Min Grade: C]

**MA 461. Modeling with Partial Differential Equations. 3 Hours.**

Practical examples of partial differential equations; derivation of partial differential equations from physical laws; introduction to MATLAB and its PDE Tool-box, and COMSOL using practical examples; an overview of finite difference and finite element solution methods; specialized modeling projects in topics such as groundwater modeling, scattering of waves, medical and industrial imaging, continuum mechanics and deformation of solids, Fluid mechanics including the class boat race, financial derivative modeling, and acoustic and electromagnetic wave applications. Written project reports required for all homework assignments. Quantitative Literacy and Writing are significant components of this course.

**Prerequisites:** MA 252 [Min Grade: C]

**MA 462. Intro to Stochastic Differential Equations. 3 Hours.**

Stochastic differential equations arise when random effects are introduced into the modeling of physical systems. Topics include Brownian motion and Wiener processes, stochastic integrals and the Ito calculus, stochastic differential equations, and applications to financial modeling, including option pricing.

**Prerequisites:** MA 485 [Min Grade: C]

**MA 466. Introduction to Optimization. 3 Hours.**

Optimization is important in many decision making problems in various areas like engineering, economics and machine learning. Optimization theory deals with finding the best solution(s) or variables of a given objective function. Recently, the area of optimization has received much attention due to the development of highly efficient computational methods for data analysis. The scope of this course covers linear algebra, unconstrained optimization, linear programming, and nonlinear constrained optimization. The topics include linear algebra, linear program, duality, network flows, simplex method, non-simplex method, gradient and conjugate methods, neural network, genetic algorithm and convex optimization. The course will also introduce optimization algorithms and codes via python and matlab.

**Prerequisites:** MA 126 [Min Grade: C] or MA 226 [Min Grade: C]

**MA 467. Gas Dynamics. 3 Hours.**

Euler's equations for inviscid flows, rotation and vorticity, Navier-Stokes equations for viscous flows, hyperbolic equations and characteristics, rarefaction waves, shock waves and entropy conditions, the Riemann problem for one-dimensional gas flows, numerical schemes.

**Prerequisites:** MA 252 [Min Grade: C] and MA 360 [Min Grade: C]

**MA 468. Numerical Analysis I. 3 Hours.**

Programming for numerical calculations, round-off error, approximation and interpolation, numerical quadrature, and solution of ordinary differential equations. Practice on the computer.

**Prerequisites:** MA 227 [Min Grade: C] or MA 252 [Min Grade: C]

**MA 469. Numerical Analysis II. 3 Hours.**

Iterative solution of systems of nonlinear equations, evaluation of eigenvalues and eigenvectors of matrices, applications to simple partial differential equations, special topics in numerical linear algebra. Practice on the computer.

**Prerequisites:** MA 468 [Min Grade: C]

**MA 470. Differential Geometry. 3 Hours.**

Theory of curves and surfaces: Frenet formulas for curve, first and second fundamental forms of surface; global theory; abstract surfaces, manifolds, Riemannian geometry.

**Prerequisites:** MA 126 [Min Grade: C] or MA 226 [Min Grade: C]

**MA 472. Geometry I. 3 Hours.**

The axiomatic method; Euclidean geometry including Euclidean constructions, basic analytic geometry, transformational geometry, and Klein's Erlangen Program. Students present proofs from a list of pre-assigned theorems to the class. Logical correctness and proper mathematical proof-writing style are assessed.

**Prerequisites:** MA 125 [Min Grade: C] or MA 225 [Min Grade: C]

**MA 473. Geometry II. 3 Hours.**

Analytical geometry, Birkhoff's axioms, and the complex plane; structure and representation of Euclidean isometries; plane symmetries; non-Euclidean(hyperbolic) geometry and non-Euclidean transformations; fractal geometry; algorithmic geometry. Course integrates intuition/ exploration and proof/ explanation.

**Prerequisites:** MA 472 [Min Grade: C] and (MA 260 [Min Grade: C] or MA 434 [Min Grade: C])

**MA 474. Introduction to Topology I. 3 Hours.**

Essence and consequences of notion of continuous function developed. Topics include metric spaces, topological spaces, compactness, connectedness, and separation.

**Prerequisites:** MA 126 [Min Grade: C] or MA 226 [Min Grade: C]

**MA 475. Introduction to Topology II. 3 Hours.**

Essence and consequences of notion of continuous function developed. Topics include metric spaces, topological spaces, compactness, connectedness, and separation.

**Prerequisites:** MA 474 [Min Grade: C]

**MA 480. Introduction to Statistics. 3 Hours.**

Descriptive and inferential statistics, probability distributions, estimation, hypothesis testing. Recommended that two years of high school algebra or MA 102 has been completed before taking course. MA 480 does not count toward any math major or minor.

**MA 484. Mathematical Finance. 3 Hours.**

The notion of no arbitrage. Interest, compounding, bonds. Review of mean, variance, and co-variance. Central limit theorem. Portfolio management: risk and return. Forwards and Futures. Put-call parity. Martingales and conditional expectation. The binomial model. Fundamental theorems of asset pricing. The Cox-Ross-Rubinstein formula. The Black-Scholes-Merton formula. Using computing programs such as Matlab and Python for more complex derivatives such as American put options.

**Prerequisites:** MA 125 [Min Grade: C] and MA 485 [Min Grade: C]

**MA 485. Probability. 3 Hours.**

Probability spaces, combinatorics, conditional probabilities and independence, Bayes rule, discrete and continuous distributions, mean value and variance, moment generation function, joint distributions, correlation, Central Limit Theorem, Law of Large Numbers, random walks, Poisson process.

**Prerequisites:** MA 126 [Min Grade: C] or MA 226 [Min Grade: C]

**MA 486. Mathematical Statistics. 3 Hours.**

Sampling techniques and data analysis, Simulation, Point estimation, Confidence intervals, Sufficient statistics, Rao-Cramer lower bound, Tests for binomials, Tests for normals, Goodness-of-fit test, Contingency tables, Two factor analysis, Regression, Order statistics, Nonparametric methods: Wilcoxon test, Run test, and Kolmogorov-Smirnov test. A computer project that involves a written report. Quantitative Literacy and Writing are significant components of this course.

**Prerequisites:** MA 485 [Min Grade: C]

**MA 490. Mathematics Seminar. 1-3 Hour.**

This course covers special topics in mathematics and the applications of mathematics. May be repeated for credit when topics vary. Prerequisites: Permission of instructor.

**MA 491. Special Topics in Mathematics. 1-3 Hour.**

This course covers special topics in mathematics and the applications of mathematics. May be repeated for credit when topics vary. Prerequisites vary with topics.

**MA 492. Special Topics in Mathematics. 1-3 Hour.**

This course covers special topics in mathematics and the applications of mathematics. May be repeated for credit when topics vary. Prerequisites vary with topics.

**MA 493. Special Topics in Mathematics. 1-3 Hour.**

This course covers special topics in mathematics and the applications of mathematics. May be repeated for credit when topics vary. Prerequisites vary with topics.

**MA 494. Special Topics in Mathematics. 1-6 Hour.**

This course covers special topics in mathematics and the applications of mathematics. May be repeated for credit when topics vary. Prerequisites vary with topics.

**MA 495. Special Topics in Mathematics. 1-6 Hour.**

This course covers special topics in mathematics and the applications of mathematics. May be repeated for credit when topics vary. Prerequisites vary with topics.

**MA 496. Special Topics in Mathematics. 1-12 Hour.**

This course covers special topics in mathematics and the applications of mathematics. May be repeated for credit when topics vary. Prerequisites vary with topics.

**MA 497. Research Methods in Mathematics. 1-3 Hour.**

Through experience in designing and carrying out investigations, learn how scientists and mathematicians gain knowledge, evaluate scientific and mathematical claims when they conduct, and design and carry out investigations to answer new questions. Work is closely coordinated with the work of students from other content disciplines so that students see the similarity and differences of research methods in their own field as compared with those of science and mathematics inquiry as a whole. Enrollment in UABTeach is required.

**Prerequisites:** MA 125 [Min Grade: C] or MA 225 [Min Grade: C]

**MA 498. Research in Mathematics. 1-12 Hour.**

This course covers special topics in mathematics and the applications of mathematics. May be repeated for credit when topics vary. Prerequisites vary with topics. Senior standing recommended.

**MA 499. Honors Research in Mathematics. 1-12 Hour.**

Mentored research in mathematics leading to a written research report and a public presentation in the form of a talk or poster. Admission restricted to students admitted to Honors in Mathematics. Permission of instructor required.

## Department of Music

**Chair:** Dr. Patrick Evans

The Department of Music offers the Bachelor of Arts degree with a major in Music. Optional concentrations in Music Education (including teacher certification) and Music Technology are also available in the Bachelor of Arts degree program. Students majoring in other fields may complete a minor in Music or Music Technology and may take music courses as electives. The Department of Music is accredited by the National Association of Schools of Music.

The Department of Music offers instruction at a variety of levels to provide a balanced musical education for a broad spectrum of students. Areas of instruction include music theory and composition, music history and literature, music performance, music education, and music technology. Courses in music theory explore the materials and techniques employed in music composition. History and literature courses present the evolution of musical styles in the context of our cultural heritage, and identify certain works that represent the highest levels of artistic achievement. Performance activities develop individual musical skills through personal creative involvement. Music Education prepares students to teach music at the nursery through high school level. Music Technology explores current developments in computers and their applications to and impact on the creation, presentation, and recording of music. Full updated information is available on the Department of Music web site at [www.uab.edu/cas/music](http://www.uab.edu/cas/music).

## Music Ensembles

Students of all majors are invited to participate in a variety of musical ensembles: Blazer Band, Brass Ensembles, Chamber Singers, Computer Music Ensemble, Concert Choir, Gospel Choir, Guitar Ensemble,

Jazz Combo, Jazz Ensemble, Marching Band, Opera Workshop, Orchestra, Percussion Ensemble, Steel Drum Band, Electro-Acoustic Percussion Group, Piano Ensemble, Symphony Band, Wind Symphony, and Woodwind Ensembles. Other ensembles may become available depending on student interest and available resources.

## Music Scholarships

The Myrtle Jones-Steele and James Darrell McAnnally Scholarships (piano), the W. Ronald Clemmons Endowed Music Scholarship, the Alys Robinson Stephens Scholarship (any instrument or voice), and other scholarships are awarded each year to qualified music majors. Choral, Opera, Wind Symphony, and Marching Band scholarships are also competitively based and are awarded to any full-time student enrolled in the university for participation in those ensembles. The Music Technology Scholarships, Stevie Wonder Scholarships, and Audiostate 55 Music Technology and Jazz Scholarships are awarded to students in the Music Technology program. Auditions are scheduled throughout the year for award for the next academic year. For an application or further information about music scholarships or any of the programs and activities described above, call the Department office, (205) 934-7376, or visit the departmental web page: <http://www.uab.edu/cas/music/admissions>.

## Admittance for Music Majors

Students who wish to pursue a degree in music must first apply for admission to the UAB Office of Undergraduate Admissions. In addition, students must complete an audition before members of the music faculty for admission to the Department of Music. Auditions are scheduled throughout the year. Examinations may also be required to determine the appropriate placement of students within the curriculum. Students should contact the music office at (205) 934-7376 or email [uabmusic@uab.edu](mailto:uabmusic@uab.edu) (%20uabmusic@uab.edu) for specific audition requirements and to schedule a date on which they may complete this requirement. Once the audition is complete, students will be informed of one of three outcomes:

1. Admission to the Department is granted and they may enroll as a music major.
2. Admission to the Department is conditional, in which case they are admitted as a Pre-Music major. Students admitted into this preliminary program have one year to gain full admission as a music major.
3. Admission to the Department is denied.

In the case of number 2 above, students must re-audition in order to gain full admission as a music major. In the event they are not accepted, they will be advised to seek another major within the University. Once fully or conditionally admitted to the Department of Music, students will work closely with a music faculty adviser and an academic adviser within the College of Arts and Sciences, who will monitor their progress and advise in the selection of appropriate courses. All students must audition during the term preceding the expected entrance date. Admission to UAB does not guarantee admission to the Department of Music.

## Music Theory Entrance Exams

All incoming students must take a music theory placement exam upon entering the music program. To sign up for the Music Theory Placement Exam, please contact the UAB Music Office at (205) 934-7376, or by email: [uabmusic@uab.edu](mailto:uabmusic@uab.edu).

## First-Year Music Theory Entrance Exam

All new music students must either pass the placement examination with a minimum score of 70%, or successfully complete MU 100 Fundamentals of Music, with a grade of "C" or higher, before they are eligible to enter MU 221 Music Theory I, and MU 224 Aural Skills I. Students will be notified of the results at least two days prior to the first day of classes.

In preparing to take the entrance exam, students may wish to review the first four chapters in the following textbooks:

- *Tonal Harmony* by Stefan Kostka and Dorothy Payne

- *Music in Theory and Practice* by Bruce Benward

## Exceptions:

### A. Pre-enrollment Credit

Students who enroll and pass a music fundamentals course from an accredited college prior to enrolling at UAB may enroll in MU 221 and MU 224 A grade of "C" is considered passing.

### B. Advanced Placement Exam Exemption (AP Music Theory)

Students who score a "3" or higher on both parts of the AP Music Theory Exam may place out of MU 221 and MU 224; students cannot test out of MU 222, Music Theory II, and/or MU 225, Aural Skills II.

AP exam scores must be sent to the Associate Chair of the Department, Dr. Paul Mosteller ([songman@uab.edu](mailto:songman@uab.edu)), before the first day of fall classes. Students who fail to send their scores will not be allowed to enroll in MU 221 and MU 224

### C. State Schools for the Fine Arts

Students who attend an accredited state sponsored school for the fine arts and pass its "Advanced Placement" music theory class with a grade of "B" may place out of MU 221 and MU 224 and enroll in MU 222 and MU 225 in the spring semester; students cannot test out of MU 222 and/or MU 225

## Music Theory Placement Exam for Transfer Students

All transfer students with prior music theory credits are required to take a Music Theory Placement Exam.

For transfer credits to be considered equivalent to Music Theory I-IV and Aural Skills I-IV, courses taken at another college must have included an Aural Skills course. If a separate Skills course was taken, both the laboratory and the related music theory course must have been completed with a grade of "C" or higher. On the basis of placement exam results, the faculty will place the student in the appropriate course, which may be at a lower level than the student's transfer credits indicate. Students must pass the placement examination with a minimum score of 70%. Students will be notified of the results of the placement exam at least two days prior to the first day of classes.

In preparing to take the placement exam, students may wish to review the following materials according to the last course successfully completed in their theory sequence:

- Theory I: Fundamentals; diatonic harmony; basic part-writing; Roman numeral analysis;

- Theory II: Diatonic harmony; part-writing; Roman numeral and non-chord tone analysis; basic musical form;
- Theory III: Diatonic and chromatic harmony; form and analysis;
- Theory IV: Diatonic and advanced chromatic harmony; form and analysis; late Romantic harmony; modes; 20th-century techniques (12-tone analysis and set theory).

Students may wish to consult the following textbooks:

- *Tonal Harmony* by Stefan Kostka and Dorothy Payne
- *Music in Theory and Practice* by Bruce Benward
- *Form in Tonal Music* by Douglass M. Green

## Piano Proficiency

Functional keyboard facility must be demonstrated by **ALL** music majors at UAB. This is accomplished by means of the required Piano Proficiency Exam. **All Music majors are required to pass the Piano Proficiency Exam (MUP 125) before being permitted to enroll in MU 322, Music Theory IV.** This may be accomplished by passing the proficiency exam upon entering UAB, or by taking two semesters of Class Piano (MUP 124) and successfully completing the proficiency exam requirements in the context of the course. Up to three semester hours of credit earned in Class Piano may be counted toward general electives.

## Piano Proficiency Examination Requirements

### Purpose

To demonstrate functional keyboard skills at a level appropriate for students majoring in Music, Music Technology, or Music Education.

### Procedure

All Music, Music Technology, and Music Education majors must pass the Piano Proficiency Examination by the end of their third semester of study as a UAB Music Major. Students with considerable experience in piano may be allowed to take the examination during their first term without enrolling for Class Piano. In the event they are not successful, they should enroll in Class Piano until the proficiency exam has been passed. All other students should enroll in Class Piano and continue enrollment until the exam has been passed. Students should plan to pass the Piano Proficiency Examination at the end of their third semester of music study at UAB. **All Music majors are required to pass the Piano Proficiency Examination MUP 125 before being permitted to enroll in MU 322 Music Theory IV.** Proficiency examinations will be scheduled during the final examination week of each semester. The instructor of MUP 125 and two other faculty members will administer the exam. Students wishing to take the proficiency exam must contact the instructor at least one week before the last day of classes to schedule a time and place for the exam. The exam will be approximately fifteen minutes in duration and will cover examples from the areas listed below. The examination may be attempted once each semester until it is passed. **Music Education majors cannot enter the TEP (Teacher Education Program) without first completing this requirement.**

Students have two options leading to the completion of the Piano Proficiency requirement.

- Incoming freshmen will be advised to enroll in class piano in their first semester. Passing the final exam of the second semester (advanced) course will count as passing the piano proficiency exam. They

must still register for the piano proficiency exam for zero credit for transcript purposes.

- Students may elect to take the piano proficiency exam in August, December, or April, without enrolling in the class piano sequence. If they pass the exam, they are not required to take class piano at all. If they do not pass the exam, they must enroll in the two-semester sequence and pass the second-semester exam.
- Transfer students who have a documented piano proficiency exam pass (either transcript or letter from department chair) will not be required to take the exam or the class.
- Transfer students who have not passed a proficiency exam, even if they have taken some class piano, must take the UAB piano proficiency exam in August. If they pass the exam, they have met the Piano Proficiency requirement; if not, they must enroll in either the two-semester sequence, or the second semester, depending on the results of the exam.
- In all of the above circumstances, the student must register for MUP 125 (zero credit) for transcript purposes.

## Required Skills

The student is expected to demonstrate proficiencies in the areas of sight reading, performance, technique, and related functional skills including transposing and improvising simple accompaniments.

- Sight-reading of song arrangements and/or simple solo piano literature such as a selected example from Chapter 5, pages 195-219 in *Progressive Class Piano* by Elmer Heerema.
- Performance:
  - Two patriotic songs: *America* and *The Star-Spangled Banner*. Music may be used.
  - A solo selected from the following list or from repertoire of comparable difficulty (memorization optional).
    - J.S. Bach - *Little Preludes*
    - Clementi - *Sonatinas*
    - Schumann - *Album for the Young*
- Technique:
  - All major and white-key harmonic minor scales (i.e., minor scales with the tonic of A, B, C, D, E, F, or G): Two octaves in parallel motion, hands together.
  - All major and white-key minor arpeggios: Two octaves, hands together.
- Functional Skills:
  - Accompaniment improvisations (see *Progressive Class Piano*; each chapter contains sections on harmonization and improvisation).
  - Transpose a simple accompaniment or song at sight (see *Progressive Class Piano*, Chapter 5 pages 195-204 for examples).
  - Play the progression I-IV-I <sup>6</sup><sub>4</sub>-V<sup>7</sup>-I hands together in all major and white-key minor keys.

## Performance Attendance Requirement

All Music majors are expected to attend Music Department concerts and programs, and are required to attend a minimum of 15 events per term. To satisfy the Department's performance attendance requirement, all music majors must enroll in and successfully complete MUP 001 every term of enrollment, except during the term of the capstone experience (seven terms). A grade of P (pass) or NP (not pass) will be assigned accordingly for a student's attendance at concerts, Music Convocation,

Department-sponsored lectures, and other events approved previously by the Department. For more specific information concerning the Performance Attendance requirement, students are urged to consult the Department of Music's Student Handbook.

#### **Clarification for students that enter the UAB Department of Music as freshmen:**

- Once you have passed Performance Attendance for a total of seven terms, your PA requirement is complete.
- You are not required to register for PA during your capstone semester.
- You are only required to register for PA during the fall and spring semesters; summer registration is not required. Summers may be used to "make up" a term if needed, but it should be noted that successful completion during summer terms is more difficult.

#### **Clarification for transfer students and students who change major to Music:**

- If you enter UAB with no Performance Attendance credits from another approved institution, you must enroll for and successfully complete PA every semester (fall and spring) you are a Music major at UAB. For example, if you are a UAB Music major for five semesters (including your capstone semester), you must pass PA four terms.
- If you enter the UAB Department of Music with one or more credits in Performance Attendance from another approved institution, you must still pass PA for each semester (fall and spring) you are a Music major at UAB, except for the capstone semester.
- You are not required to register for PA during your capstone semester.

### **Ensemble Participation Requirement**

Students in the B.A. degree program in Music are required to participate for credit in at least one music ensemble per term for a minimum of seven terms. To fulfill the participation requirement, instrumental students must enroll in an instrumental ensemble, and vocal/choral students must enroll in a vocal/choral ensemble. At least six of the seven terms of the required ensemble participation must include involvement in one of the following major ensembles: Concert Choir, Marching Band, Wind Symphony, Symphony Band, and Orchestra. Other ensembles may be considered major ensembles, but only for students whose major instrument is listed here: Jazz Ensemble (Bass, Bass Guitar, Guitar, and Piano), Guitar Ensemble (Bass Guitar, Guitar), and Piano Ensemble (Piano). All other ensembles are considered minor ensembles. Credit earned in excess of the seven semester hour minimum requirement stated above may be applied toward electives.

Students in the Music Technology program may fulfill up to four of their required ensemble hours in Computer Music Ensemble or the UAB Jazz Ensemble. The remaining three hours must be in the major ensembles named above. Music Technology majors must enroll for at least two semesters in Computer Music Ensemble. Music Technology majors with principal performing instrument of guitar, bass guitar, piano, drum set, or percussion may satisfy the major ensemble participation requirement by enrolling in a UAB jazz combo or UAB Jazz Ensemble. Music Technology majors with principal performing instrument of saxophone, trombone, or trumpet may satisfy the major ensemble participation requirement by enrolling in the UAB Jazz Ensemble or Computer Music Ensemble for up to four semesters. The remaining three hours must be in the major ensembles named in the preceding paragraph. Music Technology Majors

are required to take a minimum of two semesters in Computer Music Ensemble.

#### **Clarification for students that enter the UAB Department of Music as freshmen:**

- Once you have earned credit in ensembles as stated above for a total of seven terms, your ensemble participation requirement is complete.
- You are not required to register for an ensemble during your capstone semester.

#### **Clarification for transfer students and students who change major to Music:**

- If you enter UAB with no ensemble credits from another approved institution, you must participate for credit every semester (fall and spring) you are a Music major at UAB, except for the capstone semester.
- If you enter the UAB Department of Music with one or more ensemble credits from another approved institution, you must still participate for credit in an appropriate ensemble for each semester (fall and spring) you are a Music major at UAB, except for the capstone semester.
- You are not required to register for an ensemble during your capstone semester.

### **Music Capstones**

UAB policy states: "Freshman students entering UAB in fall 2009 or after, must successfully complete the capstone course or experience required by their major program or school in order to graduate. All students graduating in 2013 or later must complete a capstone requirement." This UAB policy is fulfilled by the Music Education and Music Technology internships for music majors with those concentrations. All other Music majors should complete MUP 497, Senior Recital/Project, during their last semester.

### **Teacher Certification**

Students who wish to prepare for careers as music teachers in schools at the pre-college level will need to complete the requirements for the professional teaching certificate issued by the Alabama Department of Education. These requirements are met by completing the curriculum for the Bachelor of Arts in Music Education degree. Because the Alabama State Board of Education frequently changes or adds teacher certification requirements, it is essential that students stay informed about current certification requirements. Therefore, **Music Education majors are required to meet with their Music adviser and an adviser in the School of Education before registration *each semester*.**

The Alabama teaching certificate is issued for two teaching fields in music: instrumental music and vocal/choral music, both valid for kindergarten through grade twelve. Students in any of the teacher certification areas in Music Education are required to earn credit in at least one music ensemble per term for a minimum of seven terms. In fulfilling the participation requirement, instrumental students must enroll in an instrumental ensemble and vocal/choral students must enroll in a vocal/choral ensemble. At least six terms of the required ensemble participation must include involvement in the appropriate Major Ensemble (see above). Credit earned in excess of the minimum semester hour requirements for ensembles may be applied to music electives within the general studies portion of the teacher certification program.

Minor in Music or Music Technology

The minor consists of 26 semester hours of coursework in music. Students who minor in Music or Music Technology should have some prior musical experience and **must audition** on their performing instrument. Music courses in which a grade below C is earned may not be counted toward the minor. Minors are encouraged to participate in music ensembles throughout their academic program. Students should contact the music office at (205) 934-7376 or email [uabmusic@uab.edu](mailto:uabmusic@uab.edu) for specific audition requirements and to schedule an audition.

Transfer Students

A student may not apply more hours of transfer credit toward any requirement for a major or minor in music than are awarded for the equivalent courses at UAB. Excess hours in any required area may be applied as electives. Music majors must complete at least nine semester hours in music at UAB. Minors must complete at least six semester hours in music at UAB. See the section of the catalog titled “Completion of a Degree” for additional residency requirements.

The stated requirements for majors and minors in music are intended to assure a balanced academic program. In evaluating transfer credits, therefore, course content as well as the number of credits in particular areas must be considered in order to determine whether courses taken at other colleges satisfy UAB requirements. To be considered equivalent to Music Theory I–IV and Aural Skills I–IV, courses taken at another college must have included “aural skills.” If a separate “theory laboratory” was taken, both the laboratory and the related music theory course must have been satisfactorily completed. Transfer students will be required to demonstrate by examinations, auditions, and other means that their current knowledge and skills meet expected standards. Auditions will be required to determine placement in applied music courses and conducting. Transfer students majoring in music will be required to pass the UAB Piano Proficiency Examination unless written verification is provided from the appropriate official at the former college which shows that they have passed an equivalent examination at that institution.

Music majors who transfer to UAB and students who change their major from another field to music may either:

- 1. Complete the normal ensemble participation requirement for their degree program.
- 2. Participate in an ensemble during each term they are enrolled as a music major at UAB, with no fewer than three terms of participation in UAB ensembles.

In either case, the semester hour ensemble requirement must be met by transfer and/or UAB credit. Students must be officially enrolled in an ensemble in order to fulfill the participation requirement.

Music majors who transfer to UAB and students who change their major from another field to music may either:

- 1. Complete the normal performance attendance requirement.
- 2. Enroll in and successfully complete MUP 001 during each term they are enrolled as a music major at UAB, with no fewer than three terms.

Courses transferred from a two-year college cannot be used to satisfy requirements for work at advanced levels (courses numbered 300 or higher). No more than 60 semester hours may be transferred from a two-year college.

Scheduling of Courses

Certain music courses are offered one time each year or once every two years, according to a Department plan. A copy of this plan may be obtained from the Department of Music. Several courses are offered irregularly, according to need.

Academic Advising

Each music major is assigned a Departmental academic adviser. The student **MUST** meet with his/her adviser before registering for classes each semester. **Music Education majors must also meet with an academic adviser in the School of Education each semester.**

Bachelor of Arts with a Major in Music

Requirements		Hours
First Year Experience		
CAS 112	Success in College	1
Computer Music		
MU 115	Computer Music I	3
Music Theory and Aural Skills <sup>1</sup>		
MU 221 & MU 224	Music Theory I and Aural Skills I	4
MU 222 & MU 225	Music Theory II and Aural Skills II	4
MU 321 & MU 324	Music Theory III and Aural Skills III	4
MU 322 & MU 325	Music Theory IV and Aural Skills IV	4
Music Theory V Elective		
Select 3 hours from the following courses:		3
MU 445	Modal Counterpoint (Removed MU 359 from Theory V elective options.)	
MU 446	Tonal Counterpoint	
MU 448	Orchestration	
MU 451	Topics in Music Theory	
MU 455	Form and Analysis	
MU 458	Contemporary Techniques	
MU 459	Composition II	
Music History and Literature		
MU 366	Music in World Cultures	2
MU 471	Music History and Literature to 1750	3
MU 472	Music Hist/Lit 1750-Present	3
Music History and Literature Elective		
Select one of the following courses:		3
MU 261	Introduction to Music Literature	
MU 364	American Music	
MU 365	The Evolution of Jazz	
MU 461	Seminar in Music Literature	
Music Elective		
Select three hours from the following Music (MU) or Music Performance (MUP) courses:		3
MU 145	The Music Business	
MU 165	Jazz Styles: History and Appreciation	
MU 199	Independent Studies	
MU 210	Special Topic	
MU 211	Recording Studio Workshop	
MU 235	English and Italian Diction	
MU 236	French and German Diction	

MU 245	Recording Technology I	MUP 261	Private Lessons: Flute
MU 261	Introduction to Music Literature	MUP 262	Private Lessons: Oboe
MU 299	Independent Studies	MUP 263	Private Lessons: Clarinet
MU 330	Marching Band Techniques	MUP 264	Private Lessons: Saxophone
MU 331	Band Literature	MUP 266	Private Lessons: Bassoon
MU 341	Computer Music II	MUP 267	Private Lessons: Jazz Saxophone
MU 342	Computer Music III	MUP 271	Private Lessons: Trumpet
MU 345	Recording Technology II	MUP 272	Private Lessons: French Horn
MU 364	American Music	MUP 273	Private Lessons: Trombone
MU 365	The Evolution of Jazz	MUP 274	Private Lessons Euphonium
MU 367	Introduction to Ethnomusicology	MUP 275	Private Lessons: Tuba
MU 399	Independent Studies	MUP 276	Private Lessons: Jazz Trumpet
MU 429	Advanced Conducting/Techniques	MUP 277	Private Lessons: Jazz Trombone
MU 441	Multimedia Productions	MUP 280	Private Lessons: Percussion
MU 445	Modal Counterpoint	MUP 281	Private Lessons: Jazz Percussion
MU 446	Tonal Counterpoint	MUP 291	Private Lessons: Violin
MU 448	Orchestration	MUP 292	Private Lessons: Viola
MU 451	Topics in Music Theory	MUP 293	Private Lessons: Cello
MU 455	Form and Analysis	MUP 294	Private Lessons: Bass
MU 458	Contemporary Techniques	MUP 295	Private Lessons: Guitar
MU 459	Composition II	MUP 296	Private Lessons: Jazz Guitar
MU 461	Seminar in Music Literature	MUP 297	Private Lessons: Jazz Bass
MU 499	Independent Studies	MUP 320	Chamber Singers
MUP 140	Private Lessons: Voice	MUP 321	Women's Chorale
MUP 150	Private Lessons: Piano	MUP 340	Private Lessons: Voice
MUP 161	Private Lessons: Flute	MUP 341	Computer Music Ensemble
MUP 162	Private Lessons: Oboe	MUP 342	Commercial Music Ensemble
MUP 163	Private Lessons: Clarinet	MUP 350	Private Lessons: Piano
MUP 164	Private Lessons: Saxophone	MUP 353	Piano Ensemble
MUP 166	Private Lessons: Bassoon	MUP 361	Private Lessons: Flute
MUP 171	Private Lessons: Trumpet	MUP 362	Private Lessons: Oboe
MUP 172	Private Lessons: French Horn	MUP 363	Private Lessons: Clarinet
MUP 173	Private Lessons: Trombone	MUP 364	Private Lessons: Saxophone
MUP 174	Private Lessons: Euphonium	MUP 366	Private Lessons: Bassoon
MUP 175	Private Lessons: Tuba	MUP 371	Private Lessons: Trumpet
MUP 180	Private Lessons: Percussion	MUP 372	Private Lessons: French Horn
MUP 191	Private Lessons: Violin	MUP 373	Private Lessons: Trombone
MUP 192	Private Lessons: Viola	MUP 374	Private Lessons: Euphonium
MUP 193	Private Lessons: Cello	MUP 375	Private Lessons: Tuba
MUP 194	Private Lessons: Bass	MUP 380	Private Lessons: Percussion
MUP 195	Private Lessons: Guitar	MUP 391	Private Lessons: Violin
MUP 220	Concert Choir	MUP 392	Private Lessons: Viola
MUP 221	Jazz Combo	MUP 393	Private Lessons: Cello
MUP 225	Symphony Band	MUP 394	Private Lessons: Bass
MUP 230	Guitar Ensemble	MUP 395	Private Lessons: Guitar
MUP 231	Orchestra	MUP 420	Opera Workshop
MUP 232	Marching Band	MUP 440	Private Lessons: Voice
MUP 233	Clarinet Choir	MUP 450	Private Lessons: Piano
MUP 234	Percussion Ensemble	MUP 461	Private Lessons: Flute
MUP 235	Wind Symphony	MUP 462	Private Lessons: Oboe
MUP 236	Jazz Ensemble	MUP 463	Private Lessons: Clarinet
MUP 237	Blazer Band	MUP 464	Private Lessons: Saxophone
MUP 238	Brass Ensemble	MUP 466	Private Lessons: Bassoon
MUP 239	Tuba/Euphonium Ensemble	MUP 471	Private Lessons: Trumpet
MUP 240	Private Lessons: Voice	MUP 472	Private Lessons: French Horn
MUP 250	Private Lessons: Piano	MUP 473	Private Lessons: Trombone
MUP 253	Private Lessons: Jazz Piano	MUP 474	Private Lessons: Euphonium

MUP 475	Private Lessons: Tuba	
MUP 480	Private Lessons: Percussion	
MUP 491	Private Lessons: Violin	
MUP 492	Private Lessons: Viola	
MUP 493	Private Lessons: Cello	
MUP 494	Private Lessons: Bass	
MUP 495	Private Lessons: Guitar	

**Conducting**

MU 329	Conducting	2
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**Music Ensemble <sup>2</sup>** **7**

Major Ensembles: Take at least 6 hours		
MUP 220	Concert Choir	
MUP 225	Symphony Band	
MUP 230	Guitar Ensemble	
MUP 231	Orchestra	
MUP 232	Marching Band	
MUP 235	Wind Symphony	
MUP 236	Jazz Ensemble	
MUP 353	Piano Ensemble	
Minor Ensembles		
MUP 110	Gospel Choir	
MUP 221	Jazz Combo	
MUP 234	Percussion Ensemble	
MUP 237	Blazer Band	
MUP 320	Chamber Singers	
MUP 321	Women's Chorale	
MUP 341	Computer Music Ensemble	
MUP 342	Commercial Music Ensemble	
MUP 420	Opera Workshop	

**Applied Music**

Select six hours from the following courses designated "Private Lessons" at the 200 level or higher (each course may be repeated for credit.) **6**

MUP 240	Private Lessons: Voice	
MUP 250	Private Lessons: Piano	
MUP 253	Private Lessons: Jazz Piano	
MUP 261	Private Lessons: Flute	
MUP 262	Private Lessons: Oboe	
MUP 263	Private Lessons: Clarinet	
MUP 264	Private Lessons: Saxophone	
MUP 266	Private Lessons: Bassoon	
MUP 267	Private Lessons: Jazz Saxophone	
MUP 271	Private Lessons: Trumpet	
MUP 272	Private Lessons: French Horn	
MUP 273	Private Lessons: Trombone	
MUP 274	Private Lessons Euphonium	
MUP 275	Private Lessons: Tuba	
MUP 276	Private Lessons: Jazz Trumpet	
MUP 277	Private Lessons: Jazz Trombone	
MUP 280	Private Lessons: Percussion	
MUP 281	Private Lessons: Jazz Percussion	
MUP 291	Private Lessons: Violin	
MUP 292	Private Lessons: Viola	
MUP 293	Private Lessons: Cello	
MUP 294	Private Lessons: Bass	
MUP 295	Private Lessons: Guitar	
MUP 296	Private Lessons: Jazz Guitar	
MUP 297	Private Lessons: Jazz Bass	

MUP 340	Private Lessons: Voice	
MUP 350	Private Lessons: Piano	
MUP 361	Private Lessons: Flute	
MUP 362	Private Lessons: Oboe	
MUP 363	Private Lessons: Clarinet	
MUP 364	Private Lessons: Saxophone	
MUP 366	Private Lessons: Bassoon	
MUP 371	Private Lessons: Trumpet	
MUP 372	Private Lessons: French Horn	
MUP 373	Private Lessons: Trombone	
MUP 374	Private Lessons: Euphonium	
MUP 375	Private Lessons: Tuba	
MUP 380	Private Lessons: Percussion	
MUP 391	Private Lessons: Violin	
MUP 392	Private Lessons: Viola	
MUP 393	Private Lessons: Cello	
MUP 394	Private Lessons: Bass	
MUP 395	Private Lessons: Guitar	
MUP 440	Private Lessons: Voice	
MUP 450	Private Lessons: Piano	
MUP 461	Private Lessons: Flute	
MUP 462	Private Lessons: Oboe	
MUP 463	Private Lessons: Clarinet	
MUP 464	Private Lessons: Saxophone	
MUP 466	Private Lessons: Bassoon	
MUP 471	Private Lessons: Trumpet	
MUP 472	Private Lessons: French Horn	
MUP 473	Private Lessons: Trombone	
MUP 474	Private Lessons: Euphonium	
MUP 475	Private Lessons: Tuba	
MUP 480	Private Lessons: Percussion	
MUP 491	Private Lessons: Violin	
MUP 492	Private Lessons: Viola	
MUP 493	Private Lessons: Cello	
MUP 494	Private Lessons: Bass	
MUP 495	Private Lessons: Guitar	

**Piano Proficiency**

MUP 125	Piano Proficiency Exam	0
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**Performance Attendance (take for seven terms)**

MUP 001	Performance Attendance	0
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**Music Capstone**

MUP 497	Senior Recital/Project	0
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Total Hours		52
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<sup>1</sup> Each level of Music Theory and Aural Skills is co-requisite, i.e., they must be taken at the same time. A grade of "C" or better must be earned in order to proceed to the next level. After this is accomplished, a student may retake one of the two co-requisite courses for the purpose of improving their grade.

<sup>2</sup> Students must participate in at least one semester hour of Music Ensemble per term for a minimum of seven terms. Music Ensembles are divided into two groups, "Major Ensembles" and "Minor Ensembles." Music majors must complete at least six hours in a Major Ensemble, with the remaining hour in either a Major or Minor Ensemble.

## Bachelor of Arts with a Major in Music and a Concentration in Music Technology

Requirements		Hours
<b>First Year Experience</b>		
CAS 112	Success in College	1
<b>Music Theory and Aural Skills <sup>1</sup></b>		
MU 221 & MU 224	Music Theory I and Aural Skills I	4
MU 222 & MU 225	Music Theory II and Aural Skills II	4
MU 321 & MU 324	Music Theory III and Aural Skills III	4
MU 322 & MU 325	Music Theory IV and Aural Skills IV	4
<b>Music Theory V Elective</b>		
Select three hours from the following courses:		3
MU 445	Modal Counterpoint (Removed MU 359 from the list of options for the Theory V elective.)	
MU 446	Tonal Counterpoint	
MU 448	Orchestration	
MU 451	Topics in Music Theory	
MU 455	Form and Analysis	
MU 458	Contemporary Techniques	
MU 459	Composition II	
<b>Music History and Literature</b>		
MU 366	Music in World Cultures	2
MU 472	Music Hist/Lit 1750-Present	3
<b>Music Technology</b>		
MU 115	Computer Music I	3
MU 245	Recording Technology I	3
MU 341	Computer Music II	3
MU 342	Computer Music III	3
MU 345	Recording Technology II	3
MU 441	Multimedia Productions	3
<b>Music Ensembles <sup>2</sup></b>		
Major Ensembles: Take at least 6 hours		
MUP 220	Concert Choir	
MUP 225	Symphony Band	
MUP 230	Guitar Ensemble	
MUP 231	Orchestra	
MUP 232	Marching Band	
MUP 235	Wind Symphony	
MUP 236	Jazz Ensemble	
MUP 353	Piano Ensemble	
Minor Ensembles:		
MUP 110	Gospel Choir	
MUP 221	Jazz Combo	
MUP 234	Percussion Ensemble	
MUP 237	Blazer Band	
MUP 320	Chamber Singers	
MUP 321	Women's Chorale	
MUP 341	Computer Music Ensemble	
MUP 342	Commercial Music Ensemble	
MUP 420	Opera Workshop	
<b>Applied Music</b>		

Select four hours from Music Performance (MUP) courses designated "Private Lessons" at the 200-level or higher (each course may be repeated for credit)		4
MUP 240	Private Lessons: Voice	
MUP 250	Private Lessons: Piano	
MUP 253	Private Lessons: Jazz Piano	
MUP 261	Private Lessons: Flute	
MUP 262	Private Lessons: Oboe	
MUP 263	Private Lessons: Clarinet	
MUP 264	Private Lessons: Saxophone	
MUP 266	Private Lessons: Bassoon	
MUP 267	Private Lessons: Jazz Saxophone	
MUP 271	Private Lessons: Trumpet	
MUP 272	Private Lessons: French Horn	
MUP 273	Private Lessons: Trombone	
MUP 274	Private Lessons Euphonium	
MUP 275	Private Lessons: Tuba	
MUP 276	Private Lessons: Jazz Trumpet	
MUP 277	Private Lessons: Jazz Trombone	
MUP 280	Private Lessons: Percussion	
MUP 281	Private Lessons: Jazz Percussion	
MUP 291	Private Lessons: Violin	
MUP 292	Private Lessons: Viola	
MUP 293	Private Lessons: Cello	
MUP 294	Private Lessons: Bass	
MUP 295	Private Lessons: Guitar	
MUP 296	Private Lessons: Jazz Guitar	
MUP 297	Private Lessons: Jazz Bass	
MUP 340	Private Lessons: Voice	
MUP 350	Private Lessons: Piano	
MUP 361	Private Lessons: Flute	
MUP 362	Private Lessons: Oboe	
MUP 363	Private Lessons: Clarinet	
MUP 364	Private Lessons: Saxophone	
MUP 366	Private Lessons: Bassoon	
MUP 371	Private Lessons: Trumpet	
MUP 372	Private Lessons: French Horn	
MUP 373	Private Lessons: Trombone	
MUP 374	Private Lessons: Euphonium	
MUP 375	Private Lessons: Tuba	
MUP 380	Private Lessons: Percussion	
MUP 391	Private Lessons: Violin	
MUP 392	Private Lessons: Viola	
MUP 393	Private Lessons: Cello	
MUP 394	Private Lessons: Bass	
MUP 395	Private Lessons: Guitar	
MUP 440	Private Lessons: Voice	
MUP 450	Private Lessons: Piano	
MUP 461	Private Lessons: Flute	
MUP 462	Private Lessons: Oboe	
MUP 463	Private Lessons: Clarinet	
MUP 464	Private Lessons: Saxophone	
MUP 466	Private Lessons: Bassoon	
MUP 471	Private Lessons: Trumpet	
MUP 472	Private Lessons: French Horn	
MUP 473	Private Lessons: Trombone	
MUP 474	Private Lessons: Euphonium	

MUP 475	Private Lessons: Tuba	
MUP 480	Private Lessons: Percussion	
MUP 491	Private Lessons: Violin	
MUP 492	Private Lessons: Viola	
MUP 493	Private Lessons: Cello	
MUP 494	Private Lessons: Bass	
MUP 495	Private Lessons: Guitar	
<b>Piano Proficiency</b>		
MUP 125	Piano Proficiency Exam	0
<b>Performance Attendance (take for seven terms)</b>		
MUP 001	Performance Attendance	0
<b>Music Technology Capstone</b>		
MU 498	Music Technology Internship	1-2
Total Hours		55-56

- <sup>1</sup> Each level of Music Theory and Aural Skills is co-requisite, i.e., they must be taken at the same time. A grade of "C" or better must be earned in order to proceed to the next level. After this is accomplished, a student may retake one of the two co-requisite courses for the purpose of improving their grade.
- <sup>2</sup> Students must participate in at least one semester hour of Music Ensemble per term for a minimum of seven terms. Music Ensembles are divided into two groups, "Major Ensembles" and "Minor Ensembles." Students completing the Music Technology concentration have two options for fulfilling this requirement:
- Option A requires at least six hours in a Major Ensemble, with the remaining hour in either a Major or Minor Ensemble
  - Option B allows students to take up to four hours in the Minor Ensemble course MUP 341 Computer Music Ensemble, with the remaining hours in Major Ensembles.

## Bachelor of Arts with a Major in Music and a Concentration in Music Education (Instrumental)

Requirements	Hours
<b>Core Curriculum Requirements</b>	<b>41</b>
<u>EH 101</u> English Composition I	
<u>EH 102</u> English Composition II	
<u>CMST 101</u> Public Speaking	
<u>PY 101</u> Introduction to Psychology	
<u>MA 105</u> Pre-Calculus Algebra or <u>MA 110</u> Finite Mathematics	
<b>Computer Music</b>	
<u>MU 115</u> Computer Music I	3
<b>Music Theory and Aural Skills</b> <sup>3</sup>	
<u>MU 221</u> Music Theory I & <u>MU 224</u> and Aural Skills I	4
<u>MU 222</u> Music Theory II & <u>MU 225</u> and Aural Skills II	4
<u>MU 321</u> Music Theory III & <u>MU 324</u> and Aural Skills III	4
<u>MU 322</u> Music Theory IV & <u>MU 325</u> and Aural Skills IV	4
<b>Music History and Literature</b>	
<u>MU 366</u> Music in World Cultures	2
<u>MU 471</u> Music History and Literature to 1750	3
<u>MU 472</u> Music Hist/Lit 1750-Present	3

<b>Conducting</b>		
<u>MU 329</u>	Conducting	2
<u>MU 429</u>	Advanced Conducting/Techniques	2
<b>Music Ensemble</b> <sup>4</sup>		<b>7</b>
Major Ensemble: Take at least 6 hours		
<u>MUP 225</u>	Symphony Band	
<u>MUP 231</u>	Orchestra	
<u>MUP 232</u>	Marching Band	
<u>MUP 235</u>	Wind Symphony	
Minor Ensemble: Take remaining hours		
<u>MUP 221</u>	Jazz Combo	
<u>MUP 230</u>	Guitar Ensemble	
<u>MUP 234</u>	Percussion Ensemble	
<u>MUP 236</u>	Jazz Ensemble	
<u>MUP 237</u>	Blazer Band	
<u>MUP 341</u>	Computer Music Ensemble	
<u>MUP 342</u>	Commercial Music Ensemble	
<u>MUP 353</u>	Piano Ensemble	
<b>Applied Music</b>		
Select seven hours from Music Performance (MUP) courses designated "Private Lessons" at the 200-level or higher (each course may be repeated for credit). Four of the seven credit hours must be at the 300 level or higher:		7
<u>MUP 250</u>	Private Lessons: Piano	
<u>MUP 261</u>	Private Lessons: Flute	
<u>MUP 262</u>	Private Lessons: Oboe	
<u>MUP 263</u>	Private Lessons: Clarinet	
<u>MUP 264</u>	Private Lessons: Saxophone	
<u>MUP 266</u>	Private Lessons: Bassoon	
<u>MUP 271</u>	Private Lessons: Trumpet	
<u>MUP 272</u>	Private Lessons: French Horn	
<u>MUP 273</u>	Private Lessons: Trombone	
<u>MUP 274</u>	Private Lessons Euphonium	
<u>MUP 275</u>	Private Lessons: Tuba	
<u>MUP 280</u>	Private Lessons: Percussion	
<u>MUP 291</u>	Private Lessons: Violin	
<u>MUP 292</u>	Private Lessons: Viola	
<u>MUP 293</u>	Private Lessons: Cello	
<u>MUP 294</u>	Private Lessons: Bass	
<u>MUP 295</u>	Private Lessons: Guitar	
<u>MUP 350</u>	Private Lessons: Piano	
<u>MUP 361</u>	Private Lessons: Flute	
<u>MUP 362</u>	Private Lessons: Oboe	
<u>MUP 363</u>	Private Lessons: Clarinet	
<u>MUP 364</u>	Private Lessons: Saxophone	
<u>MUP 366</u>	Private Lessons: Bassoon	
<u>MUP 371</u>	Private Lessons: Trumpet	
<u>MUP 372</u>	Private Lessons: French Horn	
<u>MUP 373</u>	Private Lessons: Trombone	
<u>MUP 374</u>	Private Lessons: Euphonium	
<u>MUP 375</u>	Private Lessons: Tuba	
<u>MUP 380</u>	Private Lessons: Percussion	
<u>MUP 391</u>	Private Lessons: Violin	
<u>MUP 392</u>	Private Lessons: Viola	
<u>MUP 393</u>	Private Lessons: Cello	
<u>MUP 394</u>	Private Lessons: Bass	
<u>MUP 395</u>	Private Lessons: Guitar	

<a href="#">MUP 450</a>	Private Lessons: Piano
<a href="#">MUP 461</a>	Private Lessons: Flute
<a href="#">MUP 462</a>	Private Lessons: Oboe
<a href="#">MUP 463</a>	Private Lessons: Clarinet
<a href="#">MUP 464</a>	Private Lessons: Saxophone
<a href="#">MUP 466</a>	Private Lessons: Bassoon
<a href="#">MUP 471</a>	Private Lessons: Trumpet
<a href="#">MUP 472</a>	Private Lessons: French Horn
<a href="#">MUP 473</a>	Private Lessons: Trombone
<a href="#">MUP 474</a>	Private Lessons: Euphonium
<a href="#">MUP 475</a>	Private Lessons: Tuba
<a href="#">MUP 480</a>	Private Lessons: Percussion
<a href="#">MUP 491</a>	Private Lessons: Violin
<a href="#">MUP 492</a>	Private Lessons: Viola
<a href="#">MUP 493</a>	Private Lessons: Cello
<a href="#">MUP 494</a>	Private Lessons: Bass
<a href="#">MUP 495</a>	Private Lessons: Guitar

**Piano Proficiency**

<a href="#">MUP 125</a>	Piano Proficiency Exam	0
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**Performance Attendance (take for seven terms)**

<a href="#">MUP 001</a>	Performance Attendance	0
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**Applied Methods**

<a href="#">MUP 122</a>	Class Voice	1
<a href="#">MUP 132</a>	Class Woodwinds	1
<a href="#">MUP 134</a>	Class Brass	1
<a href="#">MUP 136</a>	Class Percussion	1
<a href="#">MUP 138</a>	Class Strings	1

**Education**

This course must be taken PRIOR TO admission to TEP:

<a href="#">EDU 200</a>	Education as a Profession	3
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Students may take NO MORE THAN FOUR of the following courses PRIOR to admission to TEP. Students who ignore this admonition assume responsibility for their own mistakes.

<a href="#">EDF 362</a>	Foundations of Education I: Social, Historical, Philosophical	3
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<a href="#">EPR 363</a>	Foundations of Education II: Psychological	3
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**Methods Block 1**

<a href="#">MU 431</a>	Methods of Teaching Music N-6	3
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<a href="#">EDR 421</a>	Reading in Content Areas	1
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**Methods Block 2**

<a href="#">MU 433</a>	Methods I: Instrumental Music	3
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<a href="#">ECY 300</a>	Survey of Special Education	3
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**Methods Block 3**

<a href="#">MU 463</a>	Methods II: Instrumental Music	3
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<a href="#">EPR 411</a>	Measurement and Evaluation in Education	3
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<a href="#">EHS 497</a>	Special Problems in Education	3
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**Internship**

These courses must be taken AFTER admission to TEP.

<a href="#">EMU 490</a>	Internship in Music Education <sup>5</sup>	6
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<a href="#">EMU 499</a>	Internship Seminar in Music Education N - 12 <sup>5</sup>	1
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Total Hours		126
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<sup>1</sup> Completing this requirement will also count toward Core Curriculum Area II.

<sup>2</sup> Completing this requirement will also count toward Core Curriculum Area IV.

- <sup>3</sup> Each level of Music Theory and Aural Skills is co-requisite, i.e., they must be taken at the same time. A grade of "C" or better must be earned in order to proceed to the next level. After this is accomplished, a student may retake one of the two co-requisite courses for the purpose of improving their grade.
- <sup>4</sup> Students must participate in at least one semester hour of Music Ensemble per term for a minimum of seven terms. Music Ensembles are divided into two groups, Major Ensembles and Minor Ensembles. Music majors must complete at least six hours in a Major Ensemble, with the remaining hour in either a Major or Minor Ensemble.
- <sup>5</sup> Students must take EMU 490 and EMU 499 in the same term.

## Additional Requirements for Teacher Certified Programs

### Teacher Education Program

A student must be admitted to the Teacher Education Program and complete all of the requirements.

## Bachelor of Arts with a Major in Music and a Concentration in Music Education (Vocal)

Requirements	Hours
<b>First Year Experience</b>	
<a href="#">CAS 112</a> Success in College	1
<b>Public Speaking</b>	
<a href="#">CMST 101</a> Public Speaking <sup>1</sup>	3
<b>Psychology</b>	
<a href="#">PY 101</a> Introduction to Psychology <sup>2</sup>	3
<b>Computer Music</b>	
<a href="#">MU 115</a> Computer Music I	3
<b>Music Theory and Aural Skills <sup>3</sup></b>	
<a href="#">MU 221</a> Music Theory I and Aural Skills I	4
<a href="#">MU 222</a> Music Theory II and Aural Skills II	4
<a href="#">MU 321</a> Music Theory III and Aural Skills III	4
<a href="#">MU 322</a> Music Theory IV and Aural Skills IV	4
<b>Music History and Literature</b>	
<a href="#">MU 366</a> Music in World Cultures	2
<a href="#">MU 471</a> Music History and Literature to 1750	3
<a href="#">MU 472</a> Music Hist/Lit 1750-Present	3
<b>Conducting</b>	
<a href="#">MU 329</a> Conducting	2
<a href="#">MU 429</a> Advanced Conducting/Techniques	2
<b>Music Ensemble <sup>4</sup></b>	
Major Ensemble: Take for a minimum of 6 terms	
<a href="#">MUP 220</a> Concert Choir	
Minor Ensemble	
<a href="#">MUP 110</a> Gospel Choir	
<a href="#">MUP 320</a> Chamber Singers	
<a href="#">MUP 321</a> Women's Chorale	
<a href="#">MUP 342</a> Commercial Music Ensemble	
<a href="#">MUP 420</a> Opera Workshop	
<b>Applied Music</b>	

Select seven hours from the following courses (each course may be repeated for credit). Four credit hours must be at the 300 level or higher. 7

<u>MUP 240</u>	Private Lessons: Voice	
<u>MUP 250</u>	Private Lessons: Piano	
<u>MUP 340</u>	Private Lessons: Voice	
<u>MUP 350</u>	Private Lessons: Piano	
<u>MUP 440</u>	Private Lessons: Voice	
<u>MUP 450</u>	Private Lessons: Piano	

#### Piano Proficiency

<u>MUP 125</u>	Piano Proficiency Exam	0
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#### Performance Attendance (take for seven terms)

<u>MUP 001</u>	Performance Attendance	0
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#### Applied Methods

<u>MUP 132</u>	Class Woodwinds	1
<u>MUP 134</u>	Class Brass	1
<u>MUP 136</u>	Class Percussion	1
<u>MUP 138</u>	Class Strings	1

#### Education

This course must be taken PRIOR TO admission to TEP:

<u>EDU 200</u>	Education as a Profession	3
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Take NO MORE THAN FOUR of the following courses PRIOR to admission to TEP. Students who ignore this admonition assume responsibility for their own mistakes.

<u>EDF 362</u>	Foundations of Education I: Social, Historical, Philosophical	3
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<u>EPR 363</u>	Foundations of Education II: Psychological	3
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#### Methods Block 1

<u>MU 431</u>	Methods of Teaching Music N-6	3
<u>EDR 421</u>	Reading in Content Areas	1

#### Methods Block 2

<u>MU 432</u>	Methods I: Choral Music	3
<u>ECY 300</u>	Survey of Special Education	3

#### Methods Block 3

<u>MU 462</u>	Methods II: Choral Music	3
<u>EPR 411</u>	Measurement and Evaluation in Education	3
<u>EHS 497</u>	Special Problems in Education	3

#### Internship

These courses must be taken AFTER admission to TEP.

<u>EMU 490</u>	Internship in Music Education <sup>5</sup>	6
<u>EMU 499</u>	Internship Seminar in Music Education N - 12 <sup>5</sup>	1

Total Hours		91
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<sup>1</sup> Completing this requirement will also count toward Core Curriculum Area II.

<sup>2</sup> Completing this requirement will also count toward Core Curriculum Area IV.

<sup>3</sup> Each level of Music Theory and Aural Skills is co-requisite, i.e., they must be taken at the same time. A grade of "C" or better must be earned in order to proceed to the next level. After this is accomplished, a student may retake one of the two co-requisite courses for the purpose of improving their grade.

<sup>4</sup> Students must participate in at least one semester hour of Music Ensemble per term for a minimum of seven terms. Music Ensembles are divided into two groups, Major Ensembles and Minor Ensembles. Music majors must complete at least six hours in a Major Ensemble, with the remaining hour in either a Major or Minor Ensemble.

<sup>5</sup> Students must take EMU 490 and EMU 499 in the same term.

## Additional Requirements for Teacher Certified Programs

### Teacher Education Program

A student must be admitted to the Teacher Education Program and complete all of the requirements.

## Proposed Program of Study for a Major in Music

### Freshman

First Term	Hours	Second Term	Hours
CAS 112		1 EH 102	3
EH 101		3 Area IV History course	3
MA 110 or 105		3 MU 120 (or other Fine Arts course)	3
MU 221		3 MU 222	3
MU 224		1 MU 225	1
MUP 001		0 MUP 001	0
MUP 124		1 MUP 124	1
Applied Lessons		1 Applied Lessons	1
Ensemble		1 Ensemble	1
	14		16

### Sophomore

First Term	Hours	Second Term	Hours
Area II Literature course		3 Area II or IV course to complete sequence	3
Area III Natural Science with Lab		4 Area III Natural Science with Lab	4
MU 115		3 MU 322	3
MU 321		3 MU 325	1
MU 324		1 MU 366	2
MUP 001		0 MUP 001	0
MUP 124		1 Applied Lessons	1
MUP 125		0 Ensemble	1
Applied Lessons	1		
Ensemble	1		
	17		15

### Junior

First Term	Hours	Second Term	Hours
Area IV Social/Behavioral Science course		3 Area II Humanities course	3
MU 329		2 Area IV HY or SBS course	3
Music Theory V elective		3 Area II or IV course	3
MU 445		MU 472	3
MU 446		MUP 001	0
MU 448		Applied Lessons	2
MU 451		Ensemble	1
MU 455			
MU 458			
MU 459			
MU 471	3		
MUP 001	0		
Applied Lessons	2		
Ensemble	1		
	14		15

**Senior**

First Term	Hours	Second Term	Hours
Music History and Literature Elective		3 Electives	12
MU 261		Music Elective (if needed)	
MU 364		Applied Lessons	2
MU 365		MUP 497	0
MU 461			
Electives	9		
MUP 001	0		
Applied Lessons	2		
Ensemble	1		
	15		14

Total credit hours: 120

## Proposed Program of Study for a Major in Music Education (Choral)

**Freshman**

First Term	Hours	Second Term	Hours	Summer Term	Hours
CAS 112		1 EH 102		3 Area III Science course with Lab	4
EH 101		3 Area III MA 105, 110, or higher		3 Area IV required course	3
CMST 101		3 MU 115		3 SOC 100	
MU 120		3 MU 222		3 ANTH 101	
MU 221		3 MU 225		1 GEO 121	
MU 224		1 MUP 001		0	
MUP 001		0 MUP 124		1	
MUP 124		1 Applied Lessons		1	
Applied Lessons		1 Ensemble		1	
Ensemble		1			
	17		16		7

**Sophomore**

First Term	Hours	Second Term	Hours	Summer Term	Hours
EDU 200		3 PY 101		3 Area III Science course with Lab	4
EDF 362		3 EPR 363		3 Area II Literature course	3
MU 321		3 MU 322		3	
MU 324		1 MU 325		1	
MUP 001		0 MU 366		2	
MUP 132		1 MUP 001		0	
MUP 124		1 MUP 134		1	
MUP 125		0 MUP 136		1	
Applied Lessons		1 Applied Lessons		1	
Ensemble		1 Ensemble		1	
	14		16		7

**Junior**

First Term	Hours	Second Term	Hours	Summer Term	Hours
Area IV History course		3 MU 432		3 Area II Literature course to complete sequence	3
MU 431		3 ECY 300		3 Area IV course	3
EDR 421		1 MU 429		2	
MU 329		2 MU 472		3	
MU 471		3 MUP 001		0	
MUP 001		0 Applied Lessons		2	
MUP 138		1 Ensemble		1	
Applied Lessons		1			
Ensemble		1			
	15		14		6

**Senior**

First Term	Hours	Second Term	Hours
MU 462		3 EMU 490	6
EPR 411		3 EMU 499	1
EHS 497		3	
MUP 001		0	
Applied Lessons		1	
Ensemble		1	
	11		7

Total credit hours: 130

## Proposed Program of Study for a Major in Music Education (Instrumental)

**Freshman**

First Term	Hours	Second Term	Hours	Summer Term	Hours
CAS 112		1 EH 102		3 Area III Science course with Lab	4
EH 101		3 Area III Mathematics: MA 105, 110 or higher		3 Area IV Required course	3
CMST 101		3 MU 115		3 SOC 100	
MU 120		3 MU 222		3 ANTH 101	
MU 221		3 MU 225		1 GEO 121	
MU 224		1 MUP 001		0	
MUP 001		0 MUP 124		1	
MUP 124		1 Applied Lessons		1	
Applied Lessons		1 Ensemble		1	
Ensemble		1			
	17		16		7

**Sophomore**

First Term	Hours	Second Term	Hours	Summer Term	Hours
EDU 200		3 PY 101		3 Area III Science course with Lab	4
EDF 362		3 EPR 363		3 Area II Literature course	3
MU 321		3 MU 322		3	
MU 324		1 MU 325		1	
MUP 001		0 MU 366		2	
MUP 124		1 MUP 001		0	
MUP 125		0 MUP 122		1	
MUP 132		1 MUP 136		1	
Applied Lessons		1 Applied Lessons		1	
Ensemble		1 Ensemble		1	
	14		16		7

**Junior**

First Term	Hours	Second Term	Hours	Summer Term	Hours
Area IV History course		3 MU 433		3 Area II Literature course to complete sequence	3
MU 431		3 ECY 300		3 Area IV course	3
EDR 421		1 MU 429		2	
MU 329		2 MU 472		3	
MU 471		3 MUP 001		0	
MUP 001		0 MUP 134		1	
MUP 138		1 Applied Lessons		2	
Applied Lessons		1 Ensemble		1	
Ensemble		1			
	15		15		6

**Senior**

First Term	Hours	Second Term	Hours
MU 463		3 EMU 490	6
EPR 411		3 EMU 499	1
EHS 497		3	
MUP 001		0	

Applied Lessons	1	
Ensemble	1	
	11	7
Total credit hours: 131		

Proposed Program of Study for a Major in Music Technology

Freshman			
First Term	Hours	Second Term	Hours
CAS 112		1 EH 102	3
EH 101		3 Area III Mathematics course: MA 110, 105 or above	3
MU 115		3 MU 222	3
MU 221		3 MU 225	1
MU 224		1 MU 245	3
MUP 001		0 MUP 001	0
MUP 124		1 MUP 124	1
Applied Lessons		1 Applied Lessons	1
Ensemble		1 Ensemble	1
	14		16
Sophomore			
First Term	Hours	Second Term	Hours
Area II Literature course		3 Area IV History course	3
MU 120		3 Area II or Area IV course	3
MU 341		3 MU 322	3
MU 321		3 MU 325	1
MU 324		1 MU 342	3
MUP 001		0 MU 366	2
MUP 124		1 MUP 001	0
MUP 125		0 Applied Lessons	1
Applied Lessons		1 Ensemble	1
Ensemble		1	
	16		17
Junior			
First Term	Hours	Second Term	Hours
Area III Science course with Lab		4 Area II course	3
Area II or IV course to complete literature or history sequence		3 Area III Science course with Lab	4
MU 345		3 Area IV SBS course	3
Music Theory V Elective		3 MU 472	3
MU 445		MUP 001	0
MU 446		MUP 341	1
MU 448			
MU 451			
MU 455			
MU 458			
MU 459			
MUP 001	0		
Ensemble	1		
	14		14
Senior			
First Term	Hours	Second Term	Hours
Area IV course		3 MU 498	1-2
MU 441		3 Electives (any discipline)	11-12
Electives (any discipline)	9		

MUP 001	0	
MUP 341	1	
	16	12-14
Total credit hours: 119-121		

Minor in Music

Requirements		Hours
Music Theory		
<u>MU 221</u>	Music Theory I	3
<u>MU 222</u>	Music Theory II	3
Aural Skills		
<u>MU 224</u>	Aural Skills I	1
<u>MU 225</u>	Aural Skills II	1
Music History and Literature		
<u>MU 471</u>	Music History and Literature to 1750	3
<u>MU 472</u>	Music Hist/Lit 1750-Present	3
Music Ensemble		
Select six hours from the following courses (all courses may be repeated for credit)		6
<u>MUP 110</u>	Gospel Choir	
<u>MUP 220</u>	Concert Choir	
<u>MUP 120</u>	University Chorus	
<u>MUP 221</u>	Jazz Combo	
<u>MUP 225</u>	Symphony Band	
<u>MUP 230</u>	Guitar Ensemble	
<u>MUP 231</u>	Orchestra	
<u>MUP 232</u>	Marching Band	
<u>MUP 234</u>	Percussion Ensemble	
<u>MUP 235</u>	Wind Symphony	
<u>MUP 236</u>	Jazz Ensemble	
<u>MUP 237</u>	Blazer Band	
<u>MUP 320</u>	Chamber Singers	
<u>MUP 321</u>	Women's Chorale	
<u>MUP 341</u>	Computer Music Ensemble	
<u>MUP 342</u>	Commercial Music Ensemble	
<u>MUP 353</u>	Piano Ensemble	
<u>MUP 420</u>	Opera Workshop	
Applied Music		
Select three hours from Music Performance (MUP) courses designated "Private Lessons" (each course may be repeated for credit)		3
<u>MUP 140</u>	Private Lessons: Voice	
<u>MUP 150</u>	Private Lessons: Piano	
<u>MUP 161</u>	Private Lessons: Flute	
<u>MUP 162</u>	Private Lessons: Oboe	
<u>MUP 163</u>	Private Lessons: Clarinet	
<u>MUP 164</u>	Private Lessons: Saxophone	
<u>MUP 166</u>	Private Lessons: Bassoon	
<u>MUP 171</u>	Private Lessons: Trumpet	
<u>MUP 172</u>	Private Lessons: French Horn	
<u>MUP 173</u>	Private Lessons: Trombone	
<u>MUP 174</u>	Private Lessons: Euphonium	
<u>MUP 175</u>	Private Lessons: Tuba	
<u>MUP 180</u>	Private Lessons: Percussion	
<u>MUP 191</u>	Private Lessons: Violin	
<u>MUP 192</u>	Private Lessons: Viola	
<u>MUP 193</u>	Private Lessons: Cello	

<a href="#">MUP 194</a>	Private Lessons: Bass
<a href="#">MUP 195</a>	Private Lessons: Guitar
<a href="#">MUP 240</a>	Private Lessons: Voice
<a href="#">MUP 250</a>	Private Lessons: Piano
<a href="#">MUP 253</a>	Private Lessons: Jazz Piano
<a href="#">MUP 261</a>	Private Lessons: Flute
<a href="#">MUP 262</a>	Private Lessons: Oboe
<a href="#">MUP 263</a>	Private Lessons: Clarinet
<a href="#">MUP 264</a>	Private Lessons: Saxophone
<a href="#">MUP 266</a>	Private Lessons: Bassoon
<a href="#">MUP 267</a>	Private Lessons: Jazz Saxophone
<a href="#">MUP 271</a>	Private Lessons: Trumpet
<a href="#">MUP 272</a>	Private Lessons: French Horn
<a href="#">MUP 273</a>	Private Lessons: Trombone
<a href="#">MUP 274</a>	Private Lessons Euphonium
<a href="#">MUP 275</a>	Private Lessons: Tuba
<a href="#">MUP 276</a>	Private Lessons: Jazz Trumpet
<a href="#">MUP 277</a>	Private Lessons: Jazz Trombone
<a href="#">MUP 280</a>	Private Lessons: Percussion
<a href="#">MUP 281</a>	Private Lessons: Jazz Percussion
<a href="#">MUP 291</a>	Private Lessons: Violin
<a href="#">MUP 292</a>	Private Lessons: Viola
<a href="#">MUP 293</a>	Private Lessons: Cello
<a href="#">MUP 294</a>	Private Lessons: Bass
<a href="#">MUP 295</a>	Private Lessons: Guitar
<a href="#">MUP 296</a>	Private Lessons: Jazz Guitar
<a href="#">MUP 297</a>	Private Lessons: Jazz Bass
<a href="#">MUP 340</a>	Private Lessons: Voice
<a href="#">MUP 350</a>	Private Lessons: Piano
<a href="#">MUP 361</a>	Private Lessons: Flute
<a href="#">MUP 362</a>	Private Lessons: Oboe
<a href="#">MUP 363</a>	Private Lessons: Clarinet
<a href="#">MUP 364</a>	Private Lessons: Saxophone
<a href="#">MUP 366</a>	Private Lessons: Bassoon
<a href="#">MUP 371</a>	Private Lessons: Trumpet
<a href="#">MUP 372</a>	Private Lessons: French Horn
<a href="#">MUP 373</a>	Private Lessons: Trombone
<a href="#">MUP 374</a>	Private Lessons: Euphonium
<a href="#">MUP 375</a>	Private Lessons: Tuba
<a href="#">MUP 380</a>	Private Lessons: Percussion
<a href="#">MUP 391</a>	Private Lessons: Violin
<a href="#">MUP 392</a>	Private Lessons: Viola
<a href="#">MUP 393</a>	Private Lessons: Cello
<a href="#">MUP 394</a>	Private Lessons: Bass
<a href="#">MUP 395</a>	Private Lessons: Guitar
<a href="#">MUP 440</a>	Private Lessons: Voice
<a href="#">MUP 450</a>	Private Lessons: Piano
<a href="#">MUP 461</a>	Private Lessons: Flute
<a href="#">MUP 462</a>	Private Lessons: Oboe
<a href="#">MUP 463</a>	Private Lessons: Clarinet
<a href="#">MUP 464</a>	Private Lessons: Saxophone
<a href="#">MUP 466</a>	Private Lessons: Bassoon
<a href="#">MUP 471</a>	Private Lessons: Trumpet
<a href="#">MUP 472</a>	Private Lessons: French Horn
<a href="#">MUP 473</a>	Private Lessons: Trombone
<a href="#">MUP 474</a>	Private Lessons: Euphonium
<a href="#">MUP 475</a>	Private Lessons: Tuba

[MUP 480](#) Private Lessons: Percussion

[MUP 491](#) Private Lessons: Violin

[MUP 492](#) Private Lessons: Viola

[MUP 493](#) Private Lessons: Cello

[MUP 494](#) Private Lessons: Bass

[MUP 495](#) Private Lessons: Guitar

### Music Elective

Select three hours from the following courses:

3

[MU 145](#) The Music Business

[MU 165](#) Jazz Styles: History and Appreciation

[MU 199](#) Independent Studies

[MU 211](#) Recording Studio Workshop

[MU 245](#) Recording Technology I

[MU 261](#) Introduction to Music Literature

[MU 299](#) Independent Studies

[MU 330](#) Marching Band Techniques

[MU 331](#) Band Literature

[MU 341](#) Computer Music II

[MU 342](#) Computer Music III

[MU 345](#) Recording Technology II

[MU 359](#) Composition I

[MU 364](#) American Music

[MU 365](#) The Evolution of Jazz

[MU 366](#) Music in World Cultures

[MU 367](#) Introduction to Ethnomusicology

[MU 399](#) Independent Studies

[MU 429](#) Advanced Conducting/Techniques

[MU 441](#) Multimedia Productions

[MU 445](#) Modal Counterpoint

[MU 446](#) Tonal Counterpoint

[MU 448](#) Orchestration

[MU 451](#) Topics in Music Theory

[MU 455](#) Form and Analysis

[MU 458](#) Contemporary Techniques

[MU 459](#) Composition II

[MU 461](#) Seminar in Music Literature

[MU 499](#) Independent Studies

[MUP 140](#) Private Lessons: Voice

[MUP 150](#) Private Lessons: Piano

[MUP 161](#) Private Lessons: Flute

[MUP 162](#) Private Lessons: Oboe

[MUP 163](#) Private Lessons: Clarinet

[MUP 164](#) Private Lessons: Saxophone

[MUP 171](#) Private Lessons: Trumpet

[MUP 172](#) Private Lessons: French Horn

[MUP 173](#) Private Lessons: Trombone

[MUP 174](#) Private Lessons: Euphonium

[MUP 175](#) Private Lessons: Tuba

[MUP 180](#) Private Lessons: Percussion

[MUP 191](#) Private Lessons: Violin

[MUP 192](#) Private Lessons: Viola

[MUP 193](#) Private Lessons: Cello

[MUP 194](#) Private Lessons: Bass

[MUP 195](#) Private Lessons: Guitar

[MUP 220](#) Concert Choir

[MUP 221](#) Jazz Combo

[MUP 225](#) Symphony Band

<a href="#">MUP 230</a>	Guitar Ensemble
<a href="#">MUP 231</a>	Orchestra
<a href="#">MUP 232</a>	Marching Band
<a href="#">MUP 233</a>	Clarinet Choir
<a href="#">MUP 234</a>	Percussion Ensemble
<a href="#">MUP 235</a>	Wind Symphony
<a href="#">MUP 236</a>	Jazz Ensemble
<a href="#">MUP 237</a>	Blazer Band
<a href="#">MUP 238</a>	Brass Ensemble
<a href="#">MUP 239</a>	Tuba/Euphonium Ensemble
<a href="#">MUP 240</a>	Private Lessons: Voice
<a href="#">MUP 250</a>	Private Lessons: Piano
<a href="#">MUP 261</a>	Private Lessons: Flute
<a href="#">MUP 262</a>	Private Lessons: Oboe
<a href="#">MUP 263</a>	Private Lessons: Clarinet
<a href="#">MUP 264</a>	Private Lessons: Saxophone
<a href="#">MUP 266</a>	Private Lessons: Bassoon
<a href="#">MUP 271</a>	Private Lessons: Trumpet
<a href="#">MUP 272</a>	Private Lessons: French Horn
<a href="#">MUP 273</a>	Private Lessons: Trombone
<a href="#">MUP 274</a>	Private Lessons Euphonium
<a href="#">MUP 275</a>	Private Lessons: Tuba
<a href="#">MUP 280</a>	Private Lessons: Percussion
<a href="#">MUP 291</a>	Private Lessons: Violin
<a href="#">MUP 292</a>	Private Lessons: Viola
<a href="#">MUP 293</a>	Private Lessons: Cello
<a href="#">MUP 294</a>	Private Lessons: Bass
<a href="#">MUP 295</a>	Private Lessons: Guitar
<a href="#">MUP 320</a>	Chamber Singers
<a href="#">MUP 321</a>	Women's Chorale
<a href="#">MUP 340</a>	Private Lessons: Voice
<a href="#">MUP 341</a>	Computer Music Ensemble
<a href="#">MUP 342</a>	Commercial Music Ensemble
<a href="#">MUP 350</a>	Private Lessons: Piano
<a href="#">MUP 353</a>	Piano Ensemble
<a href="#">MUP 361</a>	Private Lessons: Flute
<a href="#">MUP 362</a>	Private Lessons: Oboe
<a href="#">MUP 363</a>	Private Lessons: Clarinet
<a href="#">MUP 364</a>	Private Lessons: Saxophone
<a href="#">MUP 366</a>	Private Lessons: Bassoon
<a href="#">MUP 371</a>	Private Lessons: Trumpet
<a href="#">MUP 372</a>	Private Lessons: French Horn
<a href="#">MUP 373</a>	Private Lessons: Trombone
<a href="#">MUP 374</a>	Private Lessons: Euphonium
<a href="#">MUP 375</a>	Private Lessons: Tuba
<a href="#">MUP 380</a>	Private Lessons: Percussion
<a href="#">MUP 391</a>	Private Lessons: Violin
<a href="#">MUP 392</a>	Private Lessons: Viola
<a href="#">MUP 393</a>	Private Lessons: Cello
<a href="#">MUP 394</a>	Private Lessons: Bass
<a href="#">MUP 395</a>	Private Lessons: Guitar
<a href="#">MUP 420</a>	Opera Workshop
<a href="#">MUP 440</a>	Private Lessons: Voice
<a href="#">MUP 450</a>	Private Lessons: Piano
<a href="#">MUP 461</a>	Private Lessons: Flute
<a href="#">MUP 462</a>	Private Lessons: Oboe
<a href="#">MUP 463</a>	Private Lessons: Clarinet

<a href="#">MUP 464</a>	Private Lessons: Saxophone
<a href="#">MUP 466</a>	Private Lessons: Bassoon
<a href="#">MUP 471</a>	Private Lessons: Trumpet
<a href="#">MUP 472</a>	Private Lessons: French Horn
<a href="#">MUP 473</a>	Private Lessons: Trombone
<a href="#">MUP 474</a>	Private Lessons: Euphonium
<a href="#">MUP 475</a>	Private Lessons: Tuba
<a href="#">MUP 480</a>	Private Lessons: Percussion
<a href="#">MUP 491</a>	Private Lessons: Violin
<a href="#">MUP 492</a>	Private Lessons: Viola
<a href="#">MUP 493</a>	Private Lessons: Cello
<a href="#">MUP 494</a>	Private Lessons: Bass
<a href="#">MUP 495</a>	Private Lessons: Guitar

Total Hours	26
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## Minor in Music Technology

Requirements	Hours
<b>Music Theory</b>	
<a href="#">MU 221</a> Music Theory I	3
<a href="#">MU 222</a> Music Theory II	3
<b>Aural Skills</b>	
<a href="#">MU 224</a> Aural Skills I	1
<a href="#">MU 225</a> Aural Skills II	1
<b>Music History and Literature</b>	
<a href="#">MU 366</a> Music in World Cultures	3
<b>Music Ensemble</b>	4
Select four hours from the following courses (all courses may be repeated for credit)	
<a href="#">MUP 110</a> Gospel Choir	
<a href="#">MUP 120</a> University Chorus	
<a href="#">MUP 220</a> Concert Choir	
<a href="#">MUP 221</a> Jazz Combo	
<a href="#">MUP 225</a> Symphony Band	
<a href="#">MUP 230</a> Guitar Ensemble	
<a href="#">MUP 231</a> Orchestra	
<a href="#">MUP 232</a> Marching Band	
<a href="#">MUP 234</a> Percussion Ensemble	
<a href="#">MUP 235</a> Wind Symphony	
<a href="#">MUP 236</a> Jazz Ensemble	
<a href="#">MUP 237</a> Blazer Band	
<a href="#">MUP 320</a> Chamber Singers	
<a href="#">MUP 321</a> Women's Chorale	
<a href="#">MUP 341</a> Computer Music Ensemble	
<a href="#">MUP 342</a> Commercial Music Ensemble	
<a href="#">MUP 353</a> Piano Ensemble	
<a href="#">MUP 420</a> Opera Workshop	
<b>Applied Music</b>	2
Select two hours from the following courses:	
<a href="#">MUP 140</a> Private Lessons: Voice	
<a href="#">MUP 150</a> Private Lessons: Piano	
<a href="#">MUP 161</a> Private Lessons: Flute	
<a href="#">MUP 162</a> Private Lessons: Oboe	
<a href="#">MUP 163</a> Private Lessons: Clarinet	
<a href="#">MUP 164</a> Private Lessons: Saxophone	
<a href="#">MUP 166</a> Private Lessons: Bassoon	
<a href="#">MUP 171</a> Private Lessons: Trumpet	

<a href="#">MUP 172</a>	Private Lessons: French Horn
<a href="#">MUP 173</a>	Private Lessons: Trombone
<a href="#">MUP 174</a>	Private Lessons: Euphonium
<a href="#">MUP 175</a>	Private Lessons: Tuba
<a href="#">MUP 180</a>	Private Lessons: Percussion
<a href="#">MUP 191</a>	Private Lessons: Violin
<a href="#">MUP 192</a>	Private Lessons: Viola
<a href="#">MUP 193</a>	Private Lessons: Cello
<a href="#">MUP 194</a>	Private Lessons: Bass
<a href="#">MUP 195</a>	Private Lessons: Guitar
<a href="#">MUP 240</a>	Private Lessons: Voice
<a href="#">MUP 250</a>	Private Lessons: Piano
<a href="#">MUP 253</a>	Private Lessons: Jazz Piano
<a href="#">MUP 261</a>	Private Lessons: Flute
<a href="#">MUP 262</a>	Private Lessons: Oboe
<a href="#">MUP 263</a>	Private Lessons: Clarinet
<a href="#">MUP 264</a>	Private Lessons: Saxophone
<a href="#">MUP 266</a>	Private Lessons: Bassoon
<a href="#">MUP 267</a>	Private Lessons: Jazz Saxophone
<a href="#">MUP 271</a>	Private Lessons: Trumpet
<a href="#">MUP 272</a>	Private Lessons: French Horn
<a href="#">MUP 273</a>	Private Lessons: Trombone
<a href="#">MUP 274</a>	Private Lessons Euphonium
<a href="#">MUP 275</a>	Private Lessons: Tuba
<a href="#">MUP 276</a>	Private Lessons: Jazz Trumpet
<a href="#">MUP 277</a>	Private Lessons: Jazz Trombone
<a href="#">MUP 280</a>	Private Lessons: Percussion
<a href="#">MUP 281</a>	Private Lessons: Jazz Percussion
<a href="#">MUP 291</a>	Private Lessons: Violin
<a href="#">MUP 292</a>	Private Lessons: Viola
<a href="#">MUP 293</a>	Private Lessons: Cello
<a href="#">MUP 294</a>	Private Lessons: Bass
<a href="#">MUP 295</a>	Private Lessons: Guitar
<a href="#">MUP 296</a>	Private Lessons: Jazz Guitar
<a href="#">MUP 297</a>	Private Lessons: Jazz Bass
<a href="#">MUP 340</a>	Private Lessons: Voice
<a href="#">MUP 350</a>	Private Lessons: Piano
<a href="#">MUP 361</a>	Private Lessons: Flute
<a href="#">MUP 362</a>	Private Lessons: Oboe
<a href="#">MUP 363</a>	Private Lessons: Clarinet
<a href="#">MUP 364</a>	Private Lessons: Saxophone
<a href="#">MUP 366</a>	Private Lessons: Bassoon
<a href="#">MUP 371</a>	Private Lessons: Trumpet
<a href="#">MUP 372</a>	Private Lessons: French Horn
<a href="#">MUP 373</a>	Private Lessons: Trombone
<a href="#">MUP 374</a>	Private Lessons: Euphonium
<a href="#">MUP 375</a>	Private Lessons: Tuba
<a href="#">MUP 380</a>	Private Lessons: Percussion
<a href="#">MUP 391</a>	Private Lessons: Violin
<a href="#">MUP 392</a>	Private Lessons: Viola
<a href="#">MUP 393</a>	Private Lessons: Cello
<a href="#">MUP 394</a>	Private Lessons: Bass
<a href="#">MUP 395</a>	Private Lessons: Guitar
<a href="#">MUP 440</a>	Private Lessons: Voice
<a href="#">MUP 450</a>	Private Lessons: Piano
<a href="#">MUP 461</a>	Private Lessons: Flute
<a href="#">MUP 462</a>	Private Lessons: Oboe

<a href="#">MUP 463</a>	Private Lessons: Clarinet	
<a href="#">MUP 464</a>	Private Lessons: Saxophone	
<a href="#">MUP 466</a>	Private Lessons: Bassoon	
<a href="#">MUP 471</a>	Private Lessons: Trumpet	
<a href="#">MUP 472</a>	Private Lessons: French Horn	
<a href="#">MUP 473</a>	Private Lessons: Trombone	
<a href="#">MUP 474</a>	Private Lessons: Euphonium	
<a href="#">MUP 475</a>	Private Lessons: Tuba	
<a href="#">MUP 480</a>	Private Lessons: Percussion	
<a href="#">MUP 491</a>	Private Lessons: Violin	
<a href="#">MUP 492</a>	Private Lessons: Viola	
<a href="#">MUP 493</a>	Private Lessons: Cello	
<a href="#">MUP 494</a>	Private Lessons: Bass	
<a href="#">MUP 495</a>	Private Lessons: Guitar	
<b>Music Technology</b>		
<a href="#">MU 115</a>	Computer Music I	3
<a href="#">MU 245</a>	Recording Technology I	3
<a href="#">MU 341</a>	Computer Music II	3
Total Hours		26

## Music Honors Program

### Purpose

The Music Honors Program is designed for highly talented, self-motivated students majoring in music. Through individual instruction and mentoring by the student's applied faculty member, he/she will present a full public recital on his/her major instrument or present a series of original compositions. In the Department of Music this program is also referred to as the Young Performing Artists Program.

### Eligibility

Acceptance to the Music Honors Program requires the student to:

- Be a music major.
- Be of at least sophomore standing in music.
- Be admitted to 300-level private lessons.
- Earn and maintain an overall GPA of 3.0 and a minimum cumulative GPA of 3.25 in all music courses.

### Requirements

- Have permission of his/her applied instructor.
- Be recommended and accepted to the program by members of the music faculty by way of an end-of-semester jury.
- Present a 30 minute (junior year) and/or 1 hour (senior year) preliminary recital before the music faculty. Permission from the faculty must be granted before proceeding to a public recital.
- In consultation with the applied teacher, arrange and program a recital, write program notes, and assemble the program.
- Present a 30 minute (junior year) and/or 1 hour (senior year) public recital.

### Benefits

Students will receive valuable individual attention and a public recital sponsored by the Department of Music. On most occasions, the performance is accompanied by a professional accompanist and is recorded onto compact disc. This recording is of great use to students when they are applying for music positions, graduate schools,

fellowships, and assistantships. Students who complete the program will graduate "With Honors in Music."

## Contact

For more information concerning the Department of Music Honors Program, please contact:

Dr. William Price, Coordinator  
Young Performing Artists Program  
234 Hulsey Center  
Campus Phone: (205) 934-8056  
E-mail: [pricewm@uab.edu](mailto:pricewm@uab.edu)

Dr. Denise Gainey, Associate Chair  
Department of Music  
243 Hulsey Center  
Campus Phone: (205) 975-0558  
E-mail: [clarinet@uab.edu](mailto:clarinet@uab.edu)

## EMU-Music Education Courses

### EMU 402. Methods of Teaching Music N-6. 3 Hours.

Organization of appropriate music concepts and musical experiences for all elementary children; development of methods and skills needed for direct student involvement in musical experiences for each grade level.

### EMU 403. Methods of Teaching Music N-6 Lab. 1 Hour.

Public school observation experiences for music education students enrolled in EMU 402.

### EMU 404. Methods of Teaching Music in Secondary Education. 3 Hours.

Aims, principles, and philosophies of music; various methods of teaching in secondary schools for both non-performance music classes and instrumental and vocal activities. Laboratory includes direct method application in secondary music classrooms.

### EMU 405. Methods of Teaching Music in Secondary Education Lab. 1 Hour.

Public school observation experiences for music education students enrolled in EMU 404.

### EMU 490. Internship in Music Education. 6-9 Hours.

Supervised capstone teaching experience in grades N-12 as appropriate to student's teaching field (general music, instrumental music, or vocal/choral music).

### EMU 499. Internship Seminar in Music Education N - 12. 1-3 Hour.

Capstone course for the B.A. in Music Education. Students will demonstrate the skills expected of a professional music educator. This course is a supervised teaching course where the student is expected solve problems in all issues related to classroom management, assessment, and music making. Included in the assessment will be the creation of professional documents, appropriate budgets, and supervised teaching experiences. Prerequisites: Completion of methods courses with no grade below C. Corequisite: EMU 490. 1 hour.

## MU-Music Courses

### MU 100. Fundamentals of Music. 3 Hours.

Basic elements of music and music notation: rhythm, scales, keys, and chords.

### MU 105. Introduction to Music Technology for Non-Majors. 3 Hours.

Introductory survey course for non-music majors with emphasis placed on exposing the general student to the vast array of software, hardware, and basic principles of recording and editing sound and music. The foundations of MIDI (Musical Instrument Digital Interface), digital audio, and computer and mobile applications for music creation and manipulation are explored, as well as the impact these technologies now have on careers in the recording and entertainment industry. No prior experiences as a musician or music technologist are required.

### MU 115. Computer Music I. 3 Hours.

Introduction to hardware and software for creating and performing music with computers. Concepts include digital sampling, binary computation, properties of waveforms, graphical notation, and audio sequencing. Quantitative Literacy is a significant component of this course.

**Prerequisites:** MU 100 [Min Grade: B]

### MU 120. Music Appreciation. 3 Hours.

Guided listening and class discussion covering variety of styles. Emphasis on European concert music of the eighteenth and nineteenth centuries. This course meets the Core Curriculum requirements for Area II: Fine Arts.

### MU 141. Musical Acoustics. 3 Hours.

Physical nature of musical tones (pitch, loudness, and timbre) and numerical basis of scales, tuning, and musical instrument design. Laboratory/discussion including use of oscilloscope to study actual acoustic systems.

### MU 145. The Music Business. 3 Hours.

Business aspects of music industry.

### MU 159. Introduction to Composition. 3 Hours.

Introduction to the craft of musical composition.

**Prerequisites:** MU 221 [Min Grade: C] and MU 224 [Min Grade: C]

### MU 160. First Year Experience in Music. 1 Hour.

The objective of this course is to introduce incoming freshmen to an education in music and music education in context of the university. It is meant to help prepare students for a successful collegiate career in the study of music. 1 hour.

### MU 165. Jazz Styles: History and Appreciation. 3 Hours.

American jazz with emphasis on instrumental and vocal performers, jazz bands, and combos. Development of big band, swing, and popular music.

### MU 199. Independent Studies. 1-3 Hour.

Directed projects in music. Permission of Department Chair based on written proposal submitted prior to registration.

### MU 203. Introduction to Music Education. 2 Hours.

An introduction to the expectations of the modern-day public school music teacher, including the role of the teacher, curricular and legal expectations of teaching, and historical and philosophical underpinnings of public school music teaching.

### MU 205. African-American Music 1619-Present. 3 Hours.

This course is designed to help the student understand the musical forms and structures, historical background, stylistic richness, and cultural impacts of the many genres of African-American music in North America from 1619 to the present.

### MU 210. Special Topic. 1-3 Hour.

Specialized subjects taught as opportunity allows. May be repeated for credit.

### MU 211. Recording Studio Workshop. 1-3 Hour.

Specialized subjects taught as opportunity allows. May be repeated for credit.

**MU 221. Music Theory I. 3 Hours.**

Melody, harmony, and rhythm; their interaction in music. Diatonic musical materials with emphasis on choral and simple keyboard idioms.

**MU 222. Music Theory II. 3 Hours.**

Continuation of MU 221.

**Prerequisites:** MU 221 [Min Grade: C] and MU 224 [Min Grade: C]

**MU 224. Aural Skills I. 1 Hour.**

Required laboratory for MU 221.

**MU 225. Aural Skills II. 1 Hour.**

Required laboratory for MU 222.

**Prerequisites:** MU 224 [Min Grade: C]

**MU 232. Instrumental Literature I. 3 Hours.**

Introduction to the layout of instrumental scores, a history and development of the orchestra, extensive work with transpositions, ranges, and tone colors of instruments, and a survey of instrumental literature.

**MU 233. Piano Literature I. 3 Hours.**

Survey of the important piano solo repertoire from Bach through Schubert. Examination of the development of keyboard repertoire from the time of the harpsichord through the time of the early piano through playing, analysis and listening. Two terms of Applied Piano required.

**Prerequisites:** MUP 150 [Min Grade: C]

**MU 234. Vocal Literature I. 3 Hours.**

Introductory survey of representative non-operatic solo vocal repertoire of North America, the British Isles, and Italy. Techniques of song study, interpretation, and performance practice. Two terms of Applied Voice required.

**Prerequisites:** MUP 140 [Min Grade: C]

**MU 235. English and Italian Diction. 2 Hours.**

Instruction in standard English and Italian stage pronunciation.

**MU 236. French and German Diction. 2 Hours.**

Instruction in the standard French and German stage pronunciation.

**MU 245. Recording Technology I. 3 Hours.**

Concepts and techniques of music production in recording studios. Limited enrollment. First class meets on campus.

**Prerequisites:** MU 115 [Min Grade: C] and MU 221 [Min Grade: C] and MU 224 [Min Grade: C]

**MU 261. Introduction to Music Literature. 3 Hours.**

Score reading and elementary analysis. Chronological survey of styles and forms of each historical period. Basic music reading ability.

**MU 282. Accompanying. 3 Hours.**

Principles of accompanying singers and instrumentalists; practical experience in accompanying; and facility in sight-reading for keyboard performers. Experience is gained through assigned projects and/or assigned studio accompanying.

**MU 298. Introduction to Technology in the Arts. 3 Hours.**

Applications of computer-based technology to the arts: music, theatre, video, and visual arts. Demonstrations of multimedia capabilities.

**MU 299. Independent Studies. 1-3 Hour.**

May be repeated for credit. Permission of Department Chair based on written proposal submitted prior to registration.

**MU 303. Foundations of Music Education. 3 Hours.**

Analysis into the historical, social, and philosophical foundations of music education by studying the application of education principles to music and emphasizing the development of a personal philosophy towards music education.

**Prerequisites:** MU 203 [Min Grade: C]

**MU 321. Music Theory III. 3 Hours.**

Emphasizes chromatic harmony, modulation, and the analysis of musical form.

**Prerequisites:** MU 222 [Min Grade: C] and MU 225 [Min Grade: C]

**MU 322. Music Theory IV. 3 Hours.**

Emphasizes chromatic harmony and voice-leading, the expansion of tertian harmony, and includes an overview of 20th century and contemporary compositional and analytical techniques.

**Prerequisites:** MU 321 [Min Grade: C] and MU 324 [Min Grade: C] and MUP 125 [Min Grade: C]

**MU 324. Aural Skills III. 1 Hour.**

Required laboratory for MU 321. Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** MU 225 [Min Grade: C] and MU 222 [Min Grade: C]

**MU 325. Aural Skills IV. 1 Hour.**

Required laboratory for MU 322.

**Prerequisites:** MU 324 [Min Grade: C] and MU 321 [Min Grade: C] and MUP 125 [Min Grade: P]

**MU 329. Conducting. 2 Hours.**

Basic conducting techniques and rehearsal procedures.

**MU 330. Marching Band Techniques. 3 Hours.**

Organizing and administering a marching band, including show design and computer-assisted drill-writing experience.

**MU 331. Band Literature. 3 Hours.**

Frequently performed modern concert band literature.

**MU 332. Instrumental Literature II. 3 Hours.**

Introduction to the layout of instrumental scores, a history and development of the orchestra, extensive work with transpositions, ranges, and tone colors of instruments, and a thorough study of instrumental literature including orchestral, wind, and chamber music.

**Prerequisites:** MU 232 [Min Grade: C]

**MU 333. Piano Literature II. 3 Hours.**

Survey of the important solo repertoire from the early Romantic era through the present. Examination of the development of piano technique from Chopin and Liszt through Cage and Crumb by playing, analyzing and listening.

**Prerequisites:** MU 233 [Min Grade: C]

**MU 334. Vocal Literature II. 3 Hours.**

Introductory survey of representative non-operatic solo vocal repertoire of France, Germany, and Austria. Techniques of song study, interpretation, and performance practice.

**Prerequisites:** MU 234 [Min Grade: C] and MU 236 [Min Grade: C]

**MU 341. Computer Music II. 3 Hours.**

Using computer applications, including MIDI and sampling technology, in the creation of musical compositions.

**Prerequisites:** MU 115 [Min Grade: C] and MU 221 [Min Grade: C] and MU 224 [Min Grade: C]

**MU 342. Computer Music III. 3 Hours.**

Continuation of MU 341. Advanced computer music projects utilizing sound synthesis, sound file manipulation, and hard disk recording techniques.

**Prerequisites:** MU 222 [Min Grade: C] and MU 225 [Min Grade: C] and MU 245 [Min Grade: C] and MU 341 [Min Grade: C]

**MU 345. Recording Technology II. 3 Hours.**

Advanced concepts and techniques of multitrack recording in project and professional recording studio, including signal processing mixing and mastering.

**Prerequisites:** MU 115 [Min Grade: C] and MU 221 [Min Grade: C] and MU 224 [Min Grade: C] and MU 245 [Min Grade: C]

**MU 359. Composition I. 1-2 Hour.**

Discussions and creative projects designed to help beginning composers or arrangers gain experience in handling variety of musical styles, and in shaping musical ideas. May be repeated for maximum of 3 hours credit.

**Prerequisites:** MU 322 [Min Grade: C]

**MU 364. American Music. 3 Hours.**

Music in United States from colonial times to the present.

**Prerequisites:** MU 120 [Min Grade: C] or MU 261 [Min Grade: C]

**MU 365. The Evolution of Jazz. 3 Hours.**

Origins and survey of jazz types and styles. Lectures, recordings, and readings.

**Prerequisites:** MU 120 [Min Grade: C] or MU 261 [Min Grade: C]

**MU 366. Music in World Cultures. 2-3 Hours.**

Characteristics of musical styles found in various cultures throughout the world. 3-hour option requires semester project directed by the instructor.

**MU 367. Introduction to Ethnomusicology. 3 Hours.**

Holistic approach to study of music. Musicians' training, instruments, and role in society. Methods for documenting and transcribing, social functions and economic context, and theories of performance and creativity. Ghanaian and Indian traditions, with other music, including Western, as appropriate. Six semester hours of ANTH, MU or MUP courses required.

**Prerequisites:** MU 120 [Min Grade: C] or MU 120 [Min Grade: C]

**MU 381. Instrumental Pedagogy. 3 Hours.**

Overview of important components of teaching instrumental music in the secondary school program, including developing a personal philosophy of music education and teaching strategies. **Prerequisites:** Four terms of Applied Lessons (MUP 161 - 195).

**MU 382. Piano Pedagogy. 3 Hours.**

Study of teaching objectives, techniques, literature, methods and materials (including observation) for the pre-college student as well as the study of the history of the piano and piano mechanism. Two terms of Applied Piano required.

**Prerequisites:** MUP 150 [Min Grade: C]

**MU 383. Vocal Pedagogy. 3 Hours.**

Principles of healthy voice production as the foundation for an approach to teaching voice. Two terms of Applied Voice required.

**Prerequisites:** MUP 140 [Min Grade: C] or MUP 240 [Min Grade: C]

**MU 399. Independent Studies. 1-3 Hour.**

Permission of Department Chair based on written proposal submitted prior to registration.

**MU 410. Music Technology Workshop. 1-3 Hour.**

Workshop in Music Technology.

**MU 429. Advanced Conducting/Techniques. 2 Hours.**

Rehearsal techniques, expression, and interpretation. May occasionally work with University ensembles.

**Prerequisites:** MU 329 [Min Grade: C]

**MU 431. Methods of Teaching Music N-6. 3 Hours.**

Organization of appropriate music concepts and musical experiences for all young learners; elementary children; development of methods and skills needed for direct student involvement in musical experiences for each grade level.

**MU 432. Methods I: Choral Music. 3 Hours.**

Introduction to teaching choral music to adolescent learners. Developing basic skills in planning, instruction, and assessment.

**MU 433. Methods I: Instrumental Music. 3 Hours.**

Introduction to teaching instrumental music to adolescent learners. Developing basic skills in planning, instruction, and assessment.

**MU 441. Multimedia Productions. 3 Hours.**

Techniques for producing music for television, film, video, computer presentations, and slide shows using computer-based technologies.

**Prerequisites:** MU 321 [Min Grade: C] and MU 324 [Min Grade: C] and MU 342 [Min Grade: C] and MU 345 [Min Grade: C]

**MU 445. Modal Counterpoint. 3 Hours.**

Important characteristics of vocal polyphonic writing based on modal scales with emphasis on style of Palestrina and other Renaissance composers.

**Prerequisites:** MU 222 [Min Grade: C]

**MU 446. Tonal Counterpoint. 3 Hours.**

Important characteristics of polyphonic writing based on major and minor scales with emphasis on style of J.S. Bach and other eighteenth century composers.

**Prerequisites:** MU 322 [Min Grade: C]

**MU 448. Orchestration. 3 Hours.**

Scoring techniques for orchestra, band, and other instrumental groups.

**Prerequisites:** MU 322 [Min Grade: C]

**MU 451. Topics in Music Theory. 3 Hours.**

Aspects of music theory and analysis. May be repeated for credit.

**Prerequisites:** MU 322 [Min Grade: C]

**MU 455. Form and Analysis. 3 Hours.**

Principles and techniques of organization in tonal music; analytical methods.

**Prerequisites:** MU 322 [Min Grade: C]

**MU 458. Contemporary Techniques. 3 Hours.**

Techniques and materials employed in contemporary music, including nonfunctional and nontertian harmony, polyharmony, atonal and serial music, contemporary notation.

**Prerequisites:** MU 322 [Min Grade: C]

**MU 459. Composition II. 1-2 Hour.**

Directed individual projects in composition and discussions on related topics. May be repeated for credit.

**Prerequisites:** MU 359 [Min Grade: C]

**MU 461. Seminar in Music Literature. 3 Hours.**

Selected topics concerning specific periods, genres, and forms. May be repeated for credit.

**MU 462. Methods II: Choral Music. 3 Hours.**

Preparation to plan, teach and assess choral music with adolescent learners: making informed decisions about context, learners, learner differences, teaching strategies, methodologies, curricula, and assessment.

**Prerequisites:** MU 432 [Min Grade: C]

**MU 463. Methods II: Instrumental Music. 3 Hours.**

Preparation to plan, teach, and assess instrumental music with adolescent learners: making informed decisions about context, learners, learner differences, teaching strategies, methodologies, curricula, and assessment.

**Prerequisites:** MU 433 [Min Grade: C]

**MU 471. Music History and Literature to 1750. 3 Hours.**

Major developments of music styles and forms from pre-Christian era through Baroque. Includes critical listening to selected musical examples.

**Prerequisites:** MU 222 [Min Grade: C]

**MU 472. Music Hist/Lit 1750-Present. 3 Hours.**

A course taken in the student's junior or senior year that studies the major developments of musical styles and forms from the classical period through the present. This includes critical listening to selected musical examples as well as critical analysis, research and writing. Writing is a significant component of this course.

**Prerequisites:** MU 222 [Min Grade: C]

**MU 498. Music Technology Internship. 1-2 Hour.**

This capstone experience provides students in Music Technology with practical experience in.

**Prerequisites:** MU 342 [Min Grade: C] and MU 345 [Min Grade: C] and MU 441 [Min Grade: C]

**MU 499. Independent Studies. 1-3 Hour.**

Directed studies in music. Permission of Department Chair. Written proposal must be submitted prior to registration.

**MUP-Music Courses****MUP 001. Performance Attendance. 0 Hours.**

Attendance at Department-approved musical events such as concerts, recitals, and festivals. Required of music, music technology, and music education majors.

**MUP 110. Gospel Choir. 1 Hour.**

Primarily performs choral literature from the Major Eras of American Gospel Music. Open to students of all majors. May be repeated for credit.

**MUP 120. University Chorus. 1 Hour.**

Non-auditioned ensemble open to students of all majors, performing larger masterworks for choir and orchestra. May be repeated for credit.

**MUP 122. Class Voice. 1 Hour.**

Fundamentals of singing for teaching or performance. Group and individual instruction.

**MUP 124. Class Piano. 1 Hour.**

Basic keyboard skills for adult beginner. May be repeated for maximum of 3 hours of credit.

**MUP 125. Piano Proficiency Exam. 0 Hours.**

Required of music majors for graduation and music education majors before entering Teacher Education Program (TEP).

**MUP 130. Class Guitar. 1 Hour.**

Beginning course in basic guitar techniques and music reading. Student must have a classic or acoustic guitar.

**MUP 132. Class Woodwinds. 1 Hour.**

Basic materials and performance techniques, primarily for music education students.

**MUP 134. Class Brass. 1 Hour.**

Basic materials and performance techniques, primarily for music education students.

**MUP 136. Class Percussion. 1 Hour.**

Basic materials and performance techniques, primarily for Music Education students.

**MUP 138. Class Strings. 1 Hour.**

Basic materials and performance techniques, primarily for Music Education students.

**MUP 140. Private Lessons: Voice. 1 Hour.**

Private instruction in voice. Limited to Music Majors and Minors.

**MUP 150. Private Lessons: Piano. 1 Hour.**

Private instruction in Piano. Open to all majors by audition.

**MUP 161. Private Lessons: Flute. 1 Hour.**

Private instruction in flute. Limited to Music majors and minors.

**MUP 162. Private Lessons: Oboe. 1 Hour.**

Private instruction in oboe. Limited to Music majors and minors.

**MUP 163. Private Lessons: Clarinet. 1 Hour.**

Private instruction in clarinet. Limited to Music majors and minors.

**MUP 164. Private Lessons: Saxophone. 1 Hour.**

Private instruction in saxophone. Limited to Music majors and minors.

**MUP 166. Private Lessons: Bassoon. 1 Hour.**

Private instruction in bassoon. Limited to Music majors and minors.

**MUP 171. Private Lessons: Trumpet. 1 Hour.**

Private instruction in trumpet. Limited to Music majors and minors.

**MUP 172. Private Lessons: French Horn. 1 Hour.**

Private instruction in french horn. Limited to Music majors and minors.

**MUP 173. Private Lessons: Trombone. 1 Hour.**

Private instruction in trombone. Limited to Music majors and minors.

**MUP 174. Private Lessons: Euphonium. 1 Hour.**

Private instruction in euphonium. Limited to Music majors and minors.

**MUP 175. Private Lessons: Tuba. 1 Hour.**

Private instruction in tuba. Limited to Music majors and minors.

**MUP 180. Private Lessons: Percussion. 1 Hour.**

Private instruction in percussion. Limited to Music majors and minors.

**MUP 191. Private Lessons: Violin. 1 Hour.**

Private instruction in violin. Limited to Music majors and minors.

**MUP 192. Private Lessons: Viola. 1 Hour.**

Private instruction in viola. Limited to Music majors and minors.

**MUP 193. Private Lessons: Cello. 1 Hour.**

Private instruction in cello. Limited to Music majors and minors.

**MUP 194. Private Lessons: Bass. 1 Hour.**

Private instruction in bass. Limited to Music majors and minors.

**MUP 195. Private Lessons: Guitar. 1 Hour.**

Private instruction in guitar. Limited to Music majors and minors.

**MUP 220. Concert Choir. 1 Hour.**

Performs choral music representing a variety of periods and styles. Some sight-reading ability necessary. May be repeated for credit.

**MUP 220L. Concert Choir Learning Lab. 0 Hours.**

Required Learning Lab for MUP 220 Concert Choir. Performs choral music representing a variety of periods and styles. Some sight-reading ability necessary. .

**MUP 221. Jazz Combo. 1 Hour.**

Performs repertoire of traditional and contemporary jazz for small ensembles. Rehearsals will focus on reading from "Real Books" and will include harmonic analysis as well as a study of basic improvisation, form and style.

**MUP 222. Advanced Woodwind Methods. 1 Hour.**

Methods and materials for music educators in the specialized techniques of woodwind (flute, oboe, clarinet, saxophone, bassoon) pedagogy; emphasis on learning through performance and preparing and teaching in-class lessons.

**Prerequisites:** MUP 132 [Min Grade: C]

**MUP 224. Advanced Brass Methods. 1 Hour.**

Methods and materials for music educators in the specialized techniques of brass (trumpet, trombone, horn, euphonium, tuba) pedagogy; emphasis on learning through performing and teaching in-class lessons.

**Prerequisites:** MUP 134 [Min Grade: C]

**MUP 225. Symphony Band. 1 Hour.**

Performs concert band literature. Open to students of all majors. May be repeated for credit.

**MUP 226. Advanced Percussion Methods. 1 Hour.**

Methods and Materials for music educators in the specialized techniques of percussion pedagogy; emphasis on learning through performance and preparing and teaching in-class lessons.

**Prerequisites:** MUP 136 [Min Grade: C]

**MUP 230. Guitar Ensemble. 1 Hour.**

Performs original and pre-arranged selections of guitar ensemble literature. May be repeated for credit.

**MUP 231. Orchestra. 1 Hour.**

Participation in community orchestra. Open to string students; wind or percussion players must enroll concurrently in MUP 225, MUP 235 or MUP 236.

**MUP 232. Marching Band. 1 Hour.**

Supports UAB football program by performing pre-game and half time shows. May also perform for other special University or community events. Open to students of all majors with marching band experience. May be repeated for credit.

**MUP 233. Clarinet Choir. 1 Hour.**

Performs works for clarinet choir in a chamber setting. Open to students of all majors. May be repeated for credit.

**MUP 234. Percussion Ensemble. 1 Hour.**

Performs original and pre-arranged selections of concert percussion literature. Advanced percussion skill necessary. Open to students of all majors. May be repeated for credit.

**MUP 235. Wind Symphony. 1 Hour.**

Performs finest concert band literature. Open to students of all majors. May be repeated for credit.

**MUP 235L. Wind Symphony Learning Lab. 0 Hours.**

Required Learning Lab for MUP 235 Wind Symphony. Performs finest concert band literature. Open to students of all majors.

**MUP 236. Jazz Ensemble. 1 Hour.**

Performs classic and contemporary jazz, swing, and rhythm and blues. May be repeated for credit.

**MUP 237. Blazer Band. 1 Hour.**

Supports UAB basketball program by performing at games. May also perform for other special University or community events. Open to students of all majors. May be repeated for credit.

**MUP 238. Brass Ensemble. 1 Hour.**

Performs works for brass ensemble in a chamber setting. Open to students of all majors. May be repeated for credit.

**MUP 239. Tuba/Euphonium Ensemble. 1 Hour.**

Performs works for low brass ensemble in a chamber setting. Open to students of all majors. May be repeated for credit.

**MUP 240. Private Lessons: Voice. 1-2 Hour.**

Limited to Music majors and minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 250. Private Lessons: Piano. 1-2 Hour.**

Private instruction in piano, including weekly performance class. Open to all majors by audition.

**MUP 253. Private Lessons: Jazz Piano. 1,2 Hour.**

Limited to Music Technology majors and minors. Weekly private lesson to be scheduled with the instructor. May be repeated for credit.

**MUP 261. Private Lessons: Flute. 1-2 Hour.**

Limited to Music majors and minors. Weekly performance class and private lesson, to be.

**MUP 262. Private Lessons: Oboe. 1-2 Hour.**

Limited to Music majors and minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 263. Private Lessons: Clarinet. 1-2 Hour.**

Limited to Music majors and minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 264. Private Lessons: Saxophone. 1-2 Hour.**

Limited to Music majors and minors. Weekly performance class and private lesson, to be.

**MUP 265. Jazz Improvisation. 3 Hours.**

Jazz theory and improvisational techniques. Emphasis on basic repertory of standards and typical jazz forms. Stresses both performance and theory.

**MUP 266. Private Lessons: Bassoon. 1-2 Hour.**

Private instruction in bassoon. Limited to Music majors and minors. Weekly performance class and private lesson, to be scheduled with instructor, are required. may be repeated for credit.

**MUP 267. Private Lessons: Jazz Saxophone. 1,2 Hour.**

Limited to Music Technology majors and minors. Weekly private lesson to be scheduled with the instructor. May be repeated for credit.

**MUP 271. Private Lessons: Trumpet. 1-2 Hour.**

Limited to Music majors and minors. Weekly performance class and private lesson, to be.

**MUP 272. Private Lessons: French Horn. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 273. Private Lessons: Trombone. 1-2 Hour.**

Limited to Music majors and minors. Weekly performance class and private lesson, to be.

**MUP 274. Private Lessons Euphonium. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 275. Private Lessons: Tuba. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 276. Private Lessons: Jazz Trumpet. 1,2 Hour.**

Limited to Music Technology majors and minors. Weekly private lesson to be scheduled with the instructor. May be repeated for credit.

**MUP 277. Private Lessons: Jazz Trombone. 1,2 Hour.**

Limited to Music Technology majors and minors. Weekly private lesson to be scheduled with the instructor. May be repeated for credit.

**MUP 280. Private Lessons: Percussion. 1-2 Hour.**

Limited to Music majors and minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 281. Private Lessons: Jazz Percussion. 1-2 Hour.**

Limited to Music Technology majors and minors Weekly private lesson to be scheduled with the instructor. May be repeated for credit.

**MUP 291. Private Lessons: Violin. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 292. Private Lessons: Viola. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 293. Private Lessons: Cello. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 294. Private Lessons: Bass. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 295. Private Lessons: Guitar. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 296. Private Lessons: Jazz Guitar. 1-2 Hour.**

Limited to Music Technology majors and minors. Weekly private lesson to be scheduled with the instructor. May be repeated for credit.

**MUP 297. Private Lessons: Jazz Bass. 1-2 Hour.**

Limited to Music Technology majors and minors. Weekly private lesson to be scheduled with the instructor. May be repeated for credit.

**MUP 320. Chamber Singers. 1 Hour.**

Advanced choral group. Performs variety of choral music representing different periods and styles. By audition only. Advanced music-reading skills required. May be repeated for credit.

**MUP 321. Women's Chorale. 1 Hour.**

Performs choral music for women's voices and covers a variety of periods and styles. Some sight-reading ability necessary. May be repeated for credit.

**MUP 340. Private Lessons: Voice. 1-2 Hour.**

Limited to Music majors and minors. Weekly performance class and private lesson, to be.

**MUP 341. Computer Music Ensemble. 1 Hour.**

Performs computer and other electronically generated music of various styles.

**Prerequisites:** MU 222 [Min Grade: C] and MU 225 [Min Grade: C] and MU 341 [Min Grade: C]

**MUP 342. Commercial Music Ensemble. 1 Hour.**

Open to ALL UAB students through audition, the UAB Commercial Music Ensemble provides a unique and structured environment for students to learn about performing in a professional commercial music ensemble. The ensemble will consist of a rhythm section (2 keyboards, drummer, percussionist, bassist, and two guitarists), background singers, lead vocalists, horn section (alto sax, tenor sax, trumpet, trombone, and baritone sax), and four dancers. Music performed by this section of the CME will come from Billboard-charting hits ranging from musical genres such as Pop, R & B, and Country. Students must successfully pass an audition and be chosen for the ensemble before being allowed to register for the course. Please contact the ensemble director, Craig Brandwein, at [craigbrandwein@uab.edu](mailto:craigbrandwein@uab.edu) or (205) 996-0640, for further information about audition requirements, time, and location. For Music major degree requirements, MUP 342 is classified as a MINOR ensemble.

**MUP 350. Private Lessons: Piano. 1-2 Hour.**

Private instruction in piano, plus weekly performance class. Open to all majors by audition.

**MUP 353. Piano Ensemble. 1 Hour.**

Explores piano literature for multiple performers. May be repeated for credit.

**MUP 361. Private Lessons: Flute. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 362. Private Lessons: Oboe. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 363. Private Lessons: Clarinet. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 364. Private Lessons: Saxophone. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 366. Private Lessons: Bassoon. 1-2 Hour.**

Private instruction in bassoon. Limited to Music majors and minors. Weekly performance class and private lesson, to be scheduled with instructor, are required. may be repeated for credit.

**MUP 371. Private Lessons: Trumpet. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 372. Private Lessons: French Horn. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 373. Private Lessons: Trombone. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 374. Private Lessons: Euphonium. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 375. Private Lessons: Tuba. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 380. Private Lessons: Percussion. 1-2 Hour.**

Limited to Music majors and minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 391. Private Lessons: Violin. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 392. Private Lessons: Viola. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 393. Private Lessons: Cello. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 394. Private Lessons: Bass. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 395. Private Lessons: Guitar. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**MUP 397. Junior Recital. 0 Hours.**

Thirty-minute recital presented in the junior year.

**MUP 420. Opera Workshop. 1 Hour.**

Select member group. Performs staged productions of operas, opera scenes, and musical theater excerpts. Requires advanced music-reading skills. May be repeated for credit.

**MUP 440. Private Lessons: Voice. 1-2 Hour.**

Limited to Music majors and minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**Prerequisites:** MUP 340 [Min Grade: C]

**MUP 450. Private Lessons: Piano. 1-2 Hour.**

Limited to Music majors and minors. Weekly performance class and private lesson, to be.

**Prerequisites:** MUP 350 [Min Grade: C]

**MUP 461. Private Lessons: Flute. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**Prerequisites:** MUP 361 [Min Grade: C]

**MUP 462. Private Lessons: Oboe. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**Prerequisites:** MUP 362 [Min Grade: C]

**MUP 463. Private Lessons: Clarinet. 1-2 Hour.**

Private instruction in clarinet. Limited to Music majors and minors. Weekly performance class and private lesson, to be scheduled with instructor, are required. may be repeated for credit.

**Prerequisites:** MUP 363 [Min Grade: C]

**MUP 464. Private Lessons: Saxophone. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**Prerequisites:** MUP 364 [Min Grade: C]

**MUP 466. Private Lessons: Bassoon. 1-2 Hour.**

Private instruction in bassoon. Limited to Music majors and minors. Weekly performance class and private lesson, to be scheduled with instructor, are required. May be repeated for credit.

**Prerequisites:** MUP 366 [Min Grade: C]

**MUP 471. Private Lessons: Trumpet. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**Prerequisites:** MUP 371 [Min Grade: C]

**MUP 472. Private Lessons: French Horn. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**Prerequisites:** MUP 372 [Min Grade: C]

**MUP 473. Private Lessons: Trombone. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**Prerequisites:** MUP 373 [Min Grade: C]

**MUP 474. Private Lessons: Euphonium. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**Prerequisites:** MUP 374 [Min Grade: C]

**MUP 475. Private Lessons: Tuba. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**Prerequisites:** MUP 375 [Min Grade: C]

**MUP 480. Private Lessons: Percussion. 1-2 Hour.**

Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**Prerequisites:** MUP 380 [Min Grade: C]

**MUP 491. Private Lessons: Violin. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**Prerequisites:** MUP 391 [Min Grade: C]

**MUP 492. Private Lessons: Viola. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**Prerequisites:** MUP 392 [Min Grade: C]

**MUP 493. Private Lessons: Cello. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**Prerequisites:** MUP 393 [Min Grade: C]

**MUP 494. Private Lessons: Bass. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**Prerequisites:** MUP 394 [Min Grade: C]

**MUP 495. Private Lessons: Guitar. 1-2 Hour.**

Limited to Music Majors and Minors. Weekly performance class and private lesson, to be scheduled with the instructor, are required. May be repeated for credit.

**Prerequisites:** MUP 395 [Min Grade: C]

**MUP 497. Senior Recital/Project. 0 Hours.**

A co-curricular course taken in the student's last 30 hours that, together with their last semester of applied lessons, will culminate in a Senior Recital or Lecture-Recital. This is a capstone course for all students seeking a Bachelor of Arts (general) degree.

## Department of Philosophy

**Chair:** David K Chan, PhD

The Department of Philosophy offers the Bachelor of Arts degree with a major in philosophy, as well as a minor in philosophy and course offerings for non-majors and non-minors. The department also sponsors an interdisciplinary minor in Philosophy and Law, described below.

The program for majors is built around two aims. First, the major offers study of the methods, problems, and history of philosophy. Second, it exposes the student to analysis of contemporary moral issues and philosophical puzzles. Throughout the major goal is to teach students to present and analyze critically arguments, both orally and in writing. Graduates of the department have pursued such careers as teaching, law, medicine, counseling, and business.

Further information about the department and its programs may be obtained at the department's website: [www.uab.edu/philosophy](http://www.uab.edu/philosophy).

Besides the general major, there are two other ways in which to major in philosophy at UAB:

- The Ethics Track.
- The Honors Track.

When a student first declares a major in philosophy, he or she is classified in the general path. Students remain in this path unless they request entry into the individually designed path or are successfully admitted upon request into the honors path. These requests are made of the department chair.

Students graduating in the Honors Track graduate "With Honors in Philosophy." The Ethics Track emphasizes study in ethics, value theory, and public policy.

## Bachelor of Arts with a Major in Philosophy

**Requirements****Hours****Philosophy Requirements**

Select 10 Philosophy (PHL) courses, with 7 courses at the 200-level or higher, 3 courses must be at the 400-level, one of which must be a Capstone--PHL 490, 491, or 492.

PHL 100	Introduction to Philosophy	30
PHL 115	Contemporary Moral Issues	
PHL 116	Bioethics	
PHL 120	Practical Reasoning	
PHL 125	Introduction to Ethics	
PHL 135	The Rule of Law	
PHL 203	Philosophy of Religion	
PHL 204	Philosophy and Christianity	
PHL 205	Existentialism	
PHL 209	Philosophy of Art	
PHL 215	History of Moral Philosophy	
PHL 216	Intermediate Bioethics	
PHL 220	Introduction to Symbolic Logic	
PHL 225	Environmental Ethics	
PHL 230	Social and Political Philosophy	
PHL 232	Classical Political Thought	
PHL 233	Modern Political Theory	
PHL 239	Classical Thought of India China and the West	
PHL 240	History of Philosophy: Socrates Plato and Aristotle	
PHL 270	Science, Knowledge, and Reality	
PHL 290	Topics in Philosophy	
PHL 291	Topics in Philosophy	
PHL 292	Topics in Philosophy	
PHL 293	Topics in Philosophy	
PHL 311	Philosophy of Science	
PHL 312	Philosophy of Biology	
PHL 314	Philosophy and Feminism	
PHL 315	Ethics: Theories of Good and Evil	
PHL 318	Ethics of War	
PHL 335	Philosophy of Law	
PHL 341	History of Philosophy: Descartes to Hume	
PHL 342	History of Philosophy: Kant and 19th Century	
PHL 343	History of Philosophy: Twentieth Century	
PHL 348	American Philosophy	
PHL 372	Minds and Machines	
PHL 375	Philosophy of Mind	
PHL 390	Topics in Philosophy	
PHL 391	Topics in Philosophy	
PHL 392	Topics in Philosophy	
PHL 393	Topics in Philosophy	
PHL 394	Topics in Philosophy	
PHL 395	Topics in Philosophy	
PHL 396	Topics in Philosophy	
PHL 397	Topics in Philosophy	
PHL 398	Topics in Philosophy	
PHL 399	Topics in Philosophy	
PHL 402	Neuroethics	
PHL 405	Epistemology: Theories of Knowledge	
PHL 408	Metaphysics	

PHL 435	Philosophy of Law	
PHL 441	History of Philosophy: Descartes to Hume	
PHL 442	Hist of PHL: Kant and 19th Cent	
PHL 443	History of Philosophy: Twentieth Century	
PHL 470	Philosophical Problems in the Natural and Social Sciences	
PHL 490	Philosophy Seminar	
PHL 491	Philosophy Seminar	
PHL 492	Philosophy Seminar	
PHL 493	Philosophy Seminar	
PHL 494	Philosophy Seminar	
PHL 498	Philosophy Internship	
PHL 499	Directed Studies	
Total Hours		30

## Grade Requirement

No course in which a grade below "C" has been earned may be counted toward the major.

## Bachelor of Arts with a Major in Philosophy: Ethics Track

Requirements	Hours
<b>Choose Four</b> <sup>1</sup>	<b>12</b>
PHL 115	Contemporary Moral Issues
PHL 116	Bioethics
PHL 216	Intermediate Bioethics
PHL 225	Environmental Ethics
PHL 230	Social and Political Philosophy
PHL 315	Ethics: Theories of Good and Evil
PHL 318	Ethics of War
PHL 335	Philosophy of Law
PHL 435	Philosophy of Law
PHL 390	Topics in Philosophy
PHL 391	Topics in Philosophy
PHL 392	Topics in Philosophy
PHL 402	Neuroethics
<b>Required Capstone Course: Choose One</b> <sup>2</sup>	<b>3</b>
PHL 490	Philosophy Seminar
PHL 491	Philosophy Seminar
PHL 492	Philosophy Seminar
<b>Elective Courses: Choose Five</b> <sup>3</sup>	<b>15</b>
PHL 100	Introduction to Philosophy
PHL 115	Contemporary Moral Issues
PHL 116	Bioethics
PHL 120	Practical Reasoning
PHL 125	Introduction to Ethics
PHL 135	The Rule of Law
PHL 203	Philosophy of Religion
PHL 204	Philosophy and Christianity
PHL 205	Existentialism
PHL 209	Philosophy of Art
PHL 215	History of Moral Philosophy
PHL 216	Intermediate Bioethics
PHL 220	Introduction to Symbolic Logic
PHL 225	Environmental Ethics
PHL 230	Social and Political Philosophy

PHL 232	Classical Political Thought	
PHL 233	Modern Political Theory	
PHL 239	Classical Thought of India China and the West	
PHL 240	History of Philosophy: Socrates Plato and Aristotle	
PHL 270	Science, Knowledge, and Reality	
PHL 290	Topics in Philosophy	
PHL 291	Topics in Philosophy	
PHL 292	Topics in Philosophy	
PHL 293	Topics in Philosophy	
PHL 311	Philosophy of Science	
PHL 312	Philosophy of Biology	
PHL 314	Philosophy and Feminism	
PHL 315	Ethics: Theories of Good and Evil	
PHL 318	Ethics of War	
PHL 335	Philosophy of Law	
PHL 341	History of Philosophy: Descartes to Hume	
PHL 342	History of Philosophy: Kant and 19th Century	
PHL 343	History of Philosophy: Twentieth Century	
PHL 348	American Philosophy	
PHL 350	Philosophy of Language	
PHL 372	Minds and Machines	
PHL 375	Philosophy of Mind	
PHL 390	Topics in Philosophy	
PHL 391	Topics in Philosophy	
PHL 392	Topics in Philosophy	
PHL 393	Topics in Philosophy	
PHL 394	Topics in Philosophy	
PHL 395	Topics in Philosophy	
PHL 396	Topics in Philosophy	
PHL 397	Topics in Philosophy	
PHL 398	Topics in Philosophy	
PHL 399	Topics in Philosophy	
PHL 402	Neuroethics	
PHL 405	Epistemology: Theories of Knowledge	
PHL 408	Metaphysics	
PHL 435	Philosophy of Law	
PHL 441	History of Philosophy: Descartes to Hume	
PHL 442	Hist of PHL:Kant and 19th Cent	
PHL 443	History of Philosophy: Twentieth Century	
PHL 470	Philosophical Problems in the Natural and Social Sciences	
PHL 490	Philosophy Seminar	
PHL 491	Philosophy Seminar	
PHL 492	Philosophy Seminar	
PHL 493	Philosophy Seminar	
PHL 494	Philosophy Seminar	
PHL 498	Philosophy Internship	
PHL 499	Directed Studies	
Total Hours		30

<sup>1</sup> The department chairperson may, on a case by case basis, allow substitutions to count for required courses when deemed appropriate.

<sup>2</sup> The department chairperson may, on a case by case basis, allow substitutions to count for required courses when deemed appropriate.

- <sup>3</sup> Any 5 philosophy courses may be chosen, so long as the student satisfies the general requirements for the philosophy major. Also, students must have 9 hours at the 400-level to graduate with this major.

## Grade Requirement

No course in which a grade below "C" has been earned may be counted toward the major.

## Proposed Program of Study for a Major in Philosophy

Freshman			
First Term	Hours	Second Term	Hours
PHL 100 or 115		3 PHL 100 or 115	3
PHL 116		3 Any 200 level philosophy classes	3
PHL 120	3		
	9		6
Sophomore			
First Term	Hours	Second Term	Hours
Any two 200 or 300 level philosophy classes		6 Any 200 or 300 level philosophy class	3
	6		3
Junior			
First Term	Hours	Second Term	Hours
Any two 300 or 400 level philosophy classes		6 One 300 and one 400 level course	6
	6		6
Senior			
First Term	Hours		
PHL 490	3		
400 level course/capstone seminar	3		
	6		

Total credit hours: 42

## Minor in Philosophy

Requirements	Hours
<b>Philosophy Requirement</b>	18
Select 18 hours from Philosophy (PHL) courses, with at least 9 hours at the 200-level or above.	
<b>Total Hours</b>	18

A grade of "C" or better is required in all philosophy courses for the minor.

## Minor in Philosophy & Law

Director: Matt King (Philosophy)

The Philosophy and Law minor provides interested students with a secondary specialization focusing upon the philosophical underpinnings of the political and legal systems of the United States as well as the modes of thought found in the legal system. Because legal argument frequently uses ideas found in moral thought, exposure to the theory or history of ethics is critical. The program may be of interest to students contemplating a career in law and in related careers, though it is not intended as a pre-law or legal studies program.

Requirements	Hours
<b>Required Philosophy Courses</b>	
PHL 135 The Rule of Law	3
PHL 230 Social and Political Philosophy	3
PHL 335 Philosophy of Law	3
<b>Ethical Theory</b>	
Select one of the following:	3
PHL 125 Introduction to Ethics	
PHL 215 History of Moral Philosophy	
PHL 315 Ethics: Theories of Good and Evil	
<b>Electives</b>	6
Select two of the following (other courses may be selected with approval of director):	
CJ 230 The Judicial Process in America: An Overview	
PHL 435 Advanced Topics in Philosophy of Law	
PSC 330 The American Judicial Process	
PSC 380 The Politics of Constitutional Law	
PSC 381 The Bill of Rights	
PSC 404 Seminar in Political Theory	
<b>Total Hours</b>	18

## Major in Philosophy with Honors

The Philosophy Honors Program is designed for qualified, self-motivated students. It is suited for those contemplating graduate work in philosophy or in professional fields in which an honors degree is desired. Through special distribution and credit hour requirements and a directed honors thesis, honors students are prepared for in-depth philosophical research and related graduate and professional opportunity. For acceptance in Philosophy Honors Program a student must

- be a philosophy first major
- have at least sophomore standing
- have at least nine semester hours in UAB philosophy courses
- have at least a 3.5 GPA in UAB philosophy course work
- submit an application to the department (applications are available from department office)

## Additional Requirements For Honors in Philosophy Degree

### Course Grade and GPA Requirement

No course in which a grade below C has been earned may be counted toward the major. A 3.6 GPA in philosophy (PHL) courses is required for graduation with honors.

Requirements	Hours
<b>Ethics and Value Theory</b>	
Select two of the following:	6
PHL 115 Contemporary Moral Issues	
PHL 116 Bioethics	
PHL 125 Introduction to Ethics	
PHL 135 The Rule of Law	
PHL 215 History of Moral Philosophy	
PHL 216 Intermediate Bioethics	
PHL 230 Social and Political Philosophy	
PHL 225 Environmental Ethics	
PHL 232 Classical Political Thought	
PHL 233 Modern Political Theory	

PHL 315	Ethics: Theories of Good and Evil
PHL 318	Ethics of War
PHL 335	Philosophy of Law
PHL 402	Neuroethics

**History of Philosophy**

Select two of the following: 6

PHL 205	Existentialism
PHL 215	History of Moral Philosophy
PHL 239	Classical Thought of India China and the West
PHL 240	History of Philosophy: Socrates Plato and Aristotle
PHL 341	History of Philosophy: Descartes to Hume
PHL 342	History of Philosophy: Kant and 19th Century
PHL 343	History of Philosophy: Twentieth Century
PHL 348	American Philosophy
PHL 441	History of Philosophy: Descartes to Hume
PHL 442	Hist of PHL:Kant and 19th Cent
PHL 443	History of Philosophy: Twentieth Century

**Epistemology/Metaphysics/ Philosophy of Mind/ Logic/ Philosophy of Language/Philosophy of Science**

Select three of the following: 9

PHL 270	Science, Knowledge, and Reality
PHL 311	Philosophy of Science
PHL 312	Philosophy of Biology
PHL 350	Philosophy of Language
PHL 372	Minds and Machines
PHL 375	Philosophy of Mind
PHL 405	Epistemology: Theories of Knowledge
PHL 408	Metaphysics
PHL 470	Philosophical Problems in the Natural and Social Sciences

**Seminar**

Select one of the following: 3

PHL 490	Philosophy Seminar
PHL 491	Philosophy Seminar
PHL 492	Philosophy Seminar

**Philosophy Electives**

Select three of the following: 9

PHL 100	Introduction to Philosophy
PHL 115	Contemporary Moral Issues
PHL 116	Bioethics
PHL 120	Practical Reasoning
PHL 125	Introduction to Ethics
PHL 135	The Rule of Law
PHL 203	Philosophy of Religion
PHL 204	Philosophy and Christianity
PHL 205	Existentialism
PHL 209	Philosophy of Art
PHL 215	History of Moral Philosophy
PHL 220	Introduction to Symbolic Logic
PHL 225	Environmental Ethics
PHL 230	Social and Political Philosophy
PHL 232	Classical Political Thought
PHL 233	Modern Political Theory
PHL 239	Classical Thought of India China and the West
PHL 240	History of Philosophy: Socrates Plato and Aristotle
PHL 270	Science, Knowledge, and Reality
PHL 290	Topics in Philosophy

PHL 291	Topics in Philosophy
PHL 292	Topics in Philosophy
PHL 314	Philosophy and Feminism
PHL 315	Ethics: Theories of Good and Evil
PHL 318	Ethics of War
PHL 335	Philosophy of Law
PHL 341	History of Philosophy: Descartes to Hume
PHL 348	American Philosophy
PHL 350	Philosophy of Language
PHL 372	Minds and Machines
PHL 375	Philosophy of Mind
PHL 390	Topics in Philosophy
PHL 391	Topics in Philosophy
PHL 392	Topics in Philosophy
PHL 393	Topics in Philosophy
PHL 394	Topics in Philosophy
PHL 395	Topics in Philosophy
PHL 396	Topics in Philosophy
PHL 397	Topics in Philosophy
PHL 398	Topics in Philosophy
PHL 399	Topics in Philosophy
PHL 405	Epistemology: Theories of Knowledge
PHL 408	Metaphysics
PHL 435	Advanced Topics in Philosophy of Law
PHL 442	Hist of PHL:Kant and 19th Cent
PHL 443	History of Philosophy: Twentieth Century
PHL 470	Philosophical Problems in the Natural and Social Sciences
PHL 490	Philosophy Seminar
PHL 491	Philosophy Seminar
PHL 492	Philosophy Seminar
PHL 493	Philosophy Seminar
PHL 494	Philosophy Seminar
PHL 499	Directed Studies

**Honors Thesis 3**

PHL 499	Directed Studies *
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Total Hours 36

\* To register for this course, contact the Department of Philosophy

**Courses****PHL 100. Introduction to Philosophy. 3 Hours.**

Introductory survey of philosophy, its nature, methods and problems. Topics typically include, among others, existence of God, freedom, knowledge, right and wrong. Classical and/or contemporary readings. This course meets the Core Curriculum requirements for Area II: Humanities.

**PHL 115. Contemporary Moral Issues. 3 Hours.**

Survey of contemporary moral problems and dilemmas; introduction to methods and concepts of moral philosophy. Topics may include abortion, euthanasia, capital punishment, economic justice, homosexuality, animal rights, and respect for nature. Ethics and Civic Responsibility are significant components of this course. This course meets the Core Curriculum requirements for Area II: Humanities.

**PHL 116. Bioethics. 3 Hours.**

Moral problems and dilemmas in medicine and health professions; elementary methods and concepts of moral philosophy. Problems typically include, among others, AIDS and human and animal experimentation. Ethics and Civic Responsibility are significant components of this course. This course meets the Core Curriculum requirements for Area II: Humanities.

**PHL 120. Practical Reasoning. 3 Hours.**

Survey of skills in critical thinking and scientific reasoning, including the ability to identify different kinds of arguments, recognize common fallacies of reasoning, and evaluate analogical, causal, and statistical arguments. Quantitative Literacy is a significant component of this course. This course meets the Core Curriculum requirements for Area II: Humanities.

**PHL 125. Introduction to Ethics. 3 Hours.**

Elements of moral philosophy. Moral objectivity; connections among morality, rationality, and religion; nature and significance of moral value. This course meets the Core Curriculum requirements for Area II: Humanities.

**PHL 135. The Rule of Law. 3 Hours.**

Critical examination of legal institutions and processes. Role (and history) of legal institutions within political framework. Covers topics such as the duty to obey the law, civil disobedience, theories of punishment, torts, and contracts. Ethics and Civic Responsibility are significant components of this course.

**PHL 203. Philosophy of Religion. 3 Hours.**

Religion; its nature, justification, and significance. God, evil, religious experience, faith, and reason. This course meets the Core Curriculum requirements for Area II: Humanities.

**PHL 204. Philosophy and Christianity. 3 Hours.**

What Christians believe and why they believe it; foundations of Christian philosophical thought. Christian concepts of God, Christ, salvation, atonement, faith, and ethics.

**PHL 205. Existentialism. 3 Hours.**

What Existentialists believe and why they believe it; foundations of Existentialist philosophical thought. Existentialist concepts of freedom, commitment, anxiety, and authenticity.

**PHL 207. Meaning of Life: Perspectives. 3 Hours.**

This course brings the techniques of philosophy to bear on some of life's most important questions. In particular we examine a variety of answers to the following questions: What is the meaning of life? Can humans have meaningful lives? Is meaning just a matter of subjective satisfaction, or is more required? What makes death a bad thing? Is death bad for the person who dies? What would immortality be like? Would immortality be a good thing?.

**PHL 209. Philosophy of Art. 3 Hours.**

This course is a philosophical exploration of art, aesthetic expression, appreciation and the role of inspiration. We will explore the artistic expressions of various cultures and time periods searching for commonality and difference. We will examine the views about the nature of art not only of philosophers but of artists themselves.

**PHL 215. History of Moral Philosophy. 3 Hours.**

Socrates to present, focusing on historical development of moral tradition that has shaped Western society. Plato, Aristotle, Aquinas, Hobbes, Hume, Kant, Mill, Nietzsche, and others.

**PHL 216. Intermediate Bioethics. 3 Hours.**

An in-depth examination of selected issues in Bioethics. Usually 3-4 topics will be selected from the general areas of Death and Dying, Ethical Issues at the Beginning of Human Life, Research Ethics, Justice and Medical Finance, Genetics, and the Doctor-Patient Relationship.

**PHL 220. Introduction to Symbolic Logic. 3 Hours.**

Modern theory of deductive inference. Emphasis on recognizing valid forms of reasoning. Truth-function theory and some beginning concepts of quantification theory. Quantitative Literacy is a significant component of this course.

**PHL 225. Environmental Ethics. 3 Hours.**

Environmental ethics examines questions concerning the human impact on nature and looks at the social, historical and political forces which have given rise to environmental problems. We will consider whether we have moral obligations to other animals and whether we have direct or only indirect duties to the natural world. We will look at our relationships to food and consider the rise of genetically modified organisms. We will discuss whether there is such a thing as "optimum pollution" and whether our current practices are socially just. We will address specific problems such as globalization, climate change, sustainability and the loss of biodiversity. In addition we will consider the environmental ethics that other cultures have developed.

**PHL 230. Social and Political Philosophy. 3 Hours.**

Survey of contemporary debates concerning fundamental principles of political life. Topics typically include justification of political authority, the proper role of government in society, economic justice, freedom and rights, and the free enterprise system. Ethics and Civic Responsibility are significant components of this course.

**PHL 232. Classical Political Thought. 3 Hours.**

Development of western political thought from Plato to Augustine. Theories of major political thinkers.

**PHL 233. Modern Political Theory. 3 Hours.**

Development of Western political thought from the early modern era to contemporary debates in works of Machiavelli to Mill. Theories of major political thinkers.

**PHL 239. Classical Thought of India China and the West. 3 Hours.**

Conceptions of self, society, and natural world.

**PHL 240. History of Philosophy: Socrates Plato and Aristotle. 3 Hours.**

Origins and development of Western philosophic tradition, with emphasis on writings of Plato and Aristotle. Concepts of knowledge, reality, and the good life.

**PHL 270. Science, Knowledge, and Reality. 3 Hours.**

Science; its nature, scope, and significance. Scientific reasoning; science as social institution; ethical issues in science.

**PHL 290. Topics in Philosophy. 3 Hours.**

In-depth examination of one or more problems, authors, or ideas of historical or current interest.

**PHL 291. Topics in Philosophy. 3 Hours.**

In-depth examination of one or more problems, authors, or ideas of historical or current interest.

**PHL 292. Topics in Philosophy. 3 Hours.**

In-depth examination of one or more problems, authors, or ideas of historical or current interest.

**PHL 293. Topics in Philosophy. 3 Hours.**

In-depth examination of one or more problems, authors, or ideas of historical or current interest.

**PHL 309. Teaching Practicum. 3 Hours.**

Teaching experience in philosophy courses, supervised by a faculty member. Student must have previously taken the course for which the student will work within. Permission of Department Chair required. Pass/Fail.

**PHL 311. Philosophy of Science. 3 Hours.**

Philosophical issues concerning the nature of science. Topics may include philosophical debates about scientific evidence; scientific explanation; empiricism, instrumentalism, and realism; the problems of induction; the demarcation problem; theories and models; laws and mechanisms; reduction; causation and explanation; observables vs. unobservables; ethical issues in science; and the social structure and impact of science.

**PHL 312. Philosophy of Biology. 3 Hours.**

This course surveys issues in contemporary philosophy of biology and some closely related issues. Much of the focus may be on philosophical issues concerning evolutionary biology, but issues in developmental biology, molecular biology, and immunology may also be considered. No background in biology is required. Philosophical issues involving evolution and ethics, nature vs. nurture, evolution and psychology, biological mechanisms and models, species and human nature, evolution and intelligent design, and natural selection and chance may be discussed.

**PHL 314. Philosophy and Feminism. 3 Hours.**

Feminism; conceptual foundations, scope, and applications. Problems typically include, among others, feminist concepts of gender, reasoning, knowledge, and ethics. Prerequisite: One previous PHL course or permission of instructor.

**PHL 315. Ethics: Theories of Good and Evil. 3 Hours.**

Morality; its nature, principles, and scope. Normative and critical problems in moral philosophy; moral obligation. One previous PHL course or permission of instructor required.

**PHL 318. Ethics of War. 3 Hours.**

This course examines the just war theory that originated in the early years of Christianity and that has developed into a secular doctrine and the basis of international law. We will discuss the issues facing this doctrine and how it applies to recent wars.

**PHL 331. Family and Philosophy. 3 Hours.**

This course focuses primarily on key questions about the family: Is family a useful institution? What should it look like in order to make people's lives go better? When should the state interfere with the workings of a particular family, or families in general? Who should be able to rear children? What rights/obligations do those who rear children have? This course examines both philosophical arguments and policy or practice implications of various answers to those questions.

**PHL 335. Philosophy of Law. 3 Hours.**

Theories of the nature of law (natural law, realism, positivism, critical legal theory); interpretation of precedents, statutes, and Constitution; Constitutional protections such as freedom of speech and religion and the right of privacy; selected issues in criminal and civil law. Ethics and Civic responsibility are significant components of this course.

**PHL 341. History of Philosophy: Descartes to Hume. 3 Hours.**

Philosophy in modern era, focusing on continental rationalism and British empiricism; emphasis on theories of knowledge and reality; science, religion, and modernism. One previous PHL course or permission of instructor required. Writing is a significant component of this course.

**PHL 342. History of Philosophy: Kant and 19th Century. 3 Hours.**

Western philosophic tradition from Kant through end of nineteenth century. Kant, Hegel, Marx, Kierkegaard, and Mill, among others.

**PHL 343. History of Philosophy: Twentieth Century. 3 Hours.**

Major movements and problems of twentieth century philosophy. Moore, Russell, Wittgenstein, and Quine, among others.

**PHL 348. American Philosophy. 3 Hours.**

Major philosophers of classical American period; Pierce, James, and Dewey. Origins and nature of American pragmatism. One previous PHL course or permission of instructor required.

**PHL 350. Philosophy of Language. 3 Hours.**

Language; its nature, structure, and uses. Reference, meaning, communication, and interpretation; Russell, Wittgenstein, Chomsky, and Quine, among others. One previous PHL course or permission of instructor required.

**PHL 372. Minds and Machines. 3 Hours.**

Artificial intelligence; its philosophical foundations and implications. Topics may include mind-body problem, nature of intelligence, machine models of mind, computational processes, and mental representation. One previous PHL course or permission of instructor required.

**PHL 375. Philosophy of Mind. 3 Hours.**

Mind; its nature, forms, and functions. Topics may include: concepts of mind/body, consciousness, rationality, and personal identity; free will. One previous PHL course or permission of instructor required. Writing is a significant component of this course.

**PHL 390. Topics in Philosophy. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be considered in any other course or which may be treated in another course but only at an introductory level. Topics may include: special topics in some area of philosophy, interdisciplinary issues, and important work or works by a great philosopher.

**PHL 391. Topics in Philosophy. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be considered in any other course or which may be treated in another course but only at an introductory level. Topics may include: special topics in some area of philosophy, interdisciplinary issues, and important work or works by a great philosopher. One previous PHL course or permission of instructor required.

**PHL 392. Topics in Philosophy. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be considered in any other course or which may be treated in another course but only at an introductory level. Topics may include: special topics in some area of philosophy, interdisciplinary issues, and important work or works by a great philosopher. One previous PHL course or permission of instructor required.

**PHL 393. Topics in Philosophy. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be considered in any other course or which may be treated in another course but only at an introductory level. Topics may include: special topics in some area of philosophy, interdisciplinary issues, and important work or works by a great philosopher.

**PHL 394. Topics in Philosophy. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be considered in any other course or which may be treated in another course but only at an introductory level. Topics may include: special topics in some area of philosophy, interdisciplinary issues, and important work or works by a great philosopher.

**PHL 395. Topics in Philosophy. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be considered in any other course or which may be treated in another course but only at an introductory level. Topics may include: special topics in some area of philosophy, interdisciplinary issues, and important work or works by a great philosopher.

**PHL 396. Topics in Philosophy. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be considered in any other course or which may be treated in another course but only at an introductory level. Topics may include: special topics in some area of philosophy, interdisciplinary issues, and important work or works by a great philosopher.

**PHL 397. Topics in Philosophy. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be considered in any other course or which may be treated in another course but only at an introductory level. Topics may include: special topics in some area of philosophy, interdisciplinary issues, and important work or works by a great philosopher.

**PHL 398. Topics in Philosophy. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be considered in any other course or which may be treated in another course but only at an introductory level. Topics may include: special topics in some area of philosophy, interdisciplinary issues, and important work or works by a great philosopher.

**PHL 399. Topics in Philosophy. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be considered in any other course or which may be treated in another course but only at an introductory level. Topics may include: special topics in some area of philosophy, interdisciplinary issues, and important work or works by a great philosopher.

**PHL 402. Neuroethics. 3 Hours.**

Ethical issues related to neuroscience and other sciences of the mind. Topics typically include: privacy and side effects of brain technologies; neuroscientific threats to free will; moral responsibility and mental illness; emotion and reason in moral judgment; cognitive enhancement and personality change; ethically sound research practices. A previous course in Philosophy is recommended. Ethics and Civic Responsibility are significant components of this course.

**PHL 405. Epistemology: Theories of Knowledge. 3 Hours.**

Human knowledge; its nature, sources, and limits. Concepts of truth, objectivity, evidence, and belief. Two previous PHL courses or permission of instructor required. Writing is a significant component of this course.

**PHL 408. Metaphysics. 3 Hours.**

Reality; its basic elements, principles of existence and identity, and appearance and reality. Concepts of cause, matter, mind, realism, and anti-realism. Two previous PHL courses or permission of instructor required.

**PHL 415. Metaethics. 3 Hours.**

Metaethics is the area of moral philosophy that has to do with the nature of morality. It deals with questions such as: Is morality objective? Is there really such a thing as right and wrong? Does our moral discourse express beliefs or just feelings? Do we necessarily have reasons to be moral? Two prior PHL courses or permission of instructor required. Writing is a significant component of the course.

**PHL 435. Advanced Topics in Philosophy of Law. 3 Hours.**

An in-depth examination of a single topic in the law. Discussion based course with significant reading and writing requirements. Potential topics include free speech, inchoate crimes, punishment, and legal responsibility.

**PHL 441. History of Philosophy: Descartes to Hume. 3 Hours.**

Philosophy in modern era, focusing on continental rationalism and British empiricism; emphasis on theories of knowledge and reality; science, religion, and modernism. Writing is a significant component of this course.

**PHL 442. Hist of PHL: Kant and 19th Cent. 3 Hours.**

Western philosophic tradition from Kant through end of nineteenth century. Kant, Hegel, Marx, Kierkegaard, and Mill, among others. One previous PHL course or permission of instructor required.

**PHL 443. History of Philosophy: Twentieth Century. 3 Hours.**

Major movements and problems of twentieth century philosophy. Moore, Russell, Wittgenstein, and Quine, among others. Two previous PHL courses or permission of instructor required.

**PHL 470. Philosophical Problems in the Natural and Social Sciences. 3 Hours.**

Nature and uses of science. Topics may include: concepts of explanation, confirmation, scientific law, and theory; special problems in sciences. Two previous PHL courses or permission of instructor required.

**PHL 490. Philosophy Seminar. 3 Hours.**

In-depth survey of either a topic or individual author of current interest. A systematic survey using previous course work in the main areas of philosophy to produce a substantial paper. Emphasis on detailed analysis of the structure of arguments and standards for empirical evidence where relevant. Proper standards for citation and attribution. Course fulfills capstone requirement for Seniors.

**PHL 491. Philosophy Seminar. 3 Hours.**

In-depth survey of either a topic or individual author of current interest. A systematic survey using previous course work in the main areas of philosophy to produce a substantial paper. Emphasis on detailed analysis of the structure of arguments and standards for empirical evidence where relevant. Proper standards for citation and attribution. This course fulfills the capstone requirement for seniors.

**PHL 492. Philosophy Seminar. 3 Hours.**

In-depth survey of either a topic or individual author of current interest. A systematic survey using previous course work in the main areas of philosophy to produce a substantial paper. Emphasis on detailed analysis of the structure of arguments and standards for empirical evidence where relevant. Proper standards for citation and attribution. This course fulfills the capstone requirement for seniors.

**PHL 493. Philosophy Seminar. 3 Hours.**

In-depth survey of either a topic or individual author of current interest. A systematic survey in the main areas of philosophy to produce a substantial paper. Emphasis on detailed analysis of the structure of arguments and standards for empirical evidence where relevant. Proper standards for citation and attribution.

**PHL 494. Philosophy Seminar. 3 Hours.**

In-depth survey of either a topic or individual author of current interest. A systematic survey in the main areas of philosophy to produce a substantial paper. Emphasis on detailed analysis of the structure of arguments and standards for empirical evidence where relevant. Proper standards for citation and attribution.

**PHL 498. Philosophy Internship. 1-3 Hour.**

On-campus and off-campus training positions in fields utilizing critical language and writing skills. Students should contact the Department Chair to discuss available positions and application procedures. Student must be a Philosophy major or minor.

**PHL 499. Directed Studies. 1-3 Hour.**

Special arrangement opportunity for in-depth study. Permission of Instructor Only.

## Department of Physics

**Chair:** Dr. Ilias Perakis

Physics is the fundamental science concerned with the study of the universe, including the properties that emerge from interactions among the fundamental constituents of materials and their couplings to external probes such as light. It includes core theories of classical mechanics, electromagnetism, quantum mechanics, relativity, and thermodynamics, which have withstood the test of time. Practical applications of these fundamental theories are covered in courses such as Machine Learning Applications in Physics and Materials Science, Nanoscale Science & Applications, Biophysics, Physics of Current and Emerging Energy Technologies, Laser Physics, Optics, and Solid State Physics. There are many opportunities for physics majors to excel through hands-on research participation in funded projects, where stipends are available through research grants or the established NSF/NASA REU Program, by joining the Honors Physics Program, and by participating in the Society of Physics Students.

The Department of Physics offers courses in astronomy, physics, and physical science that prepare students well for 21<sup>st</sup> century careers not always associated with physics in the past. The B.S. degree, with a major in physics, emphasizes the understanding of the theories of physics to solve fundamental and applied problems in science and technology by using critical thinking, advanced computation, and systematic analysis. Physicists work effectively in many 21<sup>st</sup> century careers which require these skills, such as, basic, applied, and medical research; advanced materials and laser science; medical, financial, and legal services; product design and development; computer coding, advanced computational science, and software engineering; management, administration, and quality control; as well as in higher and secondary education.

The Department of Physics is a partner in the UABTeach initiative. UABTeach lets undergraduate students receive both their B.S. degree in physics and full teaching certification in four years. More information about the coordination between UABTeach and the UAB Physics Undergraduate program is available at the UABTeach Web site (<http://www.uab.edu/uabteach/>).

The department offers the following B.S. degrees and concentrations as well as a minor in physics:

1. **Major in Physics**
2. **Major in Physics – Advanced Physics Track**
3. **Major in Physics – Applied Physics Track**
4. **Major in Physics – Computational Physics Track**
5. **Major in Physics – Biophysics Track**

A Bachelor of Science degree with Honors in Physics is available for all tracks, and offers the motivated and capable physics major with the enhanced opportunity to develop the research, problem-solving and communication skills necessary to excel in a scientific career or in the marketplace.

Advising for all physics majors is provided by a professional advisor in conjunction with physics faculty members.

The Department of Physics Web site (<http://www.uab.edu/physics/>) summarizes information about the Departmental programs. Further information may be obtained from Dr. Renato Camata, Undergraduate Program Director at (205) 934-8143, [camata@uab.edu](mailto:camata@uab.edu).

## Accelerated Learning Opportunities

Students majoring in physics are eligible to apply to two Accelerated Bachelors/Masters (ABM) options:

1. **B.S. in Physics/M.S. in Data Science.** The Physics/Data Science ABM is an interdisciplinary program jointly offered by the Department of Physics and the Department of Computer Science. To accelerate progress through the B.S./M.S. degrees, pertinent computational M.S.-level PH/CS courses may substitute the chemistry content (8 credit hours) of the conventional undergraduate PH major. Similarly, the 3 credit hours of the conventional Physics Capstone course may be substituted by the CS/PH 698 research. Alternatively, up to 12 credit hours of M.S. courses may be counted as general electives towards the completion of the B.S. degree in physics and towards the completion of the MS degree in data science.
2. **B.S. in Physics/M.S. in Physics.** The Physics ABM is a research intensive program that allows students to combine undergraduate and graduate research while completing their Bachelor's Degree and working toward the Master's Degree. To accelerate progress through the B.S./M.S. degrees, up to 12 credit hours of M.S. courses may be counted as physics electives towards the completion of the B.S. degree and towards the completion of the M.S. degree.

Further information about these ABM opportunities may be obtained from Dr. Renato Camata, Undergraduate Program Director, [camata@uab.edu](mailto:camata@uab.edu) or Dr. Mary Ellen Zvanut, Graduate Program Director, [mezvanut@uab.edu](mailto:mezvanut@uab.edu). Additional details and online application are available through the UAB Graduate School Web Page.

## Graduate Programs

The Department of Physics offers graduate study leading to the degrees of Master of Science and Doctor of Philosophy in physics. Further information may be obtained from Dr. Mary Ellen Zvanut, Graduate Program Director at (205) 934-6661, [mezvanut@uab.edu](mailto:mezvanut@uab.edu), or the UAB Graduate School Catalog.

See the UAB Graduate School Catalog for descriptions of graduate courses.

## Bachelor of Science with a Major in Physics

The curriculum of the Major in Physics provides fundamental knowledge in the core theories of physics.

Requirements		Hours
<b>Required Mathematics Courses</b>		
<a href="#">MA 125</a>	Calculus I	4
or <a href="#">MA 225</a>	Calculus I - Honors	
<a href="#">MA 126</a>	Calculus II	4
or <a href="#">MA 226</a>	Calculus II - Honors	
<a href="#">MA 227</a>	Calculus III	4
<a href="#">MA 252</a>	Introduction to Differential Equations	3
<b>Required Physics Courses</b>		
<a href="#">PH 110</a>	Topics in Contemporary Physics	1
<a href="#">PH 221</a>	General Physics I: Mechanics	4
<a href="#">PH 222</a>	General Physics II: Electricity & Magnetism	4
<a href="#">PH 223</a>	General Physics III: Thermodynamics & Quantum Physics	4
<a href="#">PH 350</a>	Computation, Theory, and Measurement in Quantum Physics and Relativity	4
<a href="#">PH 420</a>	Mathematical Methods of Physics I	3
<a href="#">PH 432</a>	Statistical Thermodynamics I	3
<a href="#">PH 445</a>	Electromagnetic Theory I	3
<a href="#">PH 450</a>	Introductory Quantum Mechanics I	3
<a href="#">PH 461</a>	Classical Mechanics I	3
<a href="#">PH 499</a>	Physics Capstone	3
<b>Required Chemistry Courses</b>		
<a href="#">CH 115</a>	General Chemistry I	4
& <a href="#">CH 116</a>	and General Chemistry I Laboratory	
<a href="#">CH 117</a>	General Chemistry II	4
& <a href="#">CH 118</a>	and General Chemistry II Laboratory	
<b>Mathematics Elective</b>		
Select one of the following courses:		3-4
<a href="#">MA 260</a>	Introduction to Linear Algebra	
<a href="#">MA 265</a>	Math Tools for Engineering Problem Solving	
<a href="#">MA 268</a>	Introduction to Mathematical Biology	
<a href="#">MA 311</a>	History of Mathematics I	
<a href="#">MA 312</a>	History of Mathematics II	
<a href="#">MA 360</a>	Scientific Programming	
<a href="#">MA 361</a>	Mathematical Modeling	
<a href="#">MA 411</a>	Integrating Mathematical Ideas	
<a href="#">MA 419</a>	Special Topics	
<a href="#">MA 434</a>	Algebra I: Linear	
<a href="#">MA 435</a>	Algebra II: Modern	
<a href="#">MA 440</a>	Advanced Calculus I	
<a href="#">MA 441</a>	Advanced Calculus II	
<a href="#">MA 444</a>	Vector Analysis	
<a href="#">MA 445</a>	Complex Analysis	
<a href="#">MA 453</a>	Transforms	
<a href="#">MA 454</a>	Intermediate Differential Equations	
<a href="#">MA 455</a>	Partial Differential Equations I	
<a href="#">MA 456</a>	Partial Differential Equations II	
<a href="#">MA 461</a>	Modeling with Partial Differential Equations	
<a href="#">MA 462</a>	Intro to Stochastic Differential Equations	
<a href="#">MA 463</a>	Operations Research I	

<a href="#">MA 464</a>	Operations Research II
<a href="#">MA 465</a>	Partial Differential Equations: Finite Diff. Meth.
<a href="#">MA 467</a>	Gas Dynamics
<a href="#">MA 468</a>	Numerical Analysis
<a href="#">MA 469</a>	Numerical Analysis II
<a href="#">MA 470</a>	Differential Geometry
<a href="#">MA 471</a>	Differential Geometry II
<a href="#">MA 472</a>	Geometry I
<a href="#">MA 473</a>	Geometry II
<a href="#">MA 474</a>	Introduction to Topology I
<a href="#">MA 475</a>	Introduction to Topology II
<a href="#">MA 485</a>	Probability
<a href="#">MA 486</a>	Mathematical Statistics

Total Hours

61-62

## Grade Requirement

Students must earn a grade of "C" or better in all courses applied to this major.

## Additional Requirements

### Physics or General Electives

Students must take physics or general electives to reach the 120 semester hour requirement.

## Minor

A minor is required for this degree, unless a double major is being earned.

## Bachelor of Science with a Major in Physics and an Advanced Physics Track

In addition to the requirements for the Major in Physics, students in the Advanced Physics Track are required to complete the following courses:

Requirements		Hours
<a href="#">PH 446</a>	Electromagnetic Theory II	3
or <a href="#">PH 466</a>	Applied Mechanics and Electromagnetism II	
<a href="#">PH 451</a>	Introductory Quantum Mechanics II	3
Additional elective PH courses recommended for the Advanced Physics Track:		
<a href="#">PH 418</a>	Machine Learning Applications in Physics and Materials Science	
<a href="#">PH 423</a>	Computational Physics	
<a href="#">PH 453</a>	Introductory Solid State Physics I	
<a href="#">PH 454</a>	Introductory Solid State Physics II	
<a href="#">PH 475</a>	Introduction to Biophysics I	
<a href="#">PH 491</a>	Advanced Physics Laboratory I	
<a href="#">PH 495</a>	Honors Research	
<a href="#">PH 497</a>	Special Topics in Physics	

... Click on the "Courses" tab at the top of this page or visit the Department of Physics Web Site (<http://www.uab.edu/physics/>) for a full list of PH electives for the Advanced Physics Track.

Total Hours

6

The Advanced Physics Track is designed to prepare students for graduate studies in physics or other physical sciences. In addition to a

strong foundation in the key theories of physics, this track encourages students to enroll in numerous advanced physics electives to broaden and deepen their preparation in physics.

## Bachelor of Science with a Major in Physics and an Applied Physics Track

In addition to the requirements for the Major in Physics, students in this track are required to complete a minimum of nine semester hours of courses offered by Physics or other UAB departments that qualify as Applied Physics Track courses:

Requirements	Hours
Select a minimum of nine hours of courses that qualify as Applied Physics Track courses.	9
For example:	
<a href="#">PH 336</a> Physics of Current and Emerging Energy Technologies	
<a href="#">PH 410</a> Physics of Fluids and Polymer Solutions	
<a href="#">PH 418</a> Machine Learning Applications in Physics and Materials Science	
<a href="#">PH 424</a> Biomedical Optics	
<a href="#">PH 466</a> Applied Mechanics and Electromagnetism II	
<a href="#">PH 453</a> Introductory Solid State Physics I	
<a href="#">PH 475</a> Introduction to Biophysics I	
<a href="#">PH 481</a> Laser Physics I	
<a href="#">PH 487</a> Nanoscale Science and Applications	
... Please visit the Department of Physics Web site ( <a href="http://www.uab.edu/physics/">http://www.uab.edu/physics/</a> ) for a full list of courses offered by Physics and other UAB departments that qualify as Applied Physics Track courses.	
Total Hours	9

The Applied Physics Track is designed to prepare students for careers in industry or other technology enterprises. A judicious choice of courses that qualify as Applied Physics Track courses allows graduates to develop a competitive set of professional skills.

## Bachelor of Science with a Major in Physics and a Computational Physics Track

In addition to the requirements of the Major in Physics, students in the Computational Physics Track are required to complete a minimum of nine semester hours of computationally intensive courses offered by Physics or other UAB departments.

Requirements	Hours
Select a minimum of nine hours of courses that qualify as Computational Physics Track courses:	9
For example:	
<a href="#">MA 360</a> Scientific Programming	
<a href="#">PH 418</a> Machine Learning Applications in Physics and Materials Science	
<a href="#">PH 423</a> Computational Physics	
<a href="#">CS 203</a> Object-Oriented Programming	
<a href="#">CS 203L</a> Object-Oriented Programming Lab	
<a href="#">CS 250</a> Discrete Structures	
<a href="#">CS 303</a> Algorithms and Data Structures	

<a href="#">CS 303L</a>	Algorithms and Data Structures Laboratory	
<a href="#">CS 416</a>	Big Data Programming	
<a href="#">CS 432</a>	Parallel Computing	
<a href="#">CS 460</a>	Artificial Intelligence	
<a href="#">CS 470</a>	Computer Graphics	
... Please visit the Department of Physics Web site ( <a href="http://www.uab.edu/physics/">http://www.uab.edu/physics/</a> ) for a full list of courses offered by Physics and other UAB departments that qualify as Computational Physics Track courses.		
Total Hours		9

The Computational Physics Track is designed to provide graduates with valuable computational skills in the areas of simulation of physical processes, big data processing and experimental analysis, and high levels of mathematical reasoning.

## Bachelor of Science with a Major in Physics and a Biophysics Track

The Biophysics Track is a multidisciplinary program of study that equips students for the quantitative knowledge demands of modern biomedical fields, including placement in medical school, health professions, graduate school in the biosciences, and biotech enterprises. A balanced, flexible mix of physics, chemistry, biology and math is required.

Requirements	Hours
<b>Required Biology</b>	
BY 123 Introductory Biology I	4
BY 124 Introductory Biology II	4
<b>Required Chemistry</b>	
CH 115 General Chemistry I	4
& CH 116 and General Chemistry I Laboratory	
CH 117 General Chemistry II	4
& CH 118 and General Chemistry II Laboratory	
CH 235 Organic Chemistry I	4
& CH 236 and Organic Chemistry I Laboratory	
CH 237 Organic Chemistry II	4
& CH 238 and Organic Chemistry II Laboratory	
<b>Required Mathematics</b>	
MA 125 Calculus I	4
or MA 225 Calculus I - Honors	
MA 126 Calculus II	4
or MA 226 Calculus II - Honors	
PH 299 Reasoning through Modeling and Simulation of Data	4
& PH 491 and Advanced Physics Laboratory I *	
or MA 227 Calculus III	
MA 252 Introduction to Differential Equations	3
<b>Required Physics Courses</b>	
PH 110 Topics in Contemporary Physics	1
PH 201 College Physics I	4
or PH 221 General Physics I	
PH 202 College Physics II	4
or PH 222 General Physics II	
PH 223 General Physics III: Thermodynamics & Quantum Physics	4
PH 350 Computation, Theory, and Measurement in Quantum Physics and Relativity	4
PH 432 Statistical Thermodynamics I	3
PH 499 Physics Capstone	3

**Physics Electives**

Select seven hours of Physics (PH) courses at the 400 level.

7

For example:

PH 475	Introduction to Biophysics I
PH 487	Nanoscale Science and Applications
PH 410	Physics of Fluids and Polymer Solutions
PH 418	Machine Learning Applications in Physics and Materials Science
PH 424	Biomedical Optics
PH 423	Computational Physics
PH 420	Mathematical Methods of Physics I
PH 336	Physics of Current and Emerging Energy Technologies
PH 491	Advanced Physics Laboratory I

... Click on the "Courses" tab at the top of this page for a full list of PH electives for the Biophysics Track.

**Mathematics Elective**

Select one of the following courses:

3

MA 260	Introduction to Linear Algebra
MA 265	Math Tools for Engineering Problem Solving
MA 268	Introduction to Mathematical Biology
MA 311	History of Mathematics I
MA 312	History of Mathematics II
MA 360	Scientific Programming
MA 361	Mathematical Modeling
MA 411	Integrating Mathematical Ideas
MA 419	Special Topics
MA 434	Algebra I: Linear
MA 435	Algebra II: Modern
MA 440	Advanced Calculus I
MA 441	Advanced Calculus II
MA 444	Vector Analysis
MA 445	Complex Analysis
MA 453	Transforms
MA 454	Intermediate Differential Equations
MA 455	Partial Differential Equations I
MA 456	Partial Differential Equations II
MA 461	Modeling with Partial Differential Equations
MA 462	Intro to Stochastic Differential Equations
MA 467	Gas Dynamics
MA 468	Numerical Analysis
MA 469	Numerical Analysis II
MA 470	Differential Geometry
MA 472	Geometry I
MA 473	Geometry II
MA 474	Introduction to Topology I
MA 475	Introduction to Topology II
MA 485	Probability
MA 486	Mathematical Statistics

Total Hours

72

\* PH 299 knowledge applied in PH 491 project

**Additional Requirements**

Students who have taken all or part of the PH 201-202 sequence before declaring a physics major may petition to have those courses substitute for PH 221-222.

**Suggested plan for majoring in physics**

*The table below is meant to assist you in planning your path toward the B.S. degree in physics. Please consult with your Physics Faculty Track Mentor to select your Track Electives. Please consult with the Physics Academic Advisor to add the courses required by the UAB Core Curriculum. Additional requirements may apply depending on your affiliation with the Honors College, the Science and Technology Honors Program (STHP) or the University Honors Program (UHP).*

**Proposed Program of Study for a Major in Physics**

- Consult with your Physics Faculty Track Mentor to select your Track Electives.
- Consult with the Physics Academic Advisor or an Honors College Advisor to add Core Curriculum courses or other requirements from Honors Programs.

**Freshman**

First Term	Hours	Second Term	Hours
PH 110		1 PH 221*	4
MA 225 or 125		4 MA 226 or 126	4
CH 115		3 CH 117	3
CH 116		1 CH 118	1
	9		12

**Sophomore**

First Term	Hours	Second Term	Hours
PH 222*		4 PH 223	4
MA 227		4 MA 252	3
MA 260		3 Track Elective (e.g., CE 210, EE 314, MA 360, etc.)	3
	11		10

**Junior**

First Term	Hours	Second Term	Hours
PH 350		4 PH 432	3
PH 420		3 PH 490, 491, or 495	1-4
PH 461		3 Track Electives (e.g., PH 423, PH 475, PH 486, etc.)	3-6
Track Elective (e.g., PH 336, PH 410, PH 487, etc.)	3		
	13		7-13

**Senior**

First Term	Hours	Second Term	Hours
PH 445		3 PH 446 or 466**	3
PH 450		3 PH 451**	3
PH 490, 491, 492, or 495		1-4 PH 499	3
Track Elective (e.g., PH 418, PH 453, PH 481, etc.)	3	Track Elective (e.g., PH 454, PH 482, PH 497, etc.)	3
	10-13		12

Total credit hours: 84-93

\* *Honors sections recommended for PH 221 and PH 222.*

\*\* *Advanced Physics Track Requirement.*

## Minor in Physics

Requirements		Hours
<b>Required Physics Courses</b>		
<a href="#">PH 221</a>	General Physics I: Mechanics <sup>1</sup>	4
<a href="#">PH 222</a>	General Physics II: Electricity & Magnetism <sup>1</sup>	4
<a href="#">PH 223</a>	General Physics III: Thermodynamics & Quantum Physics	4
<b>Physics Electives</b>		
Select 6 hours from the following:		6
<a href="#">PH 336</a>	Physics of Current and Emerging Energy Technologies	
<a href="#">PH 350</a>	Computation, Theory, and Measurement in Quantum Physics and Relativity	
<a href="#">PH 410</a>	Physics of Fluids and Polymer Solutions	
<a href="#">PH 418</a>	Machine Learning Applications in Physics and Materials Science	
<a href="#">PH 420</a>	Mathematical Methods of Physics I	
<a href="#">PH 423</a>	Computational Physics	
<a href="#">PH 424</a>	Biomedical Optics	
<a href="#">PH 425</a>	Applications of Contemporary Optics I	
<a href="#">PH 432</a>	Statistical Thermodynamics I	
<a href="#">PH 445</a>	Electromagnetic Theory I	
<a href="#">PH 446</a>	Electromagnetic Theory II	
<a href="#">PH 450</a>	Introductory Quantum Mechanics I	
<a href="#">PH 451</a>	Introductory Quantum Mechanics II	
<a href="#">PH 453</a>	Introductory Solid State Physics I	
<a href="#">PH 454</a>	Introductory Solid State Physics II	
<a href="#">PH 461</a>	Classical Mechanics I	
<a href="#">PH 466</a>	Applied Mechanics and Electromagnetism II	
<a href="#">PH 475</a>	Introduction to Biophysics I	
<a href="#">PH 476</a>	Introduction to Biophysics II	
<a href="#">PH 481</a>	Laser Physics I	
<a href="#">PH 482</a>	Laser Physics II	
<a href="#">PH 487</a>	Nanoscale Science and Applications	
Total Hours		18

<sup>1</sup> [PH 221](#) General Physics I: Mechanics and [PH 222](#) General Physics II: Electricity & Magnetism may also satisfy the Core Curriculum Area III: Natural Sciences requirement; check the Core Curriculum for your particular major.

## GPA & Residency Requirement

A minimum grade of "C" is required in all courses applied to the minor, as well as all mathematics course prerequisites. A minimum of two physics courses must be completed at UAB.

## Honors Program in Physics

The Physics Honors Program offers the motivated and capable physics major enhanced opportunities to develop the research, problem solving, and communication skills necessary for a dedicated effort in the scientific enterprise. By designing, describing, and defending a research project, the honors graduate will have a documented capacity for success in graduate school or in any career where scientific critical thinking, motivation, and accomplishment are valued.

## Eligibility

Acceptance into the Physics Honors Program requires the student to:

- have earned a 3.25 GPA in physics courses attempted.
- have earned a 3.0 GPA overall.
- have completed 16 semester hours in physics, including PH 223 and PH 350.

## Requirements

Students graduating with Physics Honors are required to have completed the following:

- arrangement with a faculty sponsor to do a physics research project satisfying expectations for six semester hours of PH 495 Honors Research
- selection of an Honors Committee.
- committee approval of a written research proposal.
- completion of the proposed six semester hours of PH 495 Honors Research.
- maintenance of a 3.25 GPA in physics courses and an overall 3.0 GPA.
- a written report in the format required by an appropriate journal.
- an oral or poster presentation of the research project to the Honors Committee.

## Benefits

The goal of the Physics Honors Program is to train capable undergraduates for uncommon accomplishment in academic research. The new physics honors graduate will have documented experience and productivity commonly found in second- or third-year graduate students. Ideally, the research project will result in publication and presentation at a national conference, giving the honors graduate strong credentials for graduate or medical/professional school, for industrial research, for science writing, and for teaching. Contacts made through publication and conferences and informed references written by mentor and committee members give the honors graduate a significant edge in the job market. The successful honors student will be recognized at the UAB Honors Convocation and will graduate "With Honors in Physics."

## Contact

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## AST-Astronomy Courses

### AST 101. Astronomy of the Universe. 3 Hours.

Survey of the universe of matter and energy. Interpretation of observations to develop a self-consistent view of the universe, basic physical laws and structures, cosmic history and evolution. Quantitative Literacy is a significant component of this course. This course, when taken with its corresponding laboratory, meets the Core Curriculum requirements for Area III: Natural Sciences.

### AST 102. Astronomy of Stellar Systems. 3 Hours.

Mechanisms and processes of universe and interrelationships as systems, including nature of stars and galaxies: formation, interior processes, including energy generation, evolution, and galaxies as systems. Lecture and laboratory. Quantitative Literacy is a significant component of this course. This course, when taken with its corresponding laboratory, meets the Core Curriculum requirements for Area III: Natural Sciences.

### AST 103. Astronomy of the Solar System. 3 Hours.

Descriptive and interpretive approach to solar and interplanetary phenomena, comets, and cometary/meteor relationships, asteroids and planetesimals, planetary surfaces, atmospheres, and interior structures. Physical law governing the solar system and quest for understanding its history and evolution, including formation. Lecture. This course, when taken with its corresponding laboratory, meets the Core Curriculum requirements for Area III: Natural Sciences.

### AST 105. Extraterrestrial Life. 3 Hours.

Interdisciplinary treatment (astronomy, chemistry, biology, planetary science, communications, and information sciences) of the universe as habitat, cosmic chemistry of molecules and evolution, environmental requirements, origin and occurrence of life, search for evidence, intelligence, communication, and contact. Lecture and laboratory. This course, when taken with its corresponding laboratory (AST 115), meets the Core Curriculum requirements for Area III: Natural Sciences.

### AST 111. Astronomy of the Universe Laboratory. 1 Hour.

Laboratory experience demonstrates how astronomy is practiced through observation experiences, laboratory experiments, and exercises involving analysis of data. Specific experiences illuminate topics presented in AST 101. Quantitative Literacy is a significant component of this course. Must take with AST 101 to receive credit.

### AST 112. Astronomy of Stellar Systems Laboratory. 1 Hour.

Laboratory experience demonstrates how astronomy is practiced through observation experiences, laboratory experiments, and exercises involving analysis of data. Specific experiences illuminate topics presented in AST 102. Quantitative Literacy is a significant component of this course. Must take with ST 102 to receive credit.

### AST 113. Astronomy of the Solar Systems Laboratory. 1 Hour.

Laboratory experience demonstrates how astronomy is practiced through observation experiences, laboratory experiments, and exercises involving analysis of data. Specific experiments illuminate topics presented in AST 103. Must take AST 103 to receive credit.

### AST 115. Extraterrestrial Life Laboratory. 1 Hour.

Laboratory experience illuminates topics presented in AST 105. Must take AST 105 to receive credit. This course meets the Core Curriculum requirements for Area III: Natural Sciences.

## PH-Physics Courses

### PH 100. Preparatory Physics. 3 Hours.

Designed primarily for students in need of preparation for PH 201 or PH 221. Vectors, kinematics, and dynamics, including conservation laws. Emphasis placed on methods of analyzing physics problems, setting up equations for physics problems, and interpreting information in physics problems.

**Prerequisites:** MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 125 [Min Grade: C] or MA 225 [Min Grade: C]

### PH 103. Understanding the World Through Data. 3 Hours.

This course is designed to provide students of all disciplines with an introduction to using data and models to understand systems. This course features a carefully guided and curated selection of introductory-level topics related to modeling and simulation. Emphasis is placed on developing the inductive and deductive reasoning skills specific to the use of models in the physical sciences. Students will make and explore conjectures about data in a variety of disciplines, including physics, data science, biology, the social sciences, business, and finance. Students will be introduced to the use of simple models to visualize and qualitatively understand quantitative information via the Python programming language. No prior programming experience is necessary.

### PH 110. Topics in Contemporary Physics. 1 Hour.

The objective of this course is to introduce incoming freshmen to the different areas of physics and to topics that physicists are working on today. Through lectures and seminars by members of the UAB physics faculty, students are introduced to the UAB Department of Physics community, their research activities, and career opportunities for graduates in the various tracks of the Physics Undergraduate Program. Course required for physics majors in the first fall semester of residency.

### PH 191. Co-operative Work Program. 2-3 Hours.

Co-Op Work Program.

### PH 201. College Physics I. 4 Hours.

First term of non-calculus based physics. Linear and planar motion, Newton's laws, work and energy, gravitation, momentum, rigid body motion, elasticity, oscillations, waves, sound, fluids, ideal gases, heat and thermodynamics. Lecture and laboratory. Quantitative Literacy is a significant component of this course. This course meets the Core Curriculum requirements for Area III: Natural Sciences.

**Prerequisites:** (MA 106 [Min Grade: C] or MA 106 [Min Grade: P]) or (MA 107 [Min Grade: C] or MA 107 [Min Grade: P]) or (MA 125 [Min Grade: C] or MA 125 [Min Grade: P]) or PH 100 [Min Grade: C] or MA 225 [Min Grade: C] or (MA 126 [Min Grade: C] or MA 126 [Min Grade: P]) or MA 226 [Min Grade: C] or (A02 25 and HSCG 3.5) or (A02 26 and HSCG 3.0) or A02 27 or (SAT2 580 and HSCG 3.5) or (SAT2 600 and HSCG 3.0) or SAT2 620 or MAC2 16 or MTH5 80 or (S02 600 and HSCG 3.5) or (S02 620 and HSCG 3.0) or S02 640 or MTH5 75 or MPL 76

### PH 201L. College Physics Laboratory I. 0 Hours.

Laboratory for PH 201. Lecture, laboratory, and recitation must be taken concurrently.

### PH 201R. College Physics I Recitation. 0 Hours.

First term of non-calculus based physics. Linear and planar motion, Newton's Law, work and energy, gravitation, momentum, rigid body motion, statics, elasticity, oscillations, waves, sound, fluids, ideal gases, heat, and thermodynamics. Lecture, laboratory, and recitation must be taken concurrently.

**PH 202. College Physics II. 4 Hours.**

Second term of non-calculus based physics. Electricity and magnetism, optics, and modern physics. Lecture, laboratory, and recitation must be taken concurrently. This course meets the Core Curriculum requirements for Area III: Natural Sciences.

**Prerequisites:** PH 201 [Min Grade: C]

**PH 202L. College Physics Laboratory II. 0 Hours.**

Laboratory for PH 202. Lecture, laboratory, and recitation must be taken concurrently.

**PH 202R. College Physics II - Recitation. 0 Hours.**

Second term of non-calculus based physics sequence covering electricity and magnetism, optics, and modern physics. Lecture, laboratory, and recitation must be taken concurrently.

**PH 211. College Physics I Laboratory. 0-1 Hours.**

College Physics I Laboratory.

**PH 212. College Physics II Lab. 1 Hour.****PH 221. General Physics I. 4 Hours.**

First term of introductory, calculus-based general physics sequence covering classical mechanics: measurements, kinematics, vectors, translational and rotational dynamics, work, energy, momentum, statics, oscillatory motion, wave motion, and sound. Lecture and laboratory. Quantitative Literacy is a significant component of this course. PH 221 General Physics I – Honors: This section of PH 221 is designed for students with strong interests and preparation in science, mathematics, and/or engineering. Topics are covered with more mathematical rigor and in greater depth than in regular sections. Second term of non-calculus based physics. Electricity and magnetism, optics, and modern physics. Lecture, laboratory, and recitation must be taken concurrently. This course meets the Core Curriculum requirements for Area III: Natural Sciences.

**Prerequisites:** MA 125 [Min Grade: C] or MA 225 [Min Grade: C]

**PH 221L. General Physics Laboratory I. 0 Hours.**

Laboratory for PH 221. Lecture, laboratory, and recitation must be taken concurrently.

**PH 221R. General Physics I Recitation. 0 Hours.**

First term of introductory, calculus-based general physics sequence covering classical mechanics: measurements, kinematics, vectors, translational and rotational dynamics, work, energy, momentum, statics, oscillatory motion, wave motion, and sound. Lecture, laboratory, and recitation must be taken concurrently.

**PH 222. General Physics II. 4 Hours.**

Second term of introductory, calculus-based general physics sequence covering electricity and magnetism: Coulomb's Law, electric fields, Gauss' Law, potential, capacitors and dielectrics, Ohm's Law, DC circuits, magnetic fields, Ampere's Law, Biot-Savart Law, Faraday's Law, inductance, AC circuits, geometrical and physical optics. Lecture, Laboratory, and Recitation must be taken concurrently. PH 222 General Physics II Honors: This section of PH 222 is designed for students with strong interests and preparation in science, mathematics, and/or engineering. Topics are covered with more mathematical rigor and in greater depth than in regular sections. This course meets the Core Curriculum requirements for Area III: Natural Sciences.

**Prerequisites:** PH 221 [Min Grade: C] and (MA 126 [Min Grade: C] or MA 226 [Min Grade: C])

**PH 222L. General Physics Laboratory II. 0 Hours.**

Laboratory for PH 222. Lecture, Laboratory, and Recitation must be taken concurrently.

**PH 222R. General Physics II - Recitation. 0 Hours.**

Second term of introductory, calculus-based general physics sequence covering electricity and magnetism, Coulomb's Law, electric fields, Gauss' Law, potential, capacitors, and dielectrics, Ohm's Law, DC circuits, magnetic fields, Ampere's Law, Biot-Savart Law, Faraday's Law, inductance, AC circuits, geometrical and physical optics. Lecture, laboratory, and recitation must be taken concurrently.

**PH 223. General Physics III: Thermodynamics & Quantum Physics. 4 Hours.**

Study of topics in thermodynamics (including the kinetic theory of gases, as well as first and second laws of thermodynamics) and modern physics (including atomic structure, quantum mechanics, and applications to condensed matter, nuclear and particle physics). Specific applications in medical physics will also be discussed. Emphasis on the use of quantitative reasoning to solve thermodynamics and quantum physics problems. Writing and scientific ethics assignments based on laboratory experiences. Lecture and laboratory. Writing, Quantitative Literacy and Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** PH 222 [Min Grade: C]

**PH 223L. General Physics Laboratory III. 0 Hours.**

Laboratory for PH 223. Experimental work in the topics associated with PH 223, including atomic structure, quantum physics, and solid state physics. Successful students will develop their ability to collect and analyze experimental data, interpret the results, and present their findings in a clear, concise, and convincing way. Writing, Quantitative Literacy and Ethics and Civic Responsibility are significant components of this course.

**PH 231. General Physics I Laboratory. 0-1 Hours.**

General Physics I Laboratory.

**PH 232. General Physics II Laboratory. 1 Hour.**

General Physics II Laboratory.

**PH 299. Reasoning through Modeling and Simulation of Data. 3 Hours.**

This course provides in-depth coverage of modeling and simulation topics with a focus on the use of acquired knowledge for project-based cooperative learning. Students will learn to reason in terms of models and will learn how well-validated models are used to understand data and make sense of complex systems in the physical sciences. Students will work with a team of peers and the course instructor to develop modeling and computational knowledge and skills, and apply them to the analysis of real-world data sets. Students will engage in modeling and simulation in areas including physics, data science, biology, the social sciences, and business and finance. This course introduces students to a variety of powerful modeling methods used in physics, which are ubiquitous across many fields of study. Students will be introduced to simulation via the Python programming language. No prior programming experience is necessary.

**PH 301. Instructional Astronomy I. 4 Hours.**

Survey of selected topics in astronomy of the universe, stellar systems and solar systems with a focus on preparing to teach. Lecture and Laboratory must be taken concurrently.

**PH 301L. Instructional Astronomy Laboratory. 0 Hours.**

Laboratory for PH 301. Lecture and Laboratory must be taken concurrently.

**PH 302. Instructional Physical Science. 4 Hours.**

Lecture and discussion in areas of the physical sciences importance to basic scientific literacy and to current technology, with a focus on preparing to teach. Must be taken concurrently with PH 302L.

**PH 302L. Instructional Physical Science Laboratory. 0 Hours.**  
Laboratory for PH 302.

**PH 304. Intermediate Mechanics. 3 Hours.**

Intermediate treatment of the kinematics and dynamics of classical systems. Presentation of problem solving techniques is emphasized.

**Prerequisites:** PH 222 [Min Grade: C]

**PH 305. Intermediate Electricity and Magnetism. 3 Hours.**

Intermediate treatment of electricity and magnetism including fields, potential, induction, Maxwell's equations, circuits. Presentation of problem solving techniques is emphasized.

**Prerequisites:** PH 222 [Min Grade: C]

**PH 310. Introduction to Quantum Computing. 3 Hours.**

This course introduces students to the world of quantum computation and quantum information. Students will engage in learning key algorithms and their implementations using quantum circuits. Students will develop an understanding of the major differences between traditional (classical) and modern quantum computing. Through coding and quantum simulations using Python programming language, students will develop an understanding of quantum computing models and basic algorithms — e.g., Deutsch-Jozsa, Simon, Quantum Fourier transform, Shor, and Grover's search algorithm. No prior programming experience is necessary. By discussing interdisciplinary topics in materials and device physics, students will also develop an appreciation for the quantum hardware necessary to run these algorithms.

**Prerequisites:** PH 221 [Min Grade: C]

**PH 331. Classical Thermodynamics. 3 Hours.**

Introduction to thermal phenomena on a macroscopic and statistical basic, principles and laws governing them.

**Prerequisites:** PH 222 [Min Grade: C] and MA 227 [Min Grade: C]

**PH 336. Physics of Current and Emerging Energy Technologies. 3 Hours.**

The technologies involved in energy conversion, storage, and transmission, represent one of the cornerstones of modern civilization. In this course, the principles of mechanics, electromagnetism, thermodynamics, and quantum physics are applied to the understanding of current and emerging energy technologies. Topics include electrical power generation from conventional and renewable resources, electrochemical and thermal energy storage, as well as power transmission via electrical, optical, and superconducting systems.

**Prerequisites:** PH 222 [Min Grade: C]

**PH 350. Computation, Theory, and Measurement in Quantum Physics and Relativity. 4 Hours.**

An emphasis on the principles of experimental physics at an advanced level, including computational modeling/analysis via introduction to Python coding. Lectures focused on the theoretical basis of modern physics topics with applications in special relativity, quantum mechanics, atomic and nuclear structure, solid-state physics, semiconductors, lasers and nanotechnology.

**Prerequisites:** PH 223 [Min Grade: C] or PH 351 [Min Grade: C]

**PH 350L. Computation, Theory, and Measurement in Quantum Physics and Relativity Laboratory. 0 Hours.**

Laboratory for PH 350. Experimental work in the topics associated with PH 350 at a level of investigation to more strongly develop the connections between theory and experiment. Experiments are designed to verify fundamental concepts in modern physics and will integrate computer codes to analyze and visualize the data collected in the laboratory. Students will organize and maintain a rigorous laboratory notebook and will prepare/present scientific reports for these experiments as a major component of the course. Successful students will refine their data collection, analysis, and interpretation and scientific presentation skills. Writing, Quantitative Literacy and Ethics and Civic Responsibility are significant components of this course.

**PH 351. Modern Physics I. 4 Hours.**

Study of topics in modern physics, including special relativity, atomic structure, quantum mechanics, quantum statistics, and selected additional topics (e.g. solid state physics, molecular physics, lasers, semiconductors and nanotechnology, particle physics, and general relativity). Specific applications in medical physics will also be discussed. Emphasis on the use of quantitative reasoning to solve modern physics problems. Writing and scientific ethics assignments based on laboratory experiences. Lecture and laboratory. Writing, Quantitative Literacy and Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** PH 222 [Min Grade: C]

**PH 351L. Modern Physics I Laboratory. 0 Hours.**

Laboratory for PH 351. Experimental work in the topics associated with PH 351, including special relativity, atomic structure, quantum physics, and solid state physics. Successful students will develop their ability to collect and analyze experimental data, interpret the results, and present their findings in a clear, concise, and convincing way. Writing, Quantitative Literacy and Ethics and Civic Responsibility are significant components of this course.

**PH 352. Modern Physics II. 4 Hours.**

A continuation of PH351 with more focus on the theoretical basis of modern physics topics with applications in special relativity, quantum mechanics, atomic and nuclear structure, solid-state physics, semiconductors, lasers and nanotechnology. Application of the theory to experimental measurements associated with PH352L will be a major focus. Emphasis on the use of quantitative reasoning to solve modern physics problems. Writing and scientific ethics assignments based on laboratory experiences. Lecture and laboratory. Writing, Quantitative Literacy and Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** PH 351 [Min Grade: C]

**PH 352L. Modern Physics II Laboratory. 0 Hours.**

Laboratory for PH 352. Experimental work in the topics associated with PH 352 at a level of investigation to more strongly develop the connections between theory and experiment. Successful students will refine their data collection, analysis, and interpretation and scientific presentation skills. Writing, Quantitative Literacy and Ethics and Civic Responsibility are significant components of this course.

**PH 397. Directed Reading in Physics I. 2-3 Hours.**

Tutorial studies in physics offered by special arrangement. Permission of instructor.

**PH 398. Directed Reading in Physics II. 2-3 Hours.**

Tutorial studies in physics offered by special arrangement. Permission of instructor.

**PH 410. Physics of Fluids and Polymer Solutions. 3 Hours.**

This course provides an introduction to fluid mechanics and polymer physics appropriate for physics, engineering, chemistry, and biology majors. Topics include the concept of a fluid, the fluid as a continuum, properties of the velocity field, thermodynamic properties of a fluid, viscosity, pressure distribution in a fluid, basic physical laws of fluid mechanics, the Reynolds transport theorem, differential relations for a fluid particle, viscous flow, polymer solutions and thermodynamics, Brownian motion, diffusion equation, Fick's law, Stokes-Einstein equation and hydrodynamic radius of a polymer chain, and viscosity of polymer solutions.

**Prerequisites:** PH 221 [Min Grade: C] and MA 252 [Min Grade: C]

**PH 418. Machine Learning Applications in Physics and Materials Science. 3 Hours.**

This course covers interdisciplinary topics in data science, computer science, and materials physics, with a focus on introducing first-principles software based on density-functional theory and data-driven machine-learning discoveries for applications in materials science and other physics domains.

**Prerequisites:** PH 350 [Min Grade: C]

**PH 420. Mathematical Methods of Physics I. 3 Hours.**

Vector calculus. Curvilinear coordinate systems. Commonly encountered ordinary differential equations and special functions. Complex variables and contour integration. Partial differential equations, including solutions by Green function methods.

**Prerequisites:** PH 222 [Min Grade: C] and MA 252 [Min Grade: C] or EGR 265 [Min Grade: C]

**PH 421. Mathematical Methods of Physics II. 3 Hours.**

Vector calculus. Curvilinear coordinate systems. Commonly encountered ordinary differential equations and special functions. Complex variables and contour integration. Partial differential equations, including solutions by Green function methods.

**Prerequisites:** PH 420 [Min Grade: C]

**PH 423. Computational Physics. 3 Hours.**

Introduces symbolic and numerical computation through examples drawn from classical and modern physics, such as, classical mechanics, electromagnetism, and quantum mechanics. Emphasizes computer-based approaches to visualization, solution of ordinary differential equations, evaluation of integrals, and finding roots, eigenvalues, and eigenvectors.

**Prerequisites:** MA 252 [Min Grade: C] or EGR 265 [Min Grade: C] and PH 222 [Min Grade: C]

**PH 424. Biomedical Optics. 3 Hours.**

The objective in this class is to present an introduction to applied optics, with an emphasis on biomedical applications.

**Prerequisites:** PH 222 [Min Grade: C]

**PH 425. Applications of Contemporary Optics I. 3 Hours.**

Applied geometrical and wave optics. Paraxial ray optics, optical matrix theory, aberrations, optical imaging systems, and computer-based optical design. Optical interferometry, diffraction, holography, polarization phenomena, coherence theory, lasers, and Gaussian beam propagation.

**Prerequisites:** PH 222 [Min Grade: C]

**PH 426. Applications of Contemporary Optics II. 3 Hours.**

Applied geometrical and wave optics. Paraxial ray optics, optical matrix theory, aberrations, optical imaging systems, and computer-based optical design. Optical interferometry, diffraction, holography, polarization phenomena, coherence theory, lasers, and Gaussian beam propagation.

**Prerequisites:** PH 425 [Min Grade: C]

**PH 427. Geometrical Optics. 4 Hours.**

Properties of optical systems. Lenses, mirrors, and stops. Aberrations. Rays and wave fronts. Optical instruments. Aspheric components. Lecture and laboratory must be taken concurrently.

**Prerequisites:** PH 222 [Min Grade: C]

**PH 427L. Geometrical Optics Laboratory. 0 Hours.**

Laboratory for PH 427. Lecture and laboratory must be taken concurrently.

**PH 428. Physical Optics. 4 Hours.**

Interference and diffraction phenomena. Emission, propagation, and absorption of radiation. Polarization and dispersion. Stimulated emission. Lecture and laboratory must be taken concurrently.

**Prerequisites:** PH 222 [Min Grade: C]

**PH 428L. Physical Optics Laboratory. 0 Hours.**

Laboratory for PH 428. Lecture and laboratory must be taken concurrently.

**PH 429. Applications of Contemporary Optics III. 3 Hours.**

Optical interactions with materials, including nonlinear optical effects, such as birefringence, electro-optics, photoelasticity, crystal optics, acousto-optics, and phase conjugation. Optical spectroscopies, such as spectroscopic instrumentation, lasers as spectroscopic light sources, fluorescence and Raman laser spectroscopy, and applications of laser spectroscopy in chemistry, environmental research, materials science, biology, and medicine.

**Prerequisites:** PH 425 [Min Grade: C] and PH 426 [Min Grade: C]

**PH 432. Statistical Thermodynamics I. 3 Hours.**

Statistical basis of laws of thermodynamics. Ensembles and partition functions. Quantum statistics of ideal gases, including photons and electrons. Applications to solids, real gases, liquids, and magnetic systems. Transport theory.

**Prerequisites:** PH 351 [Min Grade: C] or PH 223 [Min Grade: C]

**PH 433. Statistical Thermodynamics II. 3 Hours.**

Statistical basis of laws of thermodynamics. Ensembles and partition functions. Quantum statistics of ideal gases, including photons and electrons. Applications to solids, real gases, liquids, and magnetic systems. Transport theory.

**Prerequisites:** PH 432 [Min Grade: C] and PH 450 [Min Grade: C]

**PH 435. Physics of Biomedical Processes and Technologies. 3 Hours.**

Integrated study of the fundamentals and dynamical principles of mechanics, electromagnetism, and select quantum physics topics, with applications to biomechanical systems, biophysical networks, and bioimaging technologies.

**Prerequisites:** PH 461 [Min Grade: C] and PH 445 [Min Grade: C]

**PH 436. Physics of Renewable Energy Systems. 3 Hours.**

Integrated study of the fundamentals and dynamical principles of mechanics, electromagnetism, and select quantum physics topics, with applications to electrical power generation from renewable resources such as solar, wind, hydro, and ocean energy.

**Prerequisites:** PH 461 [Min Grade: C] and PH 445 [Min Grade: C]

**PH 445. Electromagnetic Theory I. 3 Hours.**

Electromagnetic theory approached from the standpoint of fields and using Maxwell's equations.

**Prerequisites:** PH 222 [Min Grade: C] and PH 420 [Min Grade: C]

**PH 446. Electromagnetic Theory II. 3 Hours.**

Electromagnetic theory approached from the standpoint of fields and using Maxwell's equations.

**Prerequisites:** PH 445 [Min Grade: C]

**PH 447. Directed Reading in Electromagnetic Theory. 2-3 Hours.**

Tutorial studies in electromagnetic theory offered by special arrangement.

**PH 450. Introductory Quantum Mechanics I. 3 Hours.**

Principles of quantum mechanics and their application to particle waves, angular momentum, tunneling, radiation, and selection rules. Perturbation and variational methods. Successful completion of PH 350 or PH 352 is recommended prior to registering for this class.

**Prerequisites:** (PH 352 [Min Grade: C] or PH 350 [Min Grade: C]) and PH 461 [Min Grade: C]

**PH 451. Introductory Quantum Mechanics II. 3 Hours.**

Principles of quantum mechanics and their application to particle waves, angular momentum, tunneling, radiation, and selection rules. Perturbation and variational methods. Successful completion of PH 350 or PH 352 is recommended prior to registering for this class.

**Prerequisites:** PH 450 [Min Grade: C]

**PH 452. Directed Reading in Quantum Mechanics. 2-3 Hours.**

Tutorial studies in quantum mechanics offered by special arrangement.

**PH 453. Introductory Solid State Physics I. 3 Hours.**

Properties of crystal lattices, lattice dynamics, lattice imperfections, and bonding energies. Electronic properties of dielectrics, semiconductors, and metals. Ferroelectric, magnetic, and optical properties of solids.

**Prerequisites:** PH 450 [Min Grade: C](Can be taken Concurrently)

**PH 454. Introductory Solid State Physics II. 3 Hours.**

Properties of crystal lattices, lattice dynamics, lattice imperfections, and binding energies. Electronic properties of dielectrics, semiconductors, and metals.

**Prerequisites:** PH 453 [Min Grade: C]

**PH 455. Molecular Spectroscopy. 3 Hours.**

Molecular Spectroscopy.

**PH 461. Classical Mechanics I. 3 Hours.**

Kinematics and dynamics, including central forces, rotating coordinate systems, and generalized coordinates. Lagrangian, Hamiltonian, and other equivalent formulations of mechanics.

**Prerequisites:** PH 222 [Min Grade: C] and (MA 252 [Min Grade: C] or EGR 265 [Min Grade: C])

**PH 462. Classical Mechanics II. 3 Hours.**

Kinematics and dynamics, including central forces, rotating coordinate systems, and generalized coordinates. Lagrangian, Hamiltonian, and other equivalent formulations of mechanics.

**Prerequisites:** PH 461 [Min Grade: C]

**PH 463. Directed Reading in Classical Mechanics. 2-3 Hours.**

Tutorial studies in classical mechanics offered by special arrangement.

**PH 465. Applied Mechanics and Electromagnetism I. 3 Hours.**

Integrated study of the fundamentals and dynamical principles of mechanics, electromagnetism, and select quantum physics topics, with applications to biomechanical systems, biophysical networks, and bioimaging technologies.

**Prerequisites:** PH 461 [Min Grade: C] and PH 445 [Min Grade: C]

**PH 466. Applied Mechanics and Electromagnetism II. 3 Hours.**

Integrated study of the fundamentals and dynamical principles of mechanics, electromagnetism, and select quantum physics topics, with applications to electrical power generation from renewable resources such as solar, wind, hydro, and ocean energy.

**Prerequisites:** PH 461 [Min Grade: C] and PH 445 [Min Grade: C]

**PH 467. Special Relativity. 3 Hours.**

Principles and foundations of special relativity with applications to mechanics and electrodynamics.

**Prerequisites:** PH 446 [Min Grade: C] and PH 462 [Min Grade: C]

**PH 468. General Relativity. 3 Hours.**

Gravitational phenomena associated with and resulting from linear field equations. Equivalence principle, its implications of non-linear field, and physical consequences.

**PH 469. Directed Reading in Physics. 2-3 Hours.**

Tutorial studies in physics offered by special arrangement.

**PH 471. Fundamentals of Spectroscopy. 3 Hours.**

Explanation of phenomena related to rotational vibration and electronic spectroscopy of atoms and molecules; operational principles of spectroscopic tools including diffraction grating, waveguides and interferometers, basic group theory concepts and notation.

**PH 475. Introduction to Biophysics I. 3 Hours.**

Physics of biological systems: proteins, lipids, nucleic acids, supramolecular structures, and molecular motors; structure, function, energetics, thermodynamics, and bio-nanotechnology. Emphasis on systems that are best understood in physical and molecular detail. Systems will direct study, with modern physical methods introduced as needed.

**Prerequisites:** PH 351 [Min Grade: C] or PH 223 [Min Grade: C]

**PH 476. Introduction to Biophysics II. 3 Hours.**

Physics of biological systems: proteins, lipids, nucleic acids, supramolecular structures, and molecular motors; structure, function, energetics, thermodynamics, and bio-nanotechnology. Emphasis on systems that are best understood in physical and molecular detail. Systems will direct study, with modern physical methods introduced as needed.

**Prerequisites:** PH 475 [Min Grade: C]

**PH 481. Laser Physics I. 3 Hours.**

Physical principles of laser operation and design. Spontaneous and stimulated emission, population inversion, light amplification, laser resonators, Q-switching, mode-locking, pulse shortening techniques, spectral narrowing, and tunable lasers. Individual types of lasers such as gas, solid state, dye, color center, and semiconductor. Practical applications of lasers as well as modern techniques and instrumentation in laser spectroscopy.

**Prerequisites:** PH 222 [Min Grade: C]

**PH 482. Laser Physics II. 3 Hours.**

Physical principles of laser operation and design. Spontaneous and stimulated emission, population inversion, light amplification, laser resonators, Q-switching, mode-locking, pulse shortening techniques, spectral narrowing, and tunable lasers. Individual types of lasers such as gas, solid state, dye, color center, and semiconductor. Practical applications of lasers as well as modern techniques and instrumentation in laser spectroscopy.

**Prerequisites:** PH 481 [Min Grade: C]

**PH 485. Laser Spectroscopy. 3 Hours.**

Fundamental principles, experimental techniques, instrumentation, and practical applications of laser spectroscopy.

**PH 486. Semiconductor Materials in Modern Technology. 3 Hours.**

Brief review of electronic materials with emphasis on traditional and cutting edge silicon technology. Competing and complementary semiconductors covered in standard lecture and seminar style. Materials: compound and tertiary semiconductors, organic semiconductors, and wide bandgap semiconductors. Applications: optical and chemical sensors, microwave electronics, high power electronics, and lasers. Specific applications and materials determined by student interests.

**Prerequisites:** PH 352 [Min Grade: C] or PH 350 [Min Grade: C] or EE 351 [Min Grade: C] or CH 326 [Min Grade: C]

**PH 487. Nanoscale Science and Applications. 3 Hours.**

Physics of electronic, mechanical, and biological properties of materials at the nanoscale level approaching one billionth of a meter. The applications of nanoscale materials in electronic, mechanical, and biomedical systems will be emphasized. Special tools in synthesis and characterization of nanomaterials will be discussed.

**Prerequisites:** (PH 221 [Min Grade: C] and PH 222 [Min Grade: C]) or (CH 115 [Min Grade: C] and CH 117 [Min Grade: C])

**PH 490. Preparations for Teaching. 1-4 Hour.**

This class prepares physics majors for successful teaching experiences. The course emphasizes a foundation of practical knowledge related to expectations and duties shared by teachers in physics education, as well as an opportunity to read, reflect, and discuss current research related to physics teaching and learning in secondary and higher education.

**Prerequisites:** PH 352 [Min Grade: C] or PH 350 [Min Grade: C]

**PH 491. Advanced Physics Laboratory I. 1-4 Hour.**

This course provides physics majors with the opportunity to integrate the physics knowledge acquired in earlier courses in a research environment under the supervision of an approved UAB faculty mentor.

**Prerequisites:** PH 352 [Min Grade: C] or PH 350 [Min Grade: C]

**PH 492. Advanced Physics Laboratory II. 1-4 Hour.**

This course provides physics majors with the opportunity to integrate the physics knowledge acquired in earlier courses in a research environment under the supervision of an approved UAB faculty mentor.

**Prerequisites:** PH 491 [Min Grade: C]

**PH 493. Advanced Physics Laboratory III. 1-4 Hour.**

This course provides physics majors with the opportunity to integrate the physics knowledge acquired in earlier courses in a research environment under the supervision of an approved UAB faculty mentor.

**Prerequisites:** PH 492 [Min Grade: C]

**PH 494. Research Methods in Physics. 1-3 Hour.**

This course is designed to provide future physics teachers with the tools that physicists use to solve scientific problems; to give them the opportunity to use these tools in a physics laboratory setting; to make them aware of how scientists communicate with each other through peer-reviewed scientific literature; and to enable them to understand how scientists in general and physicists in particular develop new knowledge and insights, the most important of which are eventually presented in textbooks and taught in conventional science classes.

**Prerequisites:** EHS 126 [Min Grade: C]

**PH 495. Honors Research. 1-3 Hour.**

Research in an area of active research, under the direction of a faculty sponsor and the Honors Committee. May be repeated.

**Prerequisites:** PH 352 [Min Grade: C] or PH 350 [Min Grade: C]

**PH 497. Special Topics in Physics. 1-6 Hour.**

Topics of current interest, such as theoretical physics, computational physics, experimental techniques. May be repeated for credit.

**PH 498. Directed Research. 1-6 Hour.**

Directed Research.

**PH 499. Physics Capstone. 3 Hours.**

Instructional sessions, conclusion of research or teaching project and career planning activities aimed at the integration of physics knowledge and competencies in scientific writing, quantitative literacy, and ethics and civic responsibility.

**Prerequisites:** PH 490 [Min Grade: C] or PH 491 [Min Grade: C] or PH 495 [Min Grade: C]

## PHS-Physical Sciences Courses

**PHS 101. Physical Science. 4 Hours.**

Scientific method and hands-on experience with integrated laboratory, discussion, and lecture. Emphasis on the use of quantitative reasoning to solve physical problems. Writing, assignments based on research and laboratory experiences that include collection and interpretation of experimental data. For nonscience majors. Lecture and laboratory. Writing and Quantitative Literacy are significant components of this course. This course meets the Core Curriculum requirements for Area III: Natural Sciences.

**PHS 101L. Physical Science Laboratory. 0 Hours.**

Must be taken concurrently with PHS 101 lecture.

**PHS 102. Physical Science II. 4 Hours.**

This course includes online lecture and laboratory activities and is designed to assist non-science major students in acquiring practical knowledge of established physical laws and learning scientific investigative methods. Writing and Quantitative Literacy are significant components of this course.

**Prerequisites:** PHS 101 [Min Grade: C]

**PHS 102L. Physical Science II Lab. 0 Hours.**

Physical Science II Laboratory.

**PHS 110. Overview of Space Exploration. 3 Hours.**

Descriptive approach to comparative planetology for non-science majors. Analysis of recent, ongoing, and planned space missions with regard to scientific objectives and experiment design.

**PHS 141. Musical Acoustics. 3 Hours.**

Scientific method and hands-on experience with integrated laboratory, discussion, and lecture, emphasizing physical principles and experiences important for understanding musical tones. For non-science majors. See MU 141. Prerequisite for this class includes completion of Core Curriculum mathematics requirement.

**PHS 150. Science Writing. 3 Hours.**

Scientific writing skills for science, mathematics, and engineering. Identification of audience and purpose, generation of ideas, organization of information and construction of arguments.

**PHS 211. Discussion on the Nature of Matter. 3 Hours.**

Honors seminar. Evolution of science and scientific method from early Greek origins in context of the study of matter. Non-mathematical, descriptive, and pictorial approach to understanding basic structure of matter and materials of technological interest. See HON 211. Scientific writing skills for science, mathematics, and engineering. Permission of instructor or admission to Honors Program.

## Department of Political Science and Public Administration

**Chair:** Dr. Robert Blanton

The Department of Political Science and Public Administration offers programs of study leading to the Bachelor of Arts degree in political science as well as the Master of Public Administration (MPA) degree. Undergraduates with strong academic records can participate in our Advanced Bachelor/Masters (ABM) program, in which up to 12 hours can be used towards both undergraduate and graduate degrees.

Political science is concerned with understanding the ways in which government can influence society. The curriculum in political science provides opportunities to systematically and critically study American government and politics, to compare various national political systems, to investigate conflict and cooperation among nation-states, to explore the historical development of political theory, to study human rights at the global and local levels, to analyze the organization and management of public affairs, and to master the methods of political research.

The political science major is an appropriate background for careers in law; social science teaching; state, local, and federal government; foreign diplomacy and international affairs; journalism; campaigns and electioneering; non-profit advocacy; and political research.

We offer different degree options to suit your particular interests and goals. The B.A. in Political Science allows you to take a broad variety of courses within the field of Political Science. For those of you who want to focus on a certain area within Political Science we offer three different concentrations, American Politics and Political Theory, Global Politics and Policy, and Human Rights and Social Justice.

## Bachelor of Arts with a Major in Political Science

A grade of C or better is required in all Political Science courses. In fulfilling the requirements below, students must have 17 hours at the 300-level or above, 9 of which must be at the 400 level.

Requirements		Hours
<b>Political Science</b> <sup>2</sup>		
PSC 101	Foundations of American Government <sup>1</sup>	3
PSC 400	Data, Politics, and Policy	3
<b>Capstone</b>		
Select one course from the following:		3
PSC 498	Capstone Public Affairs Internship	
PSC 499	Capstone in Political Science and International Studies	
<b>400 Level Elective</b>		
PSC 418	Politics and Race in America	
PSC 422	Gender, Politics, & Policy	
PSC 431	American Constitutional Law	
PSC 432	Law and Society	
PSC 440	American Political Thought	
PSC 443	Digital Democracy	
PSC 444	Human Rights and Technology	
PSC 456	Revolution and Political Violence	
PSC 458	Human Trafficking	
PSC 459	Politics of Transitional Justice	
PSC 461	International Political Economy	
PSC 465	International Law	
PSC 466	The United Nations	
PSC 471	Political Propaganda in Film	
Select 24 credit hours from additional PSC courses:		24
PSC 100	Public Service	

PSC 102	Foundations of Comparative Politics
PSC 103	Foundations of International Relations
PSC 104	Foundations of Political Theory
PSC 120	Urban Politics
PSC 170	Contemporary Political Issues
PSC 221	American State and Local Government
PSC 270	Law and Film
PSC 271	Contemporary Political Issues
PSC 310	American Public Policy
PSC 316	Human Rights
PSC 317	Religion and Politics
PSC 319	Civil Liberties and Civil Rights
PSC 320	Political Participation
PSC 321	Public Opinion in American Politics
PSC 322	Gender, Politics, & Policy
PSC 323	Public Administration and Policy
PSC 324	American Foreign Policy
PSC 330	The American Judicial Process
PSC 331	The U.S. Congress
PSC 332	The American Presidency
PSC 333	Political Parties and Interest Groups
PSC 335	Memory Politics: Monuments, Museums and Human Rights
PSC 341	Classical Political Thought
PSC 342	Modern Political Theory
PSC 350	African Politics
PSC 351	European Political Systems
PSC 352	Latin/South American Political Systems
PSC 353	Asian Political Systems
PSC 355	Politics of Development
PSC 358	Health and Humanitarian Crisis
PSC 359	Genocide and Crimes Against Humanity
PSC 360	International Security
PSC 361	North/South International Relations
PSC 362	Diplomacy
PSC 363	Nationalism in World Politics
PSC 364	Gender in World Politics
PSC 367	Politics of the Middle East and Northern Africa
PSC 368	Women and War
PSC 370	Politics and the Media
PSC 372	Social Justice and Pop Culture
PSC 379	Supreme Court Politics
PSC 380	The Politics of Constitutional Law
PSC 381	The Bill of Rights
PSC 382	Political Networks
PSC 383	International Conflict & Conflict Management
PSC 384	Diamonds, Drugs, and Guns: The Illicit Global Economy
PSC 386	Economics of Public Policy
PSC 395	Special Topics in Political Science
PSC 418	Politics and Race in America
PSC 422	Gender, Politics, & Policy
PSC 431	American Constitutional Law
PSC 432	Law and Society
PSC 440	American Political Thought
PSC 443	Digital Democracy
PSC 444	Human Rights and Technology
PSC 456	Revolution and Political Violence

PSC 458	Human Trafficking	
PSC 459	Politics of Transitional Justice	
PSC 461	International Political Economy	
PSC 465	International Law	
PSC 466	The United Nations	
PSC 471	Political Propaganda in Film	
PSC 495	Directed Research in Political Science	
PSC 496	Independent Studies and Special Projects	
PSC 497	Honors Research in Political Science	
PSC 498	Capstone Public Affairs Internship	
PSC 499	Capstone in Political Science and International Studies	
Total Hours		36

<sup>1</sup> Completing PSC 101, PSC 102, and PSC 103 will automatically satisfy nine hours of Core Curriculum Area IV.

<sup>2</sup> Students must complete 9 hours of the major classes at the 400 level.

### Concentration Options:

## American Politics and Political Theory

This concentration prepares students for a work in a variety of positions in the federal, state, or local governments, including careers in government agencies, non-profit organizations, interest groups, governmental relations divisions of corporations and the media. Students can also utilize this concentration to prepare for careers in law, research and teaching. This concentration is a solid foundation for public administration, nonprofit advocacy and legal studies.

Requirements	Hours
<b>Political Science Core</b>	
Courses may only count once	
PSC 101 Foundations of American Government	3
PSC 400 Data, Politics, and Policy	3
PSC 498 Capstone Public Affairs Internship	3
or PSC 499 Capstone in Political Science and International Studies	
<b>PSC Major Electives</b>	
Choose 4 PSC courses from outside of the concentration	12
<b>American Politics and Political Theory Concentration</b>	
<b>Select at least one course from 400-level</b>	<b>3</b>
PSC 418 Politics and Race in America	
PSC 431 American Constitutional Law	
PSC 432 Law and Society	
PSC 440 American Political Thought	
PSC 443 Digital Democracy	
PSC 494 Special Topics in Political Science	
PSC 497 Honors Research in Political Science	
<b>Select four courses from:</b>	<b>12</b>
PSC 100 Public Service	
PSC 104 Foundations of Political Theory	
PSC 120 Urban Politics	
PSC 221 American State and Local Government	
PSC 310 American Public Policy	
PSC 317 Religion and Politics	
PSC 321 Public Opinion in American Politics	
PSC 323 Public Administration and Policy	
PSC 319 Civil Liberties and Civil Rights	
PSC 320 Political Participation	

PSC 322	Gender, Politics, & Policy	
PSC 330	The American Judicial Process	
PSC 331	The U.S. Congress	
PSC 332	The American Presidency	
PSC 333	Political Parties and Interest Groups	
PSC 335	Memory Politics: Monuments, Museums and Human Rights	
PSC 341	Classical Political Thought	
PSC 342	Modern Political Theory	
PSC 370	Politics and the Media	
PSC 372	Social Justice and Pop Culture	
PSC 379	Supreme Court Politics	
PSC 380	The Politics of Constitutional Law	
PSC 381	The Bill of Rights	
PSC 386	Economics of Public Policy	
PSC 418	Politics and Race in America	
PSC 422	Gender, Politics, & Policy	
PSC 431	American Constitutional Law	
PSC 440	American Political Thought	
PSC 443	Digital Democracy	
PSC 490	Political Science Internship	
PSC 494	Special Topics in Political Science	
Total Hours		36

## Global Politics & Policy Concentration

This concentration prepares for work in the wide variety of public and private institutions that deal with global issues, including multinational corporations, governmental and international organizations such as the State Department and United Nations, and NGOs that deal with global issues.

Requirements	Hours
<b>Political Science Core</b>	
Courses may only count once	
PSC 101 Foundations of American Government	3
PSC 400 Data, Politics, and Policy	3
PSC 498 Capstone Public Affairs Internship	3
or PSC 499 Capstone in Political Science and International Studies	
<b>PSC Major Electives</b>	
Select four PSC courses not included in the concentration <sup>4</sup>	12
<b>Concentration in Global Politics and Policy</b>	
<b>Select one at least one from 400-level courses</b>	<b>3</b>
PSC 456 Revolution and Political Violence	
PSC 459 Politics of Transitional Justice	
PSC 461 International Political Economy	
PSC 465 International Law	
PSC 466 The United Nations	
PSC 490 Political Science Internship	
PSC 494 Special Topics in Political Science	
PSC 497 Honors Research in Political Science	
<b>Select four from:</b>	<b>12</b>
PSC 102 Foundations of Comparative Politics	
PSC 103 Foundations of International Relations	
PSC 323 Public Administration and Policy	
PSC 324 American Foreign Policy	
PSC 335 Memory Politics: Monuments, Museums and Human Rights	

PSC 350	African Politics	
PSC 351	European Political Systems	
PSC 352	Latin/South American Political Systems	
PSC 353	Asian Political Systems	
PSC 355	Politics of Development	
PSC 359	Genocide and Crimes Against Humanity	
PSC 360	International Security	
PSC 361	North/South International Relations	
PSC 362	Diplomacy	
PSC 363	Nationalism in World Politics	
PSC 364	Gender in World Politics	
PSC 365	Special Topics in Comparative Politics	
PSC 366	The United Nations	
PSC 367	Politics of the Middle East and Northern Africa	
PSC 368	Women and War	
PSC 383	International Conflict & Conflict Management	
PSC 456	Revolution and Political Violence	
PSC 461	International Political Economy	
PSC 465	International Law	
PSC 466	The United Nations	
PSC 490	Political Science Internship	
PSC 494	Special Topics in Political Science	
Total Hours		36

## Concentration in Human Rights & Social Justice

This concentration prepares students to become advocates in social justice and human rights causes. It prepares students for a wide variety of positions in government agencies, nonprofit agencies and other non-governmental organizations (NGOs) who deal with social justice and human rights concerns.

Requirements	Hours
<b>Political Science Core</b>	
Courses may only count once.	
PSC 101 Foundations of American Government	3
PSC 400 Data, Politics, and Policy	3
PSC 498 Capstone Public Affairs Internship	3
or PSC 499 Capstone in Political Science and International Studies	
<b>PSC Major Electives</b>	
Select four PSC courses from outside of the concentration	12
<b>Concentration in Human Rights and Social Justice</b>	
<b>Select at least one course from 400-level</b>	<b>3</b>
PSC 418 Politics and Race in America	
PSC 444 Human Rights and Technology	
PSC 456 Revolution and Political Violence	
PSC 458 Human Trafficking	
PSC 459 Politics of Transitional Justice	
PSC 465 International Law	
PSC 490 Political Science Internship	
PSC 494 Special Topics in Political Science	
<b>Select remainder from:</b>	<b>12</b>
PSC 103 Foundations of International Relations	
PSC 316 Human Rights	
PSC 319 Civil Liberties and Civil Rights	
PSC 322 Gender, Politics, & Policy	

PSC 335	Memory Politics: Monuments, Museums and Human Rights	
PSC 358	Health and Humanitarian Crisis	
PSC 359	Genocide and Crimes Against Humanity	
PSC 364	Gender in World Politics	
PSC 368	Women and War	
PSC 372	Social Justice and Pop Culture	
PSC 384	Diamonds, Drugs, and Guns: The Illicit Global Economy	
PSC 418	Politics and Race in America	
PSC 456	Revolution and Political Violence	
PSC 458	Human Trafficking	
PSC 465	International Law	
PSC 490	Political Science Internship	
Total Hours		36

## Additional Requirements

Students must take general electives to reach the 120 required for the degree.

In addition to the minor in Political Science, there are several minors that are often of interest to Political Science Majors: Human Rights, International Studies, Legal Affairs, Public Management and Policy and Women's and Gender Studies. Each of these minors builds upon courses and themes covered in political science coursework. However, the interdisciplinary nature of the minors provides provides students with a broader understanding of these issues and the multiple ways that they are approached.

## Minor in Political Science

A C or better is required in all courses applied to the minor. At least six hours of the minor must be completed at UAB, including three hours at the 300-level or above.

Requirements	Hours
PSC 101 Foundations of American Government <sup>1</sup>	3
<b>Political Science Electives <sup>2</sup></b>	<b>15</b>
Select 15 credit hours from Political Science courses, including at least two at the 300-level or above.	
Total Hours	18

<sup>1</sup> PSC 101 may also be eligible to count toward Core Curriculum Area IV; check the Core Curriculum for your particular major.

<sup>2</sup> PSC 221 will count toward this requirement and may also be eligible to count toward Core Curriculum Area IV; check the Core Curriculum for your particular major.

## Minor in Human Rights

Requirements	Hours
PSC 316 Human Rights	3
HRT 485 Human Rights Professional Internship	3
or HRT 482 Directed Research in Human Rights	
<b>Electives <sup>1, 2</sup></b>	<b>12</b>
<b>At least 9 hours at the 300-400 level</b>	
AAS 200 Introduction to African-American Studies	
ANTH 351 Anthropology of Human Rights	
ANTH 404 Human Rights, Peace, and Justice	
ANTH 421 Technological Monitoring of Cultural Resources, Human Rights and Conflict	

ANTH 424	Transitional Justice and Human Rights	
ANTH 443	Propaganda, Fake News, and Hate Speech	
HY 239	The Holocaust in History and Literature	
or HY 339	The Holocaust in History and Literature	
HY 304	U.S. Civil Rights Movement	
HY 422	Ethnic Cleansing & Genocide 1912-2012	
CJ 390	The Death Penalty in America	
CJ 442	Race, Crime, Gender and Social Policy	
CJ 403	Restorative Justice	
EDF 362	Foundations of Education I: Social, Historical, Philosophical	
GCLH 150	Burning Issues	
PHL 318	Ethics of War	
PSC 266	The United Nations	
or PSC 366	The United Nations	
PSC 319	Civil Liberties and Civil Rights	
PSC 335	Memory Politics: Monuments, Museums and Human Rights	
PSC 359	Genocide and Crimes Against Humanity	
PSC 444	Human Rights and Technology	
PSC 458	Human Trafficking	
PSC 459	Politics of Transitional Justice	
PSC 465	International Law	
PUH 202	Introduction to Global Health	
PUH 322	Environmental Justice and Ethics	
PUH 441	Public Health Law and Policy	
SOC 245	What's the Problem? Social Conditions that Disrupt	
SOC 220	Sociology of Sex and Gender	
SOC 250	Race, Ethnicity, and Inequality	
SOC 278	Our Interconnected World	
SW 207	Racism, Sexism and Other Isms	
SW 478	Special Topics in Social Work	
Total Hours		18

<sup>1</sup> Courses from at least two different disciplines must be represented in the minor.

<sup>2</sup> Courses offered at two levels may only be used once.

## Minor in International Studies

Requirements	Hours
<b>Required Courses</b>	
PSC 103 Foundations of International Relations	3
FLL 120 Foreign Cultures	3
<b>International Studies Electives</b>	<b>12</b>
Select twelve hours from the following courses, at least six hours must be taken at the 300 level or above:	
AAS 385	The History of Haiti
ANTH 101	Introduction to Cultural Anthropology
ANTH 104	Introduction to Peace Studies
ANTH 231	Archaeology of the Origins of Civilization in Egypt, Mesopotamia, and the Mediterranean
ANTH 245	Peoples of the World: Mediterranean
ANTH 248	Peoples of the World: Latin America
ANTH 318	Economic Development and Indigenous Societies
ANTH 319	Food and Culture
ANTH 320	Comparative Religion
ANTH 357	Anthropology of Gender

ANTH 360	Ecological Anthropology
ANTH 407	Peace Ethology
ANTH 408	Conflict Resolution in Cross-Cultural Perspective
ANTH 413	Peace & Environmental Sustainability
ANTH 418	The Power of Nonviolence
ANTH 419	Religion, Reconciliation, & Forgiveness
ANTH 432	Villains, Victims, & Vigilantes
ANTH 447	Advanced Peace Studies
ANTH 450	Advanced Cultural Anthropology
ARA 201	Intermediate Arabic I
ARH 101	The Art Experience
ARH 203	Ancient and Medieval Art
ARH 204	Early Modern-Contemporary Art
ARH 206	Survey of Asian Art
ARH 471	Post-Partition Identity in South Asian Cinema
ARH 478	Seminar: Buddhist Arts of East Asia
CHI 201	Intermediate Chinese I
CJ 115	Comparative Criminal Justice Systems
EC 405	Economic Development and Growth
EC 407	International Economics
EH 217	World Literature I: Before 1660
EH 218	World Literature II: 1660-Present
EH 421	World Literature
EH 422/522	African Literature
EH 423/523	African Women's Literature
FLL 121	Special Topics through World Cultures
FLL 220	Foreign Literatures in English Translation
FLL 485	Foreign Language Capstone Seminar
FR 201	Intermediate French I
GN 201	Intermediate German I
HY 234	The World Since 1945
HY 239	The Holocaust in History and Literature
HY 245	Introduction to Latin American History
HY 247	Indians, Spaniards & Creoles
HY 248	Modern Latin America
HY 251	Nineteenth-Century Europe
HY 252	Twentieth Century Europe
HY 262	Introduction to Early Modern Spanish History
HY 263	History of the Russian Empire
HY 264	Russian Revolution: 1917-1921
HY 265	History of the Soviet Union 1917-1991
HY 271	Traditional East Asian History and Culture
HY 272	Modern East Asia
HY 285	Mapping Our World
HY 317	History of Ancient Greece
HY 318	History of the Roman Empire
HY 319	Late Antiquity and Early Middle Ages
HY 341	The U.S. and Latin America
HY 342	Sex & Latin American Society
HY 343	Modern Latin America
HY 353	The Christians in History
HY 355	The Reformation
HY 357	Religion in Early Modern European History
HY 370	End of the U.S.S.R.
HY 371	Traditional East Asian History and Culture
HY 375	The Pacific War, 1931-1945
HY 419	The Second World War

HY 421	The Vietnam Wars, 1945-1975
HY 422	Ethnic Cleansing & Genocide 1912-2012
HY 446	Nations of the Andes
HY 447	Modern Mexico
HY 453	Clash of Civilizations
HY 454	Topics in Middle Eastern History
HY 455	Renaissance and Reformation
HY 456	Seventeenth-Century Europe: Absolutism, Revolution and Science
HY 457	Nineteenth-Century Europe
HY 458	Modern Europe
HY 459	Spain and the Spanish Inquisition
HY 461	English History: 1307-1660
HY 463	Victorian Britain
HY 464	Modern Great Britain
HY 465	French Enlightenment
HY 466	The French Revolution
HY 467	Modern France 1815 - Present
HY 468	Modern German History
HY 469	Stalin and Stalinism
HY 470	The Soviet Union Since 1953
HY 471	Russian Intellectual History
HY 472	Terror and Terrorism from French Revolution to Present
HY 475	Modern China
HY 476	Japan to the 19th Century
HY 477	Modern Japan
ITL 201	Intermediate Italian I
ITS 482	Internship in International Affairs
JPA 201	Intermediate Japanese I
MU 366	Music in World Cultures
MU 367	Introduction to Ethnomusicology
PHL 239	Classical Thought of India China and the West
PSC 102	Foundations of Comparative Politics
PSC 104	Foundations of Political Theory
PSC 266/466	The United Nations
PSC 341	Classical Political Thought
PSC 342	Modern Political Theory
PSC 350	African Politics
PSC 355	Politics of Development
PSC 360	International Security
PSC 362	Diplomacy
PSC 363	Nationalism in World Politics
PSC 461	International Political Economy
PSC 465	International Law
PUH 201	Introduction to Public Health
PUH 202	Introduction to Global Health
PUH 302	Epidemiology
PY 319	Psychopathology and Culture
SOC 200	Forces of Change
SOC 278	Our Interconnected World
SOC 335	Human Sexuality: A Comparative Approach
SOC 370	Population Problems
SOC 480	Sociology of Health and Illness
SPA 201	Intermediate Spanish I

Total Hours

18

## Minor in Legal Affairs

Requirements	Hours
<b>Required Courses</b> <sup>1</sup>	
Select three of the following courses:	9
CJ 230 The Judicial Process in America: An Overview	
CJ 255 Journey to Attorney	
CJ 330 Criminal Law	
CJ 331 Criminal Procedure	
CJ 332 Criminal Evidence	
CJ 334 Justice Advocacy	
PSC 270 Law and Film	
PSC 380 The Politics of Constitutional Law	
PSC 381 The Bill of Rights	
PSC 432 Law and Society	
PSC 465 International Law	
<b>Electives</b>	
Select three of the following courses:	9
AC 473 Fraud Examination	
CJ 333 Trial Advocacy	
EC 302 Law and Economics	
EC 450 Economics, Institutions & Law	
LS 246 Legal Environment of Business	
LS 471 Legal Elements of Fraud Investigation	
MG 413 Employment Law	
PHL 120 Practical Reasoning	
PHL 135 The Rule of Law	
PHL 220 Introduction to Symbolic Logic	
PHL 435 Advanced Topics in Philosophy of Law	
PY 376 Psychology and Law	
Total Hours	18

<sup>1</sup> A grade of "C" or better required for all courses

## Minor in Public Management and Policy

At least six hours of the minor must be completed at UAB. A grade of 'C' or better is required for all courses in the minor.

Requirements	Hours
PSC 101 Foundations of American Government	3
PSC 323 Public Administration and Policy	3
Select four classes from the following:	12
GCLH 150 Burning Issues	
GCLH 350 Stoking the Fire: Leadership in Action	
PSC 100 Public Service	
PSC 120 Urban Politics	
PSC 221 American State and Local Government	
PSC 310 American Public Policy	
PSC 386 Economics of Public Policy	
PSC 395 Special Topics in Political Science	
PSC 400 Data, Politics, and Policy	
PSC 498 Capstone Public Affairs Internship	
PSC 499 Capstone in Political Science and International Studies	
Total Hours	18

## Minor in Women's and Gender Studies

Requirements	Hours
<b>Required Women's and Gender Studies courses</b>	
<u>WS 100</u> Introduction to Women's and Gender Studies <sup>1</sup>	
<b>Women's and Gender Studies Electives <sup>2</sup></b>	
Select five of the following:	15
<u>ANTH 357</u> Anthropology of Gender	
<u>ANTH 458</u> Human Sexuality	
<u>ARH 483</u> Special Topics: Gender and the Visual Arts	
<u>CMST 324</u> Gender, Sex Similarities and Differences in Communication	
<u>EH 423</u> African Women's Literature	
<u>EH 444</u> Women's Literature and Theory	
<u>EH 460</u> American Women Writers Before 1900	
<u>EH 467</u> Black Women Writers	
<u>HY 208</u> Women in Film	
<u>HY 274</u> LGBT History	
<u>HY 279</u> Women Rogues, Radicals and Reformers	
<u>HY 303</u> Women in American History	
<u>HY 342</u> Sex & Latin American Society	
<u>HY 374</u> LGBT History	
<u>HY 379</u> Women Rogues, Radicals and Reformers	
<u>HY 423</u> Southern Women: Image and Reality	
<u>CJ 442</u> Race, Crime, Gender and Social Policy	
<u>CJ 443</u> Women and the Criminal Justice System	
<u>PSC 316</u> Human Rights	
<u>PSC 322</u> Gender, Politics, & Policy	
<u>PSC 364</u> Gender in World Politics	
<u>PSC 368</u> Women and War	
<u>PSC 422</u> Gender, Politics, & Policy	
<u>PY 108</u> Human Sexuality	
<u>PY 417</u> Psychology of Gender	
<u>PY 420</u> Special Topics in Psychology	
<u>SOC 135</u> Human Sexuality	
<u>SOC 220</u> Sociology of Sex and Gender	
<u>SOC 335</u> Human Sexuality: A Comparative Approach	
<u>SOC 482</u> Gender and Health	
<u>SOC 490/WS 480</u> Independent Study: Sociology	
<u>SOC 491</u> Independent Study and Special Courses in Sociology	
<u>SW 207</u> Racism, Sexism and Other Isms	
<u>WS 280</u> Special Topics in Women's and Gender Studies	
<u>WS 380</u> Special Topics: Women's and Gender Studies	
<u>WS 400</u> Theory and Practice of Women's and Gender Studies: Senior Seminar	
<u>WS 480</u> Special Topics in Women's and Gender Studies	
<u>WS 491</u> Directed Studies in Women's and Gender Studies	
<u>WS 495</u> Internship in Women's and Gender Studies	
Total Hours	15

<sup>1</sup> Note: WS 100 may also be eligible to count toward Core Curriculum Area IV; check the Core Curriculum for your particular major.

<sup>2</sup> Or seek approval for those not listed.

## Proposed Program of Study for a Major in Political Science

<b>Freshman</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
EH 101	3	EH 102	3
MA 110	3	PSC 102	3
PSC 101	3	PSC 103	3
Core Curriculum Area IV: History <sup>1</sup>	3	Core Curriculum Area II: Humanities	3
Core Curriculum Area II: Fine Art <sup>2</sup>	3	Core Curriculum Area IV: History Sequence <sup>1</sup>	3
	15		15
<b>Sophomore</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
PSC 104	3	Core Curriculum Area III: Natural Science with Laboratory	4
Core Curriculum Area II: Literature <sup>3</sup>	3	Core Curriculum Area II: Humanities	3
Core Curriculum Area III: Natural Science with Laboratory	4	Political Science Elective	3
Minor	3	Minor	3
General Elective	3	General Elective	3
	16		16
<b>Junior</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
PSC 400	3	Political Science (300 level or above)	3
Political Science (300 level or above)	3	Political Science (400 level)	3
Minor	3	Political Science Elective	3
General Elective	3	Minor	3
General Elective	3	General Elective	3
	15		15
<b>Senior</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
Political Science (400 level)	3	Political Science (400 level)	3
Political Science (300 level or above)	3	Political Science Elective	3
Capstone Course	3	Minor	3
Minor	3	General Elective	3
General Elective	3	General Elective	1-3
	15		13-15

Total credit hours: 120-122

<sup>1</sup> Select one course from HY 101, HY 102, HY 104, HY 105, HY 120 or HY 121.

<sup>2</sup> Select one fine art from ARH 101, ARH 203, ARH 204, ARH 206, MU 120, THR 100, THR 105 or THR 200.

<sup>3</sup> Select one from EH 216, EH 217, EH 218, EH 221, EH 222, EH 223 or EH 224.

## Honors Program in Political Science

### Purpose

The Political Science Honors Program is designed to provide outstanding political science majors with the opportunity for advanced study of the

political process. Honors students have the opportunity to complete an independent research project while working closely with a faculty member. The advanced study provided by the honors program accelerates a student's preparation for graduate or professional training.

## Eligibility

Criteria for entering freshmen are:

- A 3.25 high school GPA and ACT composite score of 28 (or equivalent SAT score).
- Declaration of political science as the student's major.
- A letter of intent.

Criteria for students already enrolled at UAB or transfer students are:

- Completion of nine semester hours of political science.
- A 3.0 cumulative GPA and a 3.25 GPA in political science (and maintenance of these minima).
- Declaration of political science as the student's major.
- A letter of intent.

OR

- Junior standing.
- Completion of nine semester hours of political science.
- A 3.0 cumulative GPA and a 3.25 GPA in political science courses in the last 30 percent of coursework attempted (and maintenance of these minima).
- Declaration of political science as the student's major.
- Letter of intent.
- Faculty approval.

## Requirements

Students in the Political Science Honors Program are required to do the following:

- Enroll in the Honors Program.
- Complete PSC 499 (Capstone on PSC and ITS)
- Enroll in three semester hours of PSC 497, preferably after completion of the Capstone seminar, which will lead to the development of a substantial research paper.
- Present research project findings to a colloquium of other PSC 497 students and department faculty.
- Participate in Pi Sigma Alpha, the national political science honor society.

## Benefits

Honors students will benefit from one-on-one mentoring with faculty in the department, which will lead to a more thorough understanding of the field and practice of political science. This is particularly useful as students choose career goals, such as graduate school, law school, public service, the foreign service, or other opportunities. Additionally, students who complete the program will receive a certificate at the annual UAB Honors Convocation and will graduate "With Honors in Political Science."

## Contact

For more information and/or admission to the Political Science Honors Program, contact the Political Science and Public Administration

Department Chair, 414 Heritage Hall, Birmingham, AL 35294-1152; Telephone (205) 934-2339.

## Courses

### PSC 100. Public Service. 3 Hours.

This course provides an introduction to public service values and career paths in political science and public policy. Students will learn of various career paths relevant to political science and international studies in public management and nonprofit organizations. A component of the course focuses on career preparation, resume building, professional networking, and interview strategies.

### PSC 101. Foundations of American Government. 3 Hours.

This course provides an overview of the American political system. The course covers the constitutional foundations of the American political system. It explains how the institutions of American Government - Congress, the presidency, and the courts operate and how they interact with one another. Each section provides a foundation for future study. Ethics and Civic Responsibility are significant components of this course. This course meets the Core Curriculum requirements for Area IV: Social and Behavioral Sciences.

### PSC 102. Foundations of Comparative Politics. 3 Hours.

Compares the political cultures and institutions of various political systems around the world. Special emphasis upon the Communist and post-Communist states, religiously-based states, and countries in transition to democracy. (CP) This course meets the Core Curriculum requirements for Area IV: Social and Behavioral Sciences.

### PSC 103. Foundations of International Relations. 3 Hours.

The introductory course in international relations is designed to be a survey of the problems and practice of global cooperation and conflict. Quantitative Literacy and Ethics and Civic Responsibility are significant components of this course. This course meets the Core Curriculum requirements for Area IV: Social and Behavioral Sciences.

### PSC 104. Foundations of Political Theory. 3 Hours.

This course surveys the intellectual origins and historical development of political theory from the ancient Athenian experiment in direct democracy to the contemporary American challenge of diversity in a representative government. We explore citizenship as a philosophical conversation about rights and duties, equality and liberty, and the ethical responsibility of the individual to the community.

### PSC 120. Urban Politics. 3 Hours.

This course is a critical examination of the institutions of urban government, focusing on intergovernmental relations, official decision makers, and the role of group and electoral politics in metropolitan environments. (AG/PT).

### PSC 170. Contemporary Political Issues. 1-3 Hour.

Selected topics of current political importance and interest. Interests identified in current schedule of classes. May be repeated with permission of department chair.

### PSC 221. American State and Local Government. 3 Hours.

This course is a critical study of the institutions, functions, and processes of the state and local levels of American government. (AG/PT) This course meets the Core Curriculum requirements for Area IV: Social and Behavioral Sciences.

**PSC 225. Contemporary Issues in Science Policy. 3 Hours.**

Our rapidly changing world faces significant, multi-faceted problems at the nexus of technology and society. The response to these socio-scientific issues will impact the future of the human condition. The scientific process has a role to play in finding timely, effective, and evidence-based solutions. This course is an introduction to cutting-edge science, medicine, and technology as well as the difficult political and ethical concerns they raise. This course provides students practical training in cross-disciplinary learning while engaging in discourse about difficult, controversial, and critical questions related to science and policy. It emphasizes the role of dialogue and communication in shaping responses to socio-scientific issues.

**PSC 266. The United Nations. 3 Hours.**

Organization framework, evolving experiences and continuing problems of United Nations system for maintenance of international peace and security and for international economic and social cooperation. (IR/CP).

**PSC 270. Law and Film. 3 Hours.**

This course focuses on the portrayal of courts, cases, lawyers, and law in major motion pictures. The course examines the extent to which films that focus on law are affected by the legal, political, and pop culture at the time of their production as well as the extent to which films shape society's perceptions, whether correctly or incorrectly, of law and the legal profession. (AG/PT).

**PSC 271. Contemporary Political Issues. 3 Hours.**

Issues of current interest in political science.

**PSC 272. Model Arab League. 1 Hour.**

Preparation for participation in Model Arab League simulations around the country. Individual research on the Arab League and cooperative efforts to represent an assigned country and its foreign policy on committees, such as political affairs, economics, social affairs, and others.

**PSC 310. American Public Policy. 3 Hours.**

This course covers the policy process at local, state, and federal levels of government, as well as the specific facets of the public policy process, including problem identification and definition, policy formulation and enactment, policy implementation and evaluation, and policy termination.

**PSC 316. Human Rights. 3 Hours.**

This course examines the definition and major facets of human rights, key issues and controversies related to human rights, as well as groups and institutions related to the promotion of human rights. Specific issues include state repression and torture, genocide, the rights of women and children, and economic rights.

**PSC 317. Religion and Politics. 3 Hours.**

This course investigates the relationship between religion and the American political community. Topics examined will include: the influence of religion on Early Settlement thought; the role of religion in shaping the 1st Amendment; the political evolution of Christian, Jewish and Islamic sects in the US; the court and the issue of "church and state"; religion and political activism; faith-based organizations and the implementation of public policy. (AG/PT).

**PSC 319. Civil Liberties and Civil Rights. 3 Hours.**

This course examines the role of the Supreme Court in defining the fundamental rights and liberties of citizens in the United States. We analyze the inherent tension in supporting individual rights when they conflict with the will of the democratic majority.

**PSC 320. Political Participation. 3 Hours.**

This course focuses on forms of political participation in American national politics, including individual level public opinion, voting behavior, and the role of groups in public life. It explores the causes and consequences of individual participation in campaigns and elections, parties and interest groups, and protest movements. Ethics and Civic Responsibility are significant components of this course. (AG/PT).

**Prerequisites:** PSC 101 [Min Grade: D]

**PSC 321. Public Opinion in American Politics. 3 Hours.**

This course is an in-depth study of public opinion and the factors that shape it, including media effects, socialization, and group formation and advocacy. Students will examine the effects of public opinion on elections and policy, and explore the methods of public opinion measurement. (AG/PT).

**PSC 322. Gender, Politics, & Policy. 3 Hours.**

This course analyzes the history, theory and public policy of women as U.S. citizens from the colonial era through suffrage toward a woman in the White House. We examine the struggle for political rights, educational opportunity and economic equality, and gender roles in the family. We evaluate poll data, public policy debates, electoral strategies and leadership styles for women candidates for local, state, and federal office. (AG/PT).

**PSC 323. Public Administration and Policy. 3 Hours.**

This course surveys the principles and practices of governmental management and administration, including organization, procedures, personnel management, budgeting, and control.

**PSC 324. American Foreign Policy. 3 Hours.**

The purpose of this course is to provide students with the analytical tools necessary to analyze and evaluate how foreign policy decisions in the U.S. are formulated and implemented.

**PSC 330. The American Judicial Process. 3 Hours.**

This course examines the purpose and structure of American courts; the selection of judges; the role of jurors; how federal courts set agendas, decide cases, and impact legal policy; the role of interest groups and public opinion on judicial behavior. This course is writing-intensive; students will produce a central research project that asks and answers an empirical question about the judicial system, broadly described. Writing is a significant component of this course. (AG/PT).

**PSC 331. The U.S. Congress. 3 Hours.**

This course is an in-depth analysis of the U.S. Congress. Students will explore the internal organization of Congress and the rules and norms that govern the legislative process. Students will also examine the roles of the president, the court, interest groups, and political parties in the legislative process. (AG/PT).

**Prerequisites:** PSC 101 [Min Grade: D]

**PSC 332. The American Presidency. 3 Hours.**

This course is a critical exploration of American presidential leadership. Students examine the legal foundations of presidential authority, popular influences on presidential politics, the role of the presidency in the broader context of American democratic government. (AG/PT).

**PSC 333. Political Parties and Interest Groups. 3 Hours.**

This course covers engagement and governing in American politics through the institutions of participation - political parties and interest groups. Topics include parties and political organizations in their varied forms - trade associations, membership groups, social movements and others, and the role of these organizations shaping outcomes. (AG/PT).

**PSC 335. Memory Politics: Monuments, Museums and Human Rights. 3 Hours.**

This course introduces students to the field of memory politics and focuses on the memorials, monuments, museums, and sites of historical significance. We will examine the politics of how governments and different segments of society decide to memorialize historical human rights abuses, the perpetrators of those abuses, and the individuals who were directly affected by those abuses.

**PSC 341. Classical Political Thought. 3 Hours.**

This course analyzes the development of Western political thought in classical period from Plato to Augustine. We trace the emergence of democratic government and the political culture of the polis as represented by the philosophers and playwrights of the ancient world from Athens to Rome, (AG/PT).

**PSC 342. Modern Political Theory. 3 Hours.**

This course surveys the development of Western political thought from early modern era to contemporary debates from Machiavelli to King. We examine the innovation of social contract theories and the revolutionary origins of modern democracies as we analyze philosophical arguments for individual consent, political authority, personal liberty, and legitimate government. (AP/PT).

**PSC 350. African Politics. 3 Hours.**

Following the African tradition of communication of political philosophies through narrative, our study of African politics will incorporate storytelling (in film, fiction, and poetry) as well as more standard methods of political analysis. The course addresses social, economic, and political dimensions of Africa - Northern, Southern, and Sub-Saharan - from pre-colonial era to the present. We will also examine Africa's regional and international relations today. (CP/IR).

**PSC 351. European Political Systems. 3 Hours.**

Comparative analysis of politics in European nations. (CP/IR).

**PSC 352. Latin/South American Political Systems. 3 Hours.**

Comparative analysis of politics in Latin and South American Societies. (CP/IR).

**PSC 353. Asian Political Systems. 3 Hours.**

This course provides an overview of the relationships between state and society in contemporary Asia, with particular emphasis on India, Pakistan, China and Japan. Also included are a presentation of Pan-Asian relation, environmental problems, current armed conflicts and political culture. (CP/IR).

**PSC 355. Politics of Development. 3 Hours.**

Analysis of social, economic and political problems confronting the world's poor countries. Topics examined include national responses to the following problems: child soldiers and child labor; government corruption and transparency; ethnic conflict; environment destruction; social inequality; globalization; and cultural preservation. (CP/IR).

**PSC 358. Health and Humanitarian Crisis. 3 Hours.**

This course examines the concepts, actors, analytic frameworks and dilemmas related to humanitarian action. Specific issues include the changing nature of conflict, coordination difficulties among humanitarian actors, evidence shortcomings, food security, public health crises, and efforts made to reform and professionalize the humanitarian sector.

**PSC 359. Genocide and Crimes Against Humanity. 3 Hours.**

In this course, we examine the political, legal, psychological, cultural, and societal roots of genocide and assess the ways in which global and national institutions have responded to it.

**PSC 360. International Security. 3 Hours.**

Analysis of arms race, process of arms control negotiations, and diffusion of nuclear weapons. (IR/CP).

**Prerequisites:** PSC 103 [Min Grade: D]

**PSC 361. North/South International Relations. 3 Hours.**

Relations between advanced industrial countries and underdeveloped countries, focusing on changing dynamics of these relations. (IR/CP).

**Prerequisites:** PSC 103 [Min Grade: D]

**PSC 362. Diplomacy. 3 Hours.**

Origins, institutions, functions and rules of modern diplomatic and consular practice and roles of diplomacy as instrument of national policy. (IR/CP).

**PSC 363. Nationalism in World Politics. 3 Hours.**

The primary objective of this course is to examine the political basis and implications of nationalism, as an idea and a political movement, in world politics. (IR/CP).

**Prerequisites:** PSC 103 [Min Grade: D]

**PSC 364. Gender in World Politics. 3 Hours.**

This course is an investigation of contemporary women's and LGBT issues in world politics, with particular emphasis on cultural politics and women and development. There is also an investigation of masculinities and conflict.

**PSC 365. Special Topics in Comparative Politics. 3 Hours.**

Selected topics in Comparative Politics.

**PSC 366. The United Nations. 3 Hours.**

Organization framework, evolving experiences and continuing problems of United Nations system for maintenance of international peace and security and for international economic and social cooperation. (IR/CP).

**PSC 367. Politics of the Middle East and Northern Africa. 3 Hours.**

The course will examine relevant theories of comparative and international politics and apply them to the Middle-East and North Africa (MENA) region. Concepts and issues examined include authoritarian rule, uprisings, religious extremism, violence and war. The course will also discuss the calls for change to the political, economic and social environment in the region.

**PSC 368. Women and War. 3 Hours.**

This course provides an overview of gender and armed conflict from a global perspective. In the first third of the class, we will learn about theories of gender and war. In the second third, we will apply these theories to case studies of women and war. We will also examine the roles of women in terrorism. The last third of the course concerns women and peacemaking.

**PSC 370. Politics and the Media. 3 Hours.**

This course covers how significant changes in communications media have affected our ability to address our political problems and make public policy. It covers the interactive relationship between real world politics and communications media, where and how we learn about candidates, elected and appointed officials, and policy issues.

**Prerequisites:** PSC 101 [Min Grade: D]

**PSC 372. Social Justice and Pop Culture. 3 Hours.**

This course uses popular culture to introduce students to ideas and concepts related to social justice in the context of race, class, gender identity and other forms of difference and exclusion. Using various types of media (e.g. social media, music, television shows, movies etc.), this course will illuminate the ways in which decision-making, policies, practices, and behaviors are used to maintain inequity and inequality for underrepresented groups and communities through interlocking systems of oppression, privilege and power.

**PSC 375. Special Topics in Political Theory. 3 Hours.**

Special Topics in Political Theory: selected topics in Political Theory.

**PSC 379. Supreme Court Politics. 3 Hours.**

In this course, you will learn how the United States Supreme Court was established and how it subsequently helped to define the other branches of the U.S. Government (Legislative and Executive). The course will focus not only on the external politics of the Court but the inner political workings of the Court as well. After covering the mechanics of the Court and how it interacts with other sovereigns (both domestically and abroad), students will have the opportunity to examine the political drama that results when the Court exercises its authority over various pieces of American life.

**PSC 380. The Politics of Constitutional Law. 3 Hours.**

Decisions of the U.S. Supreme Court as related to the development of important doctrines of constitutional law. Role of judiciary; extent of federal executive and legislative power; federal taxing and commerce powers. (AG/PT).

**Prerequisites:** PSC 101 [Min Grade: C]

**PSC 381. The Bill of Rights. 3 Hours.**

Decisions of the U.S. Supreme Court as related to the development of important doctrines of constitutional law. Guarantees of Bill of Rights regarding both national and state governments; 14th Amendment. (AG/PT).

**Prerequisites:** PSC 101 [Min Grade: C]

**PSC 382. Political Networks. 3 Hours.**

The way we connect to others affects how we behave and think, even politically. The course explores how traditional and new (through social digital media) connections between individuals, groups, and institutions affect political behavior and policy outcomes both in domestic and international politics. The course also covers computational tools used to study social networks.

**PSC 383. International Conflict & Conflict Management. 3 Hours.**

Who fights whom, where, when, and how? And what can be done to resolve conflicts? This course investigates the causes of conflict between states, groups, and individuals. It reviews and evaluates the effectiveness of the political and legal tools at our disposal to manage conflict, including negotiation, various forms of mediation, peacekeeping and peace enforcement.

**PSC 384. Diamonds, Drugs, and Guns: The Illicit Global Economy. 3 Hours.**

Systematic analysis of the illicit global economy, including the causes of the leading illegal markets, the various organizations involved and key concepts used to analyze illicit markets. Particular attention is paid to the role of the state, as well as international organizations, in responding to these markets.

**PSC 385. Special Topics in International Relations. 3 Hours.**

Selected topics in International Relations.

**PSC 386. Economics of Public Policy. 3 Hours.**

The primary focus of this course is the role of government in the economy, specifically when and why the government intervenes, how it does so, and the effect of these interventions. Key economic concepts are brought to bear on leading public issues including safety and environmental policy, health policy, and social insurance.

**PSC 395. Special Topics in Political Science. 3 Hours.**

Special topics in political Science. The specific content can vary with individual courses.

**PSC 400. Data, Politics, and Policy. 3 Hours.**

From big data to focus groups and "small world networks," this course explores the use and misuse of data in the policy process and in political analysis. It emphasizes strategies for using data to test hypotheses about domestic and international politics.

**Prerequisites:** PSC 101 [Min Grade: C]

**PSC 401. Seminar in American Government. 3 Hours.**

There are multiple theoretical approaches employed in the study of American political culture, behavior, institutions, and policy making. This course covers those approaches and the significant literature on the central topics in American government and politics (AG/PT).

**Prerequisites:** PSC 101 [Min Grade: D]

**PSC 402. Seminar in Comparative Politics. 3 Hours.**

This seminar is an exploration of core themes, debates, and concepts of world politics. (CP/IR).

**Prerequisites:** PSC 102 [Min Grade: D]

**PSC 403. Seminar in International Relations. 3 Hours.**

From civil war and terrorism to human rights and climate change, this capstone seminars deals with how important issues in world politics can be understood and analyzed from a multitude of theoretical perspectives. The seminar has significant writing, quantitative, and civic engagement components.

**Prerequisites:** PSC 103 [Min Grade: D]

**PSC 404. Seminar in Political Theory. 3 Hours.**

Multiple approaches employed in study of political theory and their usefulness in forming normative judgements. (PT/AG).

**Prerequisites:** PSC 104 [Min Grade: D]

**PSC 418. Politics and Race in America. 3 Hours.**

Politics and Race in America is an advanced level course about racial politics in the United States. This course focuses on tensions between separatism and assimilation, electoral politics and protest politics, and cooperation and competition among underrepresented groups in America. The goals of the course are for you to (a) grasp the complex dynamics of racial stratification in America and the role of politics in contributing to these dynamics and (b) pinpoint the similarities and differences of the agendas and strategies adopted by underrepresented groups, but to indicate the interaction between "racial" politics and American politics as a whole. The study of race in America provides a window into the soul of America; by learning about race in America, we learn enduring lessons about the foundations, institutions, participation, and policy in American government. After completing this course, you will be able to understand the race in America and be able to develop your own analyses about race in America.

**PSC 422. Gender, Politics, & Policy. 3 Hours.**

This course analyzes the history, theory and public policy of women as U.S. citizens from the colonial era through suffrage toward a woman in the White House. We examine the struggle for political rights, educational opportunity and economic equality, and gender roles in the family. Students will design and research a paper on the impact of women elected and appointed leaders on law and public policy. (AG/PT).

**PSC 431. American Constitutional Law. 3 Hours.**

This is a course on constitutional interpretation. Although the focus is on the Constitution of the United States, comparisons with the texts and experiences of other nations and of the several states of the United States will be used to define and illustrate frames of interpretation.

**Prerequisites:** PSC 101 [Min Grade: C] or PSC 380 [Min Grade: C]

**PSC 432. Law and Society. 3 Hours.**

This course examines law as a social institution, and assesses its relationship to other institutions in society, including the federal government, law enforcement, and the media.

**PSC 440. American Political Thought. 3 Hours.**

This course focuses on the origins and evolution of American political theory from the colonial period to post-modernity. Investigates the philosophical legacy of the American founding and the civic republican tradition on contemporary theories of liberty, equality, and civic engagement in public life. Ethics and Civic Responsibility are significant components of this course).

**PSC 443. Digital Democracy. 3 Hours.**

The advent of the internet and digital media has fundamentally transformed the way humans connect, communicate, and share information. This class will look at the democratization of information as a result of the "information revolution" - i.e the internet and digital medium as a game changer in communications, politics, health, education, citizenship, and many other sectors. Additional topics will include net neutrality, protection of consumer rights, and a touch of behavioral economics in digital commerce.

**PSC 444. Human Rights and Technology. 3 Hours.**

The goal of this course is to provide students with a broad understanding of the impact of technology on human rights and how human rights law and policy have been shaped by these developments.

**PSC 456. Revolution and Political Violence. 3 Hours.**

This course examines political violence within states, ranging from protests to civil wars. We will focus particularly closely on post-WWII resistance and revolutions in North Africa.

**PSC 458. Human Trafficking. 3 Hours.**

The goal of this course is to address issues regarding modern slavery and human trafficking. Specifically, we will investigate the types of slavery, such as bonded labor and forced prostitution, the political, legal, economic and social dimensions of global slavery and human trafficking, and ways in which a broad variety of international and nongovernmental organizations respond to this crisis.

**PSC 459. Politics of Transitional Justice. 3 Hours.**

This course introduces students to the field of transitional justice and focuses on the political aspects of how governments, citizens, and the international community respond to human rights abuses, especially those committed during conflicts and dictatorships.

**PSC 461. International Political Economy. 3 Hours.**

The course examines global economic processes, such as trade and finance, as well as the key actors involved, including states, societal actors, multinational corporations, and international organizations. Key issues of contention, including trade disputes, financial crises, and problems associated with globalization, are also assessed (IR/CP).

**Prerequisites:** PSC 103 [Min Grade: D]

**PSC 465. International Law. 3 Hours.**

The course covers the sources, foundational principles, and main institutions of public international law. It explores international law concerning boundaries and territory (including the high seas and outer space), diplomatic relations, the use of force, conflict resolution, human rights, and the environment. (IR/CP).

**PSC 466. The United Nations. 3 Hours.**

Organizational framework, evolving experiences and continuing problems of United Nations system for maintenance of international peace and security and for international economic and social cooperation. (IR/CP).

**PSC 471. Political Propaganda in Film. 3 Hours.**

This course analyzes the ethics and rationale for using and abusing the film medium to relate to, undermine, or support political authority. The class employs a critical analysis of the explicit or implicit forms of political propaganda messages transmitted to popular culture in order to manipulate policy and public opinion. The films are drawn from four nations: United States, United Kingdom, Germany, and Russia.

**PSC 490. Political Science Internship. 1-3 Hour.**

Individually arranged assignment in public or non-profit agencies or organizations, monitored and evaluated by member of department.

**PSC 494. Special Topics in Political Science. 3 Hours.**

Special topics in Political Science.

**PSC 495. Directed Research in Political Science. 1-6 Hour.**

Directed research in political science with department faculty. Open to Political Science majors only. Requires instructor approval.

**PSC 496. Independent Studies and Special Projects. 1-3 Hour.**

Directed reading under supervision of member of PSC faculty.

**PSC 497. Honors Research in Political Science. 3-6 Hours.**

Directed research by Political Science Honors student.

**Prerequisites:** PSC 499 [Min Grade: C]

**PSC 498. Capstone Public Affairs Internship. 3 Hours.**

Individually arranged assignment in public or non-profit agencies or organizations monitored and evaluated by a member of the department. Placement provides significant opportunity to synthesize, practice, apply skills in political science through substantial, sustained work in real settings, planned and guided cooperatively by the institution and internship organization for credit. Minimum 150 hours at the internship organization.

**PSC 499. Capstone in Political Science and International Studies. 3 Hours.**

This is the capstone course for all majors in political science and international studies. The course is designed to provide students with a culminating capstone experience. In this course, we will discuss a diverse set of readings that provide a comprehensive overview of the major theories and methods in Political Science or International Studies. This is a writing intensive course in which a discipline-based research paper or research project is developed and presented.

**Prerequisites:** PSC 400 [Min Grade: D]

## Department of Psychology

**Chair:** Dr. Christopher Henrich

**Director of Undergraduate Studies:** Dr. Maria Hopkins

The curriculum in psychology provides a flexible program for the psychology major leading to the Bachelor of Science degree. Alternatively, students can earn a minor in psychology or take advantage of the numerous course offerings that are open to all students. The department provides a variety of experiences to give students an understanding of the basic principles and mechanisms of behavior. The scientific method is emphasized throughout the curriculum. Students with a major or minor in psychology are encouraged to obtain first-hand experience with both the creation of new knowledge (research) and the application of that knowledge in community and treatment settings. There are many opportunities for students to gain firsthand research experience by working with individual faculty members in a variety of laboratory, clinical, and field research settings. In addition, numerous community and treatment facilities provide settings for students to observe and

participate in the application of psychological principles to the solution of individual and social problems.

In addition to providing a major field of study as part of a liberal arts and science education, the B.S. degree in psychology prepares students for graduate study in psychology. The degree also provides a strong intellectual foundation for a variety of careers in areas such as teaching, counseling, social work, human factors engineering, community planning, sales, management, personnel administration, ministry, law, politics, and various health professions, including psychiatry, nursing, medicine, optometry, public health, and physical and occupational therapy. For information on preparation for these careers, see the Psychology Department Undergraduate website, <http://www.uab.edu/cas/psychology/undergraduate>

Psychology is an evolving discipline, and after a period of time the material taught in a psychology course is no longer current. For this reason, the Department of Psychology reserves the right to deny credit toward its major and minors for Elementary Statistical Methods (PY 216) and upper level (300 and above) courses completed more than 12 years prior to graduation.

## Graduate Program

The Department of Psychology offers programs of study leading to the Doctor of Philosophy (Ph.D.) degree in three areas of psychology: medical clinical psychology (co-sponsored by the School of Medicine), behavioral neuroscience, and lifespan developmental psychology. Although the Master of Science (M.S.) degree is awarded as an intermediate degree in some Ph.D. programs, a terminal M.S. degree program is not offered. Individuals interested in the graduate program should contact the Department of Psychology or the UAB Graduate School.

## Bachelor of Science with a Major in Psychology

To qualify for a B.S. degree in psychology, students must complete a minimum of 38 semester hours of courses in psychology and 6 semester hours of coursework in biology, chemistry, or physics, as listed below.

Requirements	Hours
<b>Biology, Chemistry, or Physics</b>	
Select two courses from the following areas:	6
Biology (BY) <sup>1</sup>	
Chemistry (CH) <sup>1</sup>	
Physics (PH) <sup>1</sup>	
<b>General Requirements</b> <sup>2</sup>	
PY 101 Introduction to Psychology	3
or PY 201 Honors Introduction to Psychology	
PY 212 Developmental Psychology	3
or PY 222 Honors Developmental Psychology	
PY 215 Research Literacy in Psychology	3
PY 216 Elementary Statistical Methods (Concurrent enrollment in PY 216L is required.)	4
or PY 226 Honors Elementary Statistical Methods	
PY 216L Elementary Statistical Methods Laboratory	
PY 218 Abnormal Psychology	3
or PY 228 Honors Abnormal Psychology	
PY 253 Brain, Mind and Behavior	3
PY 316 Research Methods in Psychology	3

PY 490 Psychology Capstone/SL	3
<b>Psychology Electives</b>	
Select three other Psychology (PY) courses, including two courses at the 300 level not otherwise required <sup>3</sup>	9
<b>Advanced Coursework</b>	
Select two courses at the 400 level not otherwise required	6
<b>Total Hours</b>	<b>46</b>

- <sup>1</sup> BY 111, BY 112, CH 100 and PH 100 may not be taken to satisfy this requirement. Most biology, chemistry, and physics courses that satisfy the Area III Core Curriculum requirement will also satisfy this requirement of the major. It is recommended that students consult with the psychology advisor about this requirement.
- <sup>2</sup> Completing PY 101 or PY 201 and PY 212 will also satisfy 6 of the 12 required hours in Core Curriculum Area IV.
- <sup>3</sup> PY 396 Teaching Practicum in Psychology, PY 397 Community-Based Practicum in Psychology and PY 398 Research Practicum in Psychology may not be used to fulfill more than three hours of this requirement.

## Grade and Residency Requirement

A grade of C or better is required in all courses applied to the major. At least 15 hours at the 300 level or above, including at least 9 hours at the 400 level, must be completed at UAB.

## Additional Requirements

### Minor

A minor is recommended but not required for this degree.

### General Electives

Students must take general electives to reach the 120 semester hour graduation requirement.

Students are encouraged to assist with ongoing research projects and/or obtain experience with the application of psychology in teaching or community settings. Academic credit may be earned for these experiences. Students may apply a maximum of 3 semester hours of PY 398 (research), and/or PY 396 (teaching), and/or PY 397 (community) to their major and minor requirements. Students preparing to attend graduate school in psychology are strongly encouraged to participate in the Psychology Honors Program, get involved faculty research projects, and develop a strong background in natural sciences, mathematics, and computer science.

Psychology majors may be required to complete a general psychology examination at the time they declare psychology as their major, as well as a second examination upon completion of the course requirements for a B.S. degree in psychology. Although these examinations may be required for graduation, they are intended for program assessment purposes only. Performance on these examinations will not affect students' grade point averages, nor will they be a factor in determining whether students qualify for the baccalaureate degree.

Psychology majors have two full-time academic advisors available. Please contact CAS Advising, Heritage Hall Building, (205) 934-6135.

## Proposed Program of Study for a Major in Psychology

### Freshman

First Term	Hours	Second Term	Hours
PY 101		3 PY 212	3
EH 101		3 PY 215	3
Core Curriculum Area IV: History <sup>1</sup>		3 Core Curriculum Area IV: History <sup>1</sup>	3
MA 110		3 EH 102	3
Core Curriculum Area II: Fine Art <sup>2</sup>		3 Core Curriculum Area II: Humanities	3
	15		15

### Sophomore

First Term	Hours	Second Term	Hours
Core Curriculum Area II: Literature <sup>3</sup>		3 PY 253	3
PY 216		4 PY 316	3
PY 216L		0 Core Curriculum Area II: Humanities	3
PY 218		3 Minor	3
Core Curriculum Area III: Natural Science <sup>4</sup>		4 General Elective	3
	14		15

### Junior

First Term	Hours	Second Term	Hours
Psychology (PY) 300-level <sup>5</sup>		3 Psychology (PY) 300-level <sup>5</sup>	3
Psychology (PY) 300-level		3 Psychology (PY) 400-level	3
Core Curriculum Area III: Natural Science with Lab <sup>4</sup>		4 Minor	3
Minor		3 General Electives	7
General Elective		3	
	16		16

### Senior

First Term	Hours	Second Term	Hours
PY 490		3 Psychology (PY) 400-level	3
Psychology Elective (Select One):		3 Psychology Elective (Select One)	3
PY 396		PY 396	
PY 397		PY 397	
PY 398		PY 398	
Minor		3 Minor	6
General Electives		6 General Electives	3
	15		15

Total credit hours: 121

<sup>1</sup> Select One: HY 101, HY 102, HY 104, HY 105, HY 120 or HY 121.

<sup>2</sup> Select One: ARH 101, ARH 203, ARH 204, ARH 206, MU 120, THR 100, THR 105 or THR 200.

<sup>3</sup> Select One: EH 216, EH 217, EH 218, EH 221, EH 222, EH 223 or EH 224

<sup>4</sup> Must include six hours of approved Biology (BY), Chemistry (CH), or Physics (PH) courses.

A minor is recommended for Psychology Majors.

## Minor in Psychology

To qualify for a minor in psychology, students must complete a minimum of 18 semester hours of courses in psychology, as listed below.

Requirements	Hours
<b>Introductory Psychology Course</b>	
PY 101 Introduction to Psychology <sup>1</sup>	3
or PY 201 Honors Introduction to Psychology	
<b>Advanced Psychology</b>	9
Select nine hours from Psychology (PY) courses at the 300 level or above <sup>2</sup>	
<b>Psychology Electives</b>	6
Select six hours from Psychology (PY) courses not otherwise required. <sup>2</sup>	
<b>Total Hours</b>	18

<sup>1</sup> PY 101 Introduction to Psychology or PY 201 Honors Introduction to Psychology may also be eligible to count toward Core Curriculum Area IV; check the Core Curriculum for your particular major.

<sup>2</sup> PY 396 Teaching Practicum in Psychology, PY 397 Community-Based Practicum in Psychology, and PY 398 Research Practicum in Psychology may not be used to fulfill more than three hours of this requirement.

## Grade & Residency Requirement

A grade of "C" or better is required in all courses applied to the minor. At least six hours at the 300-level or above must be completed at UAB.

## Psychology Honors Program

### Purpose

Participation in the Psychology Honors Program provides an enriched learning environment for psychology majors with excellent academic records who are interested in pursuing graduate study and a career in psychology, medicine, or other health related professions. The program provides students with a strong foundation in behavioral science through an enhanced program of study and the opportunity to conduct research with an individual member of the faculty. Students who complete the program will qualify for the B.S. in psychology and graduate "With Honors in Psychology."

### Eligibility

Students may apply for admission to the program at any time after being at UAB for at least one semester, provided they will attend UAB for at least three additional semesters in order to complete their honors thesis and program-specific coursework (PY 399 and PY 499). Students should submit an application form (available from their psychology advisor or the department website) to the Director of the Psychology Honors Program (mgcrowe@uab.edu), and an interview will be scheduled.

For admission to the program students should have a minimum GPA of 3.50 in psychology coursework, an overall GPA of 3.50 or above (at UAB as well as any transfer institution), and grades of A or B in core English and Mathematics courses.

### Requirements

Students in the Psychology Honors program must complete a minimum of 48 semester hours of courses in psychology and 6 semester hours of coursework in biology, chemistry, or physics, as listed below.

## Grade and Residency Requirement

A grade of C or better is required in all courses applied to these requirements. Overall GPA, Psychology GPA, and Institutional GPA (courses taken at UAB) must all be at least 3.50 and maintained at a minimum 3.50 to remain in and graduate from the Honors Program. At least 18 hours at the 300 level or above, including all honors and practicum courses must be completed at UAB.

Requirements		Hours
<b>Biology, Chemistry or Physics</b>		
Select two courses from the following areas:		6
Biology (BY) <sup>1</sup>		
Chemistry (CH) <sup>1</sup>		
Physics (PH) <sup>1</sup>		
<b>General Requirements</b>		
PY 101	Introduction to Psychology <sup>2</sup>	3
or PY 201	Honors Introduction to Psychology	
PY 212	Developmental Psychology <sup>2</sup>	3
PY 215	Research Literacy in Psychology	3
PY 216	Elementary Statistical Methods	4
& 216L	and Elementary Statistical Methods Laboratory	
PY 218	Abnormal Psychology	3
PY 253	Brain, Mind and Behavior	3
PY 316	Research Methods in Psychology	3
<b>Advanced Coursework</b>		
Select three of the following:		9
PY 303	Introduction to Cognitive Science	
PY 312	Advanced Developmental Psychology	
PY 313	Language: Mind, Brain, and Society	
PY 325	Clinical Child Psychology	
PY 350	Personality and Intellectual Assessment	
PY 353	Behavioral Neuroscience	
PY 354	Autism: Brain and Cognition	
PY 361	Psychology of Learning	
PY 363	Cognitive Psychology	
PY 370	Personality	
PY 372	Social Psychology	
PY 380	The Sensory and Perceptual Brain	
PY 390	Animal Behavior	
<b>Honors Courses</b>		
Complete 5 hours of honors coursework:		5
PY 399	Psychology Honors Seminar	
& PY 499	and Psychology Honors Thesis <sup>3</sup>	
<b>Psychology Electives and Practicum</b>		
Select 3 courses at the 400 level not otherwise required, in addition to completing 6 hours of practicum coursework. <sup>4</sup>		15
PY 398	Research Practicum in Psychology	
PY 396	Teaching Practicum in Psychology	
or PY 397	Community-Based Practicum in Psychology	
Total Hours		57

<sup>1</sup> BY 111, BY 112, CH 100, and PH 100 may not be taken to satisfy this requirement. Most biology, chemistry, and physics courses that satisfy the Area III Core Curriculum requirement will also satisfy this requirement of the major. It is recommended that students consult with the psychology advisor about this requirement.

<sup>2</sup> Completing PY 101 or PY 201 and PY 212 will also satisfy 6 of the 12 required hours in Core Curriculum Area IV.

- <sup>3</sup> Take PY 399 Psychology Honors Seminar in any three semesters after joining honors program. Take PY 499 Psychology Honors Thesis concurrently with the last enrollment in PY 399. Note that these courses are only offered in the Spring and Fall semesters.. If these classes are completed, students fulfill the requirement of Psychology Capstone and do not take PY 490.
- <sup>4</sup> Take at least 5 hours of PY 398 Research Practicum in Psychology hours of and at least 1 hour of PY 396 Teaching Practicum in Psychology or PY 397 Community-Based Practicum in Psychology.

Requirements for the general psychology examination, described above for the major in psychology, also apply to students in the Psychology Honors Program. As psychology majors, honors students have a full-time academic advisor available in the psychology department (Dr. Eric Gampher); Room 415 Campbell Hall; Telephone: (205) 934-3850; E-mail: [redfox@uab.edu](mailto:redfox@uab.edu)

## Contact

For more information and an application for admission to the Psychology Honors Program, see the undergraduate psychology web site at <http://www.uab.edu/cas/psychology/undergraduate>. You can also contact the Honors Program Director, Dr. Michael Crowe, at [mgcrowe@uab.edu](mailto:mgcrowe@uab.edu)

## Undergraduate Certificate in Mental Health

Requirements		Hours
A grade of B or better is required for every course.		
<u>PY 101</u>	Introduction to Psychology <sup>1,2</sup>	3
or <u>PY 201</u>	Honors Introduction to Psychology	
<u>PY 218</u>	Abnormal Psychology <sup>1</sup>	3
or <u>PY 228</u>	Honors Abnormal Psychology	
<u>PY 397</u>	Community-Based Practicum in Psychology <sup>3</sup>	3
<b>Electives</b>		<b>6</b>
Select two courses from the following:		
<u>PY 305</u>	Medical Psychology	
<u>PY 322</u>	Applied Behavior Analysis	
<u>PY 325</u>	Clinical Child Psychology	
<u>PY 335</u>	Motivation and Emotion	
<u>PY 418</u>	Psychotherapy and Behavior Change	
Total Certificate		15

- <sup>1</sup> PY 101/PY 201 and PY 218/PY 228 may count towards the Psychology Major and the Mental Health Certificate
- <sup>2</sup> PY 101/PY 201 may count towards the Psychology Minor and the Mental Health Certificate.
- <sup>3</sup> PY 397 Community-Based Practicum in Psychology must be completed at an approved site related to Mental Health. An authorization form must be submitted in order to register for the required practicum hours.

## Courses

### PY 101. Introduction to Psychology. 3 Hours.

Application of scientific method to behavior. Areas of psychology including learning, motivation, perception, physiological, comparative, personality, abnormal, social, clinical, child development, and individual differences. This course meets the Core Curriculum requirements for Area IV: Social and Behavioral Sciences.

**PY 107. Psychology of Adjustment. 3 Hours.**

Adaptive behavior; theories, research, and personal applications relevant to desirable behavior patterns; interpersonal skills and self-control techniques.

**PY 108. Human Sexuality. 3 Hours.**

Biological and psychological bases of human sexual behavior. Genetic, hormonal, and learning foundations for development of sexual and sex-related structures and of psychosexual identity and behavior. Adult sexual structures and behavior, conception control, pregnancy, lactation and parentalism, drugs and reproduction, and sexual pathology and variances.

**PY 109. Drugs and Human Behavior. 3 Hours.**

Historical and cultural perspectives on drug use by humans. Major classes of drugs; effects, side effects, and toxicity. Mechanisms of drug action, drug abuse, government regulations, and use of psychoactive drugs in treatment of mental disorders.

**PY 125. Introduction to Forensic Psychology. 3 Hours.**

Overview of issues involving the intersection of law and psychology. Focus on role of clinical assessment of competency, scientific jury selection, expert witnesses in court, punishment and sentencing, and related issues.

**PY 201. Honors Introduction to Psychology. 3 Hours.**

Advanced seminar in scientific study of behavior and cognitive processes. This course meets the Core Curriculum requirements for Area IV: Social and Behavioral Sciences. Permission of Director of Undergraduate Studies required.

**PY 212. Developmental Psychology. 3 Hours.**

Human development from prenatal period to old age. Genetic and environmental determinants of behavior. Language, cognition, personality, social and emotional behavior, intelligence, and physical and sexual development. Applied areas include child rearing, childhood psychoses, and child abuse. This course fulfills the requirements in Ethics and Civil Responsibility (ECR).

**Prerequisites:** PY 101 [Min Grade: C] or PY 201 [Min Grade: C]

**PY 213. Cross-Cultural Perspective on Child Development. 3 Hours.**

Cultural differences in determinants of child development. Effects of culturally distinct approaches to child rearing and education on infant attachment, temperament, aggression, cognitive development, peer interaction, sex-role socialization, and moral reasoning.

**Prerequisites:** PY 101 [Min Grade: C] or PY 201 [Min Grade: C]

**PY 215. Research Literacy in Psychology. 3 Hours.**

This course provides an overview of the scientific process and teaches students to read and evaluate scientific reports: popular media to primary literature; emphasizing the importance of being a good consumer of information. The course also teaches students to write scientifically, following accepted formats such as APA.

**Prerequisites:** PY 101 [Min Grade: C] or PY 201 [Min Grade: C]

**PY 216. Elementary Statistical Methods. 4 Hours.**

Descriptive and inferential statistics with emphasis on behavioral science applications. Measures of central tendency and variability, frequency distributions, probability, t-test, correlation, analysis of variance, and regression. Use of computers in statistical analysis of psychological research data. Quantitative Literacy is a significant component of this course. Concurrent enrollment in PY216L required.

**Prerequisites:** MA 105 [Min Grade: C] or MA 110 [Min Grade: C] or MA 102 [Min Grade: C] or MA 125 [Min Grade: C] or MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 109 [Min Grade: C] or MA 225 [Min Grade: C]

**PY 216L. Elementary Statistical Methods Laboratory. 0 Hours.**

Statistical Methods Laboratory required with PY 216 lecture. Concurrent enrollment in PY 216 required.

**Prerequisites:** MA 105 [Min Grade: C] or MA 102 [Min Grade: C] or MA 110 [Min Grade: C] or MA 125 [Min Grade: C] or MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 109 [Min Grade: C] or MA 225 [Min Grade: C]

**PY 218. Abnormal Psychology. 3 Hours.**

Research-oriented study of different types of maladaptive behavior, including symptoms, development, classification, and treatment. Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** PY 101 [Min Grade: C] or PY 201 [Min Grade: C]

**PY 220. Contemporary Issues in Psychology. 3 Hours.**

Issues of current interest in psychology.

**Prerequisites:** PY 101 [Min Grade: C] or PY 201 [Min Grade: C]

**PY 222. Honors Developmental Psychology. 3 Hours.**

Advanced seminar in human development from prenatal period to old age. Genetic and environmental determinants of behavior. Language, cognition, personality, social and emotional behavior, intelligence, and physical and sexual development.

**Prerequisites:** PY 101 [Min Grade: C] or PY 201 [Min Grade: C]

**PY 226. Honors Elementary Statistical Methods. 4 Hours.**

Advanced seminar in descriptive and inferential statistics with emphasis on behavioral science applications. Measures of central tendency and variability, frequency distributions, probability, t-test, correlation, analysis of variance, and regression. Use of computers in statistical analysis of psychological research data. Quantitative Literacy is a significant component of this course. Concurrent enrollment in PY216L required.

**PY 228. Honors Abnormal Psychology. 3 Hours.**

Advanced seminar in research-oriented study of different types of maladaptive behavior, including symptoms, development, classification, and treatment.

**Prerequisites:** PY 101 [Min Grade: C] or PY 201 [Min Grade: C]

**PY 236. Introduction to Research with Animal Models. 3 Hours.**

This hands-on three-credit lab course is designed to instruct students on basic research methodology, animal handling techniques and compound administration. This course will allow students to gain firsthand experience with rodents (rats, mice) while learning the basics of injection, blood collection, breeding and animal care requirements. Each student will complete online animal care and use training as set forth by the UAB Institutional Animal Care and Use Committee (IACUC). Upon completion of this course students will have completed all online and Occupational health and Safety (OH&S) requirements in order to enter research labs utilizing animals and be placed onto a research protocol. This course is designed to prepare students to start in a research lab with the knowledge and training to make them successful animal researchers.

**PY 240. Psychology of Social Inequality. 3 Hours.**

The gap in income between the rich and the poor has been growing steadily larger in the United States for over 30 years. Psychological science has produced some surprising insights about the causes and effects of this contentious trend. Among topics that will be tackled are how poverty affects decision making, wealth changes how people treat others, and racial discrimination affects responses to stress.

**Prerequisites:** PY 101 [Min Grade: C] or PY 201 [Min Grade: C]

**PY 253. Brain, Mind and Behavior. 3 Hours.**

How brain functions during dreaming, visual perception, aggression, learning and memory, sex, and language. Left versus right hemisphere specializations, recovery after brain damage, and neurological basis of illnesses such as schizophrenia, autism, and Parkinson's disease. Includes five hours of videos. Quantitative Literacy is a significant component of this course.

**Prerequisites:** PY 101 [Min Grade: C] or PY 201 [Min Grade: C]

**PY 301. Psychology of Trap Music. 3 Hours.**

This course provides an extensive study into the Deep South origins of Trap Music and its evolution over time. We will explore how aspects of the built environment and other social determinants of health such as poverty, living conditions, and access to resources influence the music and the culture. As Trap Music grew in popularity, its influence on music in other parts of the country and worldwide were evident. Therefore, the course will also discuss the psychosocial and economic impact of the genre.

**PY 302. History and Systems of Psychology. 3 Hours.**

Historical origins and development of major approaches to psychology.

**Prerequisites:** PY 101 [Min Grade: C] or PY 201 [Min Grade: C]

**PY 303. Introduction to Cognitive Science. 3 Hours.**

Introduction to the exciting new discipline of cognitive science, the interdisciplinary study of mind and intelligence. This course draws on a number of disciplines involved in unraveling the mysteries of the mind and intelligent life.

**Prerequisites:** PY 101 [Min Grade: C] or PY 201 [Min Grade: C]

**PY 305. Medical Psychology. 3 Hours.**

Psychological methods applied to health problems. Development of medical problems, psychological/behavioral treatment of medical disorders, prevention of disease, and promotion of health.

**Prerequisites:** PY 101 [Min Grade: D] or PY 201 [Min Grade: D]

**PY 312. Advanced Developmental Psychology. 3 Hours.**

Current research and theory in childhood and adolescence with focus on perceptual/cognitive and social/emotional issues. Relationship between spoken language development and learning to read, linguistic development in special populations (e.g., hearing-impaired children), applications of memory research to children's courtroom testimony, impact of preschool experience (e.g., Head Start) on academic achievement, and family and peer influence on cognitive and social development.

**Prerequisites:** PY 212 [Min Grade: C] or PY 222 [Min Grade: C]

**PY 313. Language: Mind, Brain, and Society. 3 Hours.**

Language is the greatest achievement of the human mind and brain. This course will provide an introductory survey of this amazing ability. Topics will include: speech perception, word comprehension, semantics, bilingualism, speech production, sentence processing, reading, and the social aspects of language. Throughout, the course will combine cognitive and behavioral perspectives with what is known about the brain systems that support language, and how those systems are impaired in developmental and neurological disorders. The course material will be conveyed through lectures, assigned readings, discussion of current debates, and hands-on "labs" in which students will collect data and write lab reports describing their results.

**Prerequisites:** PY 101 [Min Grade: C] or PY 201 [Min Grade: C]

**PY 315. Methods in Psychological Research. 4 Hours.**

This course provides an overview of scientific methods used to investigate psychological phenomena, including correlational methods, quasi-experimental methods, and experimental methods. It considers issues related to problem definition, hypothesis formation, measurement, causal inference, validity, and reliability and includes a strong emphasis on writing, quantitative analysis and questions of ethics and civic responsibility. Writing, Quantitative Literacy and Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** PY 215 [Min Grade: C] and PY 216 [Min Grade: C] or (PY 214 [Min Grade: C] and PY 217 [Min Grade: C] and PY 215 [Min Grade: C])

**PY 316. Research Methods in Psychology. 3 Hours.**

Overview of specific research methods such as correlational, quasi-experimental, and experimental methods. Students will design and conduct research. As such it includes a strong emphasis on quantitative analysis and questions of ethics and civic responsibility. This course also provides practical knowledge of the scientific methodology such as problem definition, hypothesis formation, measurement, causal inference, validity, and reliability. Writing, Quantitative Literacy and Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** PY 215 [Min Grade: C] and PY 216 [Min Grade: C] or (PY 214 [Min Grade: C] and PY 215 [Min Grade: C] and PY 217 [Min Grade: C])

**PY 319. Psychopathology and Culture. 3 Hours.**

Cultural differences with respect to types of behavior viewed as abnormal and how such behaviors are classified and treated.

**Prerequisites:** PY 101 [Min Grade: C] or PY 201 [Min Grade: C]

**PY 320. Contemporary Issues in Psychology. 3 Hours.**

Issues of current interest in psychology.

**Prerequisites:** PY 101 [Min Grade: C] or PY 201 [Min Grade: C]

**PY 322. Applied Behavior Analysis. 3 Hours.**

This course introduces students to the science and principles of applied behavior analysis (ABA) by providing students with an overview of behavioral principles and the behavior change procedures derived from these principles.

**Prerequisites:** PY 101 [Min Grade: C] or PY 201 [Min Grade: C]

**PY 325. Clinical Child Psychology. 3 Hours.**

Diagnosis, prevention and treatment of psychological problems in children and adolescents. Interview techniques, behavioral and cognitive interventions, and community prevention programs. Developmental considerations emphasized.

**Prerequisites:** PY 218 [Min Grade: C] or PY 228 [Min Grade: C]

**PY 326. Industrial/Organizational Psychology. 3 Hours.**

Psychological methods applied to people at work. Selection, placement, performance appraisal, training, attitude measurement, work motivation, leadership, industrial safety, and human performance.

**Prerequisites:** PY 101 [Min Grade: C] or PY 201 [Min Grade: C]

**PY 330. Sport Psychology. 3 Hours.**

Psychological factors in athletic performance. Psychological characteristics of successful athletes; anxiety, arousal, motivation, attention, concentration, attribution, cognition, and imagery.

**Prerequisites:** PY 101 [Min Grade: C] or PY 201 [Min Grade: C]

**PY 340. Behavioral MCAT Preparation. 3 Hours.**

The course is directly linked to the foundational concepts in psychology, sociology, and biology covered by the MCAT. The foundational concepts will integrate with the scientific inquiry and reasoning skills necessary to critically understand the ways psychological, social, and biological factors influence perceptions and behavior; how biobehavioral elements relate to behavioral change and health; and how cultural and social differences influence well-being and health. This course will help students prepare for the Psychological, Social, and Biological Foundations of Behavior section of the Medical College Admission Test (MCAT).

**Prerequisites:** (PY 101 [Min Grade: C] or PY 201 [Min Grade: C])

**PY 350. Personality and Intellectual Assessment. 3 Hours.**

Measurement of personality and other psychological characteristics through psychological tests. Selection, administration, and interpretation of psychological tests.

**Prerequisites:** PY 214 [Min Grade: C] or PY 216 [Min Grade: C]

**PY 353. Behavioral Neuroscience. 3 Hours.**

The focus of the course is the neurobiological basis of behavior and emotion, and will cover molecular, cellular, and systems level mechanisms that mediate processes such as learning, motivation, sensation, speech, and emotional behavior. The included lab will utilize the collection and analysis of physiological data to reinforce core course concepts.

**Prerequisites:** PY 253 [Min Grade: C]

**PY 354. Autism: Brain and Cognition. 3 Hours.**

Autism is a disorder that affects every facet of human functioning. Its multidimensional manifestation is enigmatic to researchers as well as to affected families. This course will examine the scientific research that has illuminated the nature of autism, focusing on its cognitive and biological aspects. We will examine different perspectives of thinking and various biological underpinnings of brain function, to converge on the most recent scientific consensus on the biological and psychological characterization of autism. There will be a special focus on structural and functional brain imaging studies of autism.

**Prerequisites:** PY 253 [Min Grade: C]

**PY 355. Cellular & Molecular Neuroscience. 3 Hours.**

Introduction to the cellular and molecular biology, biochemistry, biophysics, genetics and function of the mammalian nervous system. This course will emphasize the development, anatomy, cellular and molecular biology and biochemistry of neurons and glial cells, and introduce electrical, biophysical and chemical signaling within and across neurons.

**Prerequisites:** PY 253 [Min Grade: C] and BY 123 [Min Grade: C] and CH 115 [Min Grade: C]

**PY 356. From Systems to Cognitive Neuroscience. 3 Hours.**

Introduction to the cellular and molecular biology, biochemistry, biophysics, genetics and function of the mammalian nervous system. This course will emphasize mechanisms of synaptic transmission, sensory systems, neuropharmacology, and synaptic plasticity; and introduce the molecular basis of diseases and disorders of the central and peripheral nervous systems.

**Prerequisites:** PY 355 [Min Grade: C] or NBL 355 [Min Grade: C]

**PY 361. Psychology of Learning. 3 Hours.**

Issues of learning in terms of current theoretical positions. Classical conditioning, instrumental conditioning, forgetting, role of motivation, and transfer of training.

**Prerequisites:** PY 101 [Min Grade: C] or PY 201 [Min Grade: C]

**PY 363. Cognitive Psychology. 3 Hours.**

Human cognitive functioning. Selective attention, information processing, models of learning, memory, perception, and free and structured thought processes.

**Prerequisites:** PY 253 [Min Grade: C]

**PY 370. Personality. 3 Hours.**

Comparison of major theories of personality, including philosophy of human nature; structure, dynamics, and development of personality.

**Prerequisites:** PY 101 [Min Grade: C] or PY 201 [Min Grade: C]

**PY 372. Social Psychology. 3 Hours.**

Major theories and research in social psychology. Social perception and attribution, behavior in interpersonal relationships, and group influences on individual behavior.

**Prerequisites:** PY 101 [Min Grade: C] or PY 201 [Min Grade: C]

**PY 375. Philosophy of Mind. 3 Hours.**

Mind; its nature, forms, and functions. Consciousness, self-consciousness, action, belief, desire, rationality, personal identity; problems such as mind-body, psychological explanation, and freedom of will. Prerequisite: one previous PHL course or permission of instructor.

**PY 376. Psychology and Law. 3 Hours.**

Interaction between theories and applications of psychology and practice of civil and criminal law. Insanity, malpractice, competency, civil commitment, violence, jury selection, and expert-witness testimony.

**Prerequisites:** PY 101 [Min Grade: C] or PY 201 [Min Grade: C]

**PY 380. The Sensory and Perceptual Brain. 3 Hours.**

Contemporary theory and empirical research in sensory coding of perceptual information. Sensory transduction, physiology and anatomy of sensory systems, and psychophysical measurement techniques. Visual perception, hearing and speech, smell, and taste.

**Prerequisites:** PY 253 [Min Grade: C]

**PY 390. Animal Behavior. 3 Hours.**

The foundation of animal behavior as it relates to the study of psychobiology and evolutionary psychology. Reproductive and survival strategies, communication, learning, cognition, orientation/navigation/homing, behavioral genetics, and evolution.

**Prerequisites:** PY 101 [Min Grade: C](Can be taken Concurrently) or PY 201 [Min Grade: C]

**PY 396. Teaching Practicum in Psychology. 0-6 Hours.**

Teaching experience in psychology courses, supervised by a faculty member. Student must have previously taken the course for which the student will work within. Permission of Director of Undergraduate Studies required. Pass/Fail.

**PY 397. Community-Based Practicum in Psychology. 1-6 Hour.**

Community work in various supervised settings such as Crisis Center, Department of Human Resources, etc. Permission of Director of Undergraduate Studies required. (Pass/Fail) Ethics and Civic Responsibility are significant components of this course.

**PY 398. Research Practicum in Psychology. 0-7 Hours.**

Project or research activity supervised by faculty. Cannot be taken Pass/Fail. Permission of Director of Undergraduate Studies required.

**PY 399. Psychology Honors Seminar. 1 Hour.**

Focus on preparation for graduate/professional school and conducting psychological research, including presentation of research and discussion of relevant issues in statistical analysis, research methods, and ethics.

**Prerequisites:** Admission into the Psychology Honors Program and Elementary Statistical Methods (may be concurrent enrollment).

**Prerequisites:** PY 216 [Min Grade: C](Can be taken Concurrently)

**PY 401. Neuroscience Seminar. 1 Hour.**

Neuroscience faculty from the School of Medicine and Psychology present current research and discuss strategies for career development in medicine and research. Group discussion follows research presentation.

**Prerequisites:** PY 253 [Min Grade: C]

**PY 405. Biofeedback, Meditation, and Self-Regulation. 3 Hours.**

History and current applications of biofeedback, meditation, and relaxation techniques.

**Prerequisites:** PY 215 [Min Grade: C]

**PY 410. Psychology of Marriage. 3 Hours.**

The goal of this course is for students to gain an understanding of multiple principles related to marriage and families. Students will gain an understanding of theoretical paradigms and major principles related to marriage and families. Students will analyze psychological theories of marital strengths and weaknesses and components of pre-marriage, marriage, divorce, and remarriage. Topics will include the single life, mate selection, positives/negatives of marriage, and divorce.

**Prerequisites:** PY 215 [Min Grade: C]

**PY 411. Cognitive Development. 3 Hours.**

Development of and changes in memory, perception, learning, and thinking throughout the lifespan.

**Prerequisites:** (PY 212 [Min Grade: C] or PY 222 [Min Grade: C]) and (PY 316 [Min Grade: C] or PY 315 [Min Grade: C])

**PY 412. Social Development. 3 Hours.**

Contemporary theoretical models and empirical research in social development. Attachment formation in infancy, parent-child and family interactions, peer relationships, moral and pro-social development, aggression, and sex role development.

**Prerequisites:** (PY 212 [Min Grade: C] or PY 222 [Min Grade: C]) and (PY 316 [Min Grade: C] or PY 315 [Min Grade: C])

**PY 413. Psychology of the African American Child. 3 Hours.**

Psychological development of African American children from birth through adolescence. Prenatal influences on growth and development, cognitive development, practices of African American families, Black English and language development, psychological testing, self-concept, racial identification, and motivation and academic achievement.

**Prerequisites:** (PY 212 [Min Grade: C] and PY 222 [Min Grade: C]) and (PY 316 [Min Grade: C] or PY 315 [Min Grade: C])

**PY 415. Intellectual and Developmental Disabilities. 3 Hours.**

History, causes, treatment/education, behavioral interventions, and family issues related to Intellectual and Developmental Disabilities and other developmental disabilities. Psychologist as member of interdisciplinary treatment team.

**Prerequisites:** (PY 212 [Min Grade: C] or PY 222 [Min Grade: C])

**PY 417. Psychology of Gender. 3 Hours.**

The purpose of this course is to provide an overview of research and theory on gender in psychology. Themes will include the myths and stereotypes associated with men and women in our society, the social and psychological gender differences that have been identified in research, and the evidence and theoretical arguments concerning the origin of these differences. Students will gain an awareness of the hidden and obvious gender biases in the study of human behavior and an appreciation of the complexity of the research on gender issues; clarify the nature and development of gender differences and gender roles, critically think about and evaluate gender in the media; develop intellectual tolerance and exercising respect for others' viewpoints; and develop self-understanding and empowerment with the understanding that one does not need to be constrained by traditional gender roles and stereotypes.

**Prerequisites:** PY 215 [Min Grade: C]

**PY 418. Psychotherapy and Behavior Change. 3 Hours.**

Different therapeutic approaches and issues relating to their effectiveness. Principles of behavior modification.

**Prerequisites:** (PY 218 [Min Grade: C] or PY 228 [Min Grade: C]) and (PY 316 [Min Grade: C] or PY 315 [Min Grade: C])

**PY 420. Special Topics in Psychology. 3 Hours.**

Issues of current interest in psychology.

**Prerequisites:** PY 215 [Min Grade: C]

**PY 422. Infant Development. 3 Hours.**

The goal of the course is to review contemporary theory, research, and methods relevant to understanding infant development. The course focuses on both normative and atypical development because an understanding of one enriches an understanding of the other. Individual differences, sociocultural diversity, and a historical perspective on the study of all these themes will be emphasized throughout. Topics will include: Genetic and environmental influences on development & temperament; Neurodevelopment & Risk, Resilience, & Intervention; Sensory development; Cognitive development; Social cognitive development, joint attention; Language development; Emotion & emotion regulation; Social Interaction; Precursors to attachment.

**Prerequisites:** PY 212 [Min Grade: C] or PY 222 [Min Grade: C]

**PY 423. Abnormal Child Development. 3 Hours.**

Current research and theories related to aberrations of normal development processes, including autism, childhood schizophrenia, and other disorders of childhood.

**Prerequisites:** (PY 218 [Min Grade: C] or PY 228 [Min Grade: C])

**PY 424. Psychology of Race and Ethnic Relations. 3 Hours.**

This course is intended to construct and advance students' knowledge employed in race and ethnicity as they relate to human behavior in various social contexts. Students will gain knowledge of race and ethnic relations in the United States from a psycho-historical perspective and how those changes have affected our current view of race relations. Topics will include social psychological principles such as forms of racism and discrimination, attitude formation, psychological response to racism, and racial identity development.

**Prerequisites:** PY 215 [Min Grade: C]

**PY 425. Psychology of Aging. 3 Hours.**

A comprehensive overview of psychological aspects of aging. Topics will include age-related changes in cognitive function, behavior, sensation/perception, health, and personality, as well as dementia and other forms of psychopathology. (Also offered under Gerontology.)

**Prerequisites:** (PY 212 [Min Grade: C] or PY 222 [Min Grade: C])

**PY 426. Creative Arts Therapies. 3 Hours.**

The goals of the course are to provide an introduction to and overview of the educational, ethical and credentialing requirements for each of the creative arts therapies. The course includes lecture, discussion, research, and presentation requirements.

**PY 431. The Dynamics of Pain. 3 Hours.**

Physiology, pharmacology, and anatomy of acute and chronic pain. How medical treatments relieve pain. Stress-induced analgesia, transcutaneous electrical stimulation, acupuncture, inflammation, and psychological approaches to treatment of pain.

**Prerequisites:** (PY 253 [Min Grade: C] or NBL 230 [Min Grade: C])

**PY 433. Diseases of the Nervous System. 3 Hours.**

Molecular mechanisms and treatments for neurological, psychiatric, and injury based disorders and diseases of the nervous system. Topics include neurodevelopmental disorders (including intellectual disability and autism spectrum disorders), neurological disorders (including neurodegenerative and demyelinating disease), neuropsychiatric disorders (including depression disorders and schizophrenia), and injury to the nervous system (including stroke and traumatic brain and spinal cord injury).

**Prerequisites:** PY 353 [Min Grade: B] or PY 355 [Min Grade: C] or PY 356 [Min Grade: C]

**PY 435. Motivation and Emotion. 3 Hours.**

The psychobiology of homeostatic human drives thirst, eating, sexual motivation, sleep, aggression, emotions, and reward. Role of genes, central and peripheral nervous system, hormones, and interaction between these and environment. Includes hallmark experiments and abnormal conditions of these motivated behaviors including obesity, eating disorders, sleep/wake disorders, anxiety, depression, psychopathy, sexual deviance, and addiction.

**Prerequisites:** PY 253 [Min Grade: C] or NBL 230 [Min Grade: C]

**PY 436. Statistical Programming. 3 Hours.**

This course integrates an introduction to the most commonly-used statistical methods in psychology and neuroscience with an introduction to statistical programming. The statistical programming material includes basic programming concepts, and focuses on specific needs of data management, data visualization, and reproducible data analysis. The statistical methods include descriptive and inferential statistics, organized around the generalized linear modeling framework.

**Prerequisites:** PY 216 [Min Grade: C] or PY 226 [Min Grade: C]

**PY 441. Principle Cell Neuroscience Module I. 2 Hours.**

Module I: Molecules, genes and cell biology of the nervous system. The first module will cover the biochemistry, molecular and cellular biology of neurons and glial cells. Topics on biochemistry and molecular biology will include protein, lipid, carbohydrate and nucleic acid biosynthesis and structure. Next, the cell biology of neurons and glial cells will be introduced, including protein and membrane transport pathways, energy metabolism, protein turnover and gene regulation. Introductory basic concepts of nervous system development will be covered, including the differentiation of neurons and glial cells and the anatomical plan of the brain and spinal cord. This developmental neurobiology concepts are intended to be an introduction to a later graduate-level course taught in the second year (Developmental Neurobiology, Keyser).

**Prerequisites:** PY 253 [Min Grade: D] and PY 315 [Min Grade: D]

**PY 442. Principle Cell Neuroscience Module II. 2 Hours.**

Module II: Membrane biophysics and synaptic transmission The second module will introduce basic concepts of membrane biophysics, as well as the electrical and chemical signaling within and across neurons. Topics will include the resting membrane potential, passive and active propagation of electrical signals, active electrogenic properties of dendrites and axons, structure and function of voltage-gated and ligand-gated ion channels, and mechanisms of action potential conduction. The molecular and cellular mechanisms of synaptic transmission, the transfer of information between neurons, will then be covered in detail. Topics will include mechanisms of synaptic vesicle synthesis and their filling with neurotransmitters, their storage, exocytosis, endocytosis and recycling, the role of neurotransmitter transporters in clearance and termination of neurotransmitter actions, postsynaptic receptors and signal transduction pathways, as well as the dynamic changes in synaptic structure and function. Fundamental basic concepts of neurotransmitter receptor pharmacology will also be presented as the bases for understanding neuropharmacology, the effect of drugs on nerve cell function.

**Prerequisites:** PY 253 [Min Grade: D] and PY 315 [Min Grade: D]

**PY 443. Principle Cell Neuroscience Module III. 2 Hours.**

Module III: Synaptic integration, synaptic plasticity and basic neuronal circuitry The third module will focus on the modulation and integration of all the synaptic inputs arriving on neurons. Topics will include temporal and spatial summation of synaptic inputs, metabotropic and neurotrophic factor receptors and their signal transduction mechanisms through second-messenger systems, as well as long- and short-term synaptic plasticity, including LTP and LTD as current cellular models of learning and memory. The neurochemical bases of neurological and psychiatric disorders will also be covered. Finally, sensory transduction and motor control systems will be covered as an introduction to a later graduate-level course taught in the second year (Integrative Neuroscience, Gamlin).

**Prerequisites:** PY 253 [Min Grade: D] and PY 315 [Min Grade: D]

**PY 444. Principle Cell Neuroscience Module IV. 1 Hour.**

Module IV: Discussion of classical and contemporary research articles This class will use a journal club format to dissect and discuss primary research literature on topics that parallel the material taught in lectures. Research articles will include groundbreaking seminal papers ("classical") and modern, state-of-the-art experimental approaches in Neuroscience ("contemporary").

**PY 453. Advanced Behavioral Neuroscience. 4 Hours.**

Neural systems which control behavior will be studied, incorporating knowledge gained from neurobiological and psychological research. Topics will include synaptic communication, sensation and perception, movement, genetic influences on behavior, motivation, emotions, psychopathology, brain plasticity, and an extended module on learning. The associated lab will utilize the collection and analysis of physiological data to reinforce core course concepts.

**Prerequisites:** PY 353 [Min Grade: D] or PY 355 [Min Grade: D] or PY 363 [Min Grade: D] or NBL 355 [Min Grade: D]

**PY 453L. Advanced Behavioral Neuroscience Laboratory. 0 Hours.**

Advanced Behavioral Neuroscience Laboratory required with PY 453 lecture. Concurrent enrollment in PY 453 required.

**PY 454. Advanced Topics in Behavioral Neuroscience. 3 Hours.**

Advanced Topics in Behavioral Neuroscience will cover methods and discoveries in the neuroscience of behavior, such as brain imaging, human and animal learning, perception, neurophysiology, neuropharmacology and psychiatric disorders.

**Prerequisites:** PY 453 [Min Grade: C]

**PY 455. Psychology of Eating Disorders and Obesity. 3 Hours.**

The history, epidemiology, genetic, environmental, and behavioral correlates and prevention and treatment strategies of eating disorders and obesity. Includes mechanisms of normal feeding and weight control and general research methods used to understand psychiatric disorders.

**Prerequisites:** PY 253 [Min Grade: C] and (PY 315 [Min Grade: C] or PY 316 [Min Grade: C]) and (PY 353 [Min Grade: C] or PY 335 [Min Grade: C] or PY 355 [Min Grade: C])

**PY 457. Neural Measurement Lab. 3 Hours.**

This course is about how to obtain nervous system data. It will include basic and applied research techniques, including data collection, measurement, and analysis methodology. Students will learn basic instrumentation for the measurement of autonomic and central nervous system responses related to psychological, psychophysiological, and emotional tasks.

**Prerequisites:** PY 253 [Min Grade: B] or PY 353 [Min Grade: C]

**PY 460. Advanced Neuroscience: From Molecules to Mind. 3 Hours.**

Builds on foundation set in PY 355. Provides in-depth understanding of nervous system functions at molecular, cellular, biophysical, and circuit level. Includes developmental, cognitive, systems and clinical neuroscience.

**Prerequisites:** PY 355 [Min Grade: C]

**PY 463. Cognitive Neuroscience. 3 Hours.**

Interdisciplinary study of higher-order cognitive functions in humans. Data from functional brain imaging, neurology, neuroanatomy, and neurophysiology used in study of human perception, language, learning, and memory.

**Prerequisites:** PY 253 [Min Grade: C] or PY 353 [Min Grade: C]

**PY 464. Honors Cognitive Neuroscience. 3 Hours.**

Interdisciplinary study of higher-order cognitive functions in humans. Data from functional brain imaging, neurology, neuroanatomy, and neurophysiology used in study of human perception, language, learning, and memory.

**Prerequisites:** PY 353 [Min Grade: C] or PY 355 [Min Grade: C] or PY 363 [Min Grade: C] or NBL 355 [Min Grade: C]

**PY 465. Neural Analysis Lab. 3 Hours.**

This course extends the analysis methodology from the PY 457 course and includes an advanced focus on the processes associated with data examination (probability and basic statistics), and how to model data (Simulink and Matlab).

**Prerequisites:** PY 457 [Min Grade: C]

**PY 468. Cognitive Neuroimaging. 3 Hours.**

This course will focus on examining the neural bases of higher cognitive and social functions. We will discuss the basics of functional MRI and will study scientific papers in neuroimaging to arrive at neural characterization of cognitive functions, such as: executive functions, emotion, intentionality, language comprehension, and social cognition. This course will provide students a unique opportunity to learn about the potential of neuroimaging in understanding cognition. It will also help students refine their research interests and possibly choose the field of neuroscience to pursue further studies.

**Prerequisites:** PY 315 [Min Grade: C] or (PY 316 [Min Grade: C] and PY 253 [Min Grade: C])

**PY 470. Introduction to Neurobiology. 6 Hours.**

Students will be introduced to the fundamental basis of neuronal communication and the neurobiological bases of behavior. They will use laboratory exercises to learn to form hypotheses and to collect and analyze experimental data to test their hypothesis. Topics will include invertebrate and vertebrate neuroanatomy, neurons and glia, resting potentials, action potentials, synaptic transmission, neurotransmitters and receptors, sensory transduction, and sensorimotor integration. This class is taught at the Dauphin Island Sea Lab.

**PY 472. Social Psychophysiology. 3 Hours.**

Current research on the effects of the social world on hormonal responses (cortisol, testosterone etc.). Several research articles will be discussed every week in a seminar format.

**Prerequisites:** PY 215 [Min Grade: C]

**PY 474. Positive Psychology. 3 Hours.**

Introduction to "positive psychology," which is the application of psychological science to questions such as what makes people happy, how do you foster hope, and is being curious an adaptive trait.

**Prerequisites:** PY 316 [Min Grade: C]

**PY 484. Psychology of Driving. 3 Hours.**

Overview of relevant theories of driver behavior and associated psychological principles such as attention and cognition. Students will design and conduct research related to human behavior in the driving context. Strong emphasis on quantitative analysis and experimental design. Writing, Quantitative Literacy, and Team-Based learning are significant components of this course.

**Prerequisites:** PY 316 [Min Grade: C]

**PY 488. Pediatric Psychology. 3 Hours.**

Behavioral influence on health and illness; impact of health problems and illness on behavior and development of children and adolescents; family issues related to these interactions.

**Prerequisites:** (PY 212 [Min Grade: C] or PY 222 [Min Grade: C])

**PY 490. Psychology Capstone/SL. 3 Hours.**

Capstone emphasizes the synthesis of knowledge and research skills expected of the undergraduate Psychology major. Students are guided in conducting research within a specific content area. Use of computers in statistical analysis of psychological research data. Also includes class readings and discussions on ethical issues. Observation or community service in selected social service agencies is an integral part of the course. Ethics and Civic Responsibility, Writing and Quantitative Literacy are significant components of this course. This is a designated service-learning course integrating academic learning, civic learning and meaningful service to the community.

**Prerequisites:** PY 315 [Min Grade: C] or PY 316 [Min Grade: C]

**PY 499. Psychology Honors Thesis. 2 Hours.**

The Capstone course represents the culmination of the undergraduate major in Psychology for participants in the Psychology Honors Program. Students complete their honors thesis with guidance from their research mentor and the honors program Director, and defend their thesis in the Psychology Honors Seminar, and also present their research at a conference or in another public venue. Participation in the Honors Program in Psychology and completion of 3 semesters of PY 399 required, one of which may be concurrently enrolled.

**Prerequisites:** PY 399 [Min Grade: C](Can be taken Concurrently)

## Department of Social Work

The baccalaureate social work program is fully accredited by the Council on Social Work Education (CSWE) and prepares graduates for

employment at the beginning level of professional social work practice as well as for graduate-level professional education. The mission is to educate undergraduate students from a social science perspective in both problem-solving skills and social work values to prepare them for generalist practice with diverse populations in an increasingly complex and interconnected world, emphasizing social and economic justice for populations at risk. The program encourages social work career development through affiliation with professional organizations, pursuit of graduate education, and involvement in continuing education.

Students seeking to formally declare Social Work as a major must officially apply to the Social Work Professional program. Upon submitting the application and a signed academic check sheet all applicants are expected to submit a four question essay which will be evaluated by Department of Social Work faculty to determine admission.

Required course work includes acquisition of social work knowledge, values, and skills essential to social work practice, research, and policy. The curriculum culminates with a full-time, one-term field practicum.

The UAB BSW program is accredited by CSWE; therefore this program will only accept transfer credits from other programs accredited by CSWE.

SW 322 and SW 322L, SW 422 and SW 422L, SW 490 and SW 494 must be taken at UAB. For these courses transfer credits will not be accepted.

No minor is required for social work majors. Instead, selected social and behavioral science courses provide a foundation for the professional courses. These foundation courses include:

Requirements	Hours
HY 121 The United States Since 1877	3
EC 210 Principles of Microeconomics	3
or EC 211 Principles of Macroeconomics	
PY 101 Introduction to Psychology	3
PSC 101 Foundations of American Government	3
or PSC 221 American State and Local Government	
SOC 100 Introduction to Sociology	3
ANTH 101 Introduction to Cultural Anthropology	3

These courses must be completed with a grade of C or better. Additionally, students are required to take at least one biology course and laboratory that includes content about human beings (BY 101 or BY 123), also completed with a grade of C or better. This requirement may be taken as part of the Core Curriculum.

## Bachelor of Science in Social Work

Requirements	Hours
<b>Required Social Work Courses</b>	
<u>SW 100</u> Introduction to Social Work	3
<u>SW 200</u> Professional Communication in Social Work	3
<u>SW 207</u> Racism, Sexism and Other Isms	3
<u>SW 222</u> Social Work Values	3
<u>SW 222L</u> Social Work Values Lab	1
<u>SW 302</u> Social Welfare Policy Analysis	3
<u>SW 315</u> Human Behavior and Social Environment	3
<u>SW 320</u> Introduction to Research Methods	3
<u>SW 321</u> Statistics for Social Work Research	3
<u>SW 322</u> Social Work Practice I	3

<u>SW 322L</u>	SW 322L Practice I Lab	1
<u>SW 422</u>	Social Work Practice II	3
<u>SW 422L</u>	SW 422L Practice II Lab	1
<u>SW 490</u>	Practicum in Social Work/SL	9
<u>SW 494</u>	Practicum Seminar	3

### Social Work Elective

Select six hours from SW courses	6
Total Hours	51

## Additional Requirements

### General Electives

Students must take general electives to reach the 120 semester hour requirement.

## Proposed Program of Study for a Major in Social Work

### Freshman

First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
MA 110		3 HY 121	3
HY 120		3 SOC 100	3
PY 101		3 SW 100	3
Core Curriculum Area II: Fine Art <sup>1</sup>		3 Core Curriculum Area II: Humanities	3
	15		15

### Sophomore

First Term	Hours	Second Term	Hours
SW 200		3 SW 222	3
BY 101 & BY 102		4 SW 222L	1
SW 207		3 ANTH 101	3
EC 210 or 211		3 Core Curriculum Area III: Natural Science with Laboratory	4
Core Curriculum Area II: Literature <sup>2</sup>		3 Core Curriculum Area II: Humanities or Fine Art	3
	16		14

### Junior

First Term	Hours	Second Term	Hours
PSC 101 or 221		3 SW 302	3
Social Work (SW) Elective		3 SW 322	3
General Electives		9 SW 322L	1
		SW 320	3
		General Elective	3
	15		13

### Senior

First Term	Hours	Second Term	Hours
SW 315		3 SW 490	9
SW 321 or SOC 410		3-4 SW 494	3
SW 422		3	
SW 422L		1	
Social Work (SW) Elective		3	
General Elective		3	
	16-17		12

Total credit hours: 116-117

**Junior**

First Term	Hours	Second Term	Hours
SW 320 (SW 320 Honors Research )		3 SW 496 (Honors Seminar)	3
	3		3

**Senior**

First Term	Hours	Second Term	Hours
SW 498 (Honors Independent Study)		1-3 SW 494 (Honors Practicum Seminar)	3
	1-3		3

Total credit hours: 10-12

- <sup>1</sup> Select One: ARH 101, ARH 203, ARH 204, ARH 206, MU 120, THR 100, THR 105 or THR 200.
- <sup>2</sup> Select One: EH 216, EH 217, EH 218, EH 221, EH 222, EH 223 or EH 224.

## Minor in Social Work

Requirements	Hours
<b>Required Social Work</b> <sup>1</sup>	
<u>SW 100</u> Introduction to Social Work	3
<b>Social Work Electives</b>	15
Select fifteen hours from SW courses <sup>2</sup>	
Total Hours	18

- <sup>1</sup> Online option is available.
- <sup>2</sup> Social Work Electives: 200, 208, 222 and 222L, 302, 305, 315, 320, 321, 339, 428, 432, 452, 454, 478, and 499

## Grade Requirement

"C" or better is required in all courses applied to the minor.

## Purpose

The Social Work Honors Program encourages a stellar opportunity for our brightest students to prepare for graduate study and/or professional careers in social work through enhanced and personalized exposure to the application of social work research/evidence-based practice. The Program, through an individualized match with Department faculty and established social work researchers, will build students' problem-solving skills and promote critical and independent thinking. In partnership with a faculty mentor, students will have the opportunity to participate in a research project and present the results at an event that highlights student research (e.g., the UAB Expo or the Department's Social Work Month activities). The Honors Program can accept up to five (5) outstanding students each term; thus, meeting the eligibility requirements does not guarantee acceptance into the Program.

## Benefits

- Honors students will benefit from one-on-one mentoring and collaboration in research and/or evidence-based practice with faculty in the Department that can substantially enhance student preparation for graduate school and practice.
- Honor students will participate in a professional presentation, which will provide academic exposure and enhance the student's understanding of the field and practice of social work.
- Students who complete the program will graduate with the "With Honors in Social Work" distinction.

## Eligibility Requirements

- Declaration and acceptance into the social work major (application can be in the process of being reviewed at the time of submission); in order to be accepted into the social work major, students must have completed (or be in the process of completing at the time of submission) (SW 100, SW 200, SW 207, SW 222, SW 222L);
- Minimum 3.2 cumulative GPA and a minimum 3.6 GPA in social work courses;
- Completion of Honors Program application process.

## Application Process

The completed application packet should be submitted to the Department of Social Work, University Hall Third Floor. Currently, applications are accepted on a rolling basis; it is recommended that interested students should submit their application packets no later than mid-March or mid-November, whichever precedes the desired semester of Honors Program acceptance. Students will receive periodic notifications about their Honors Program application.

The Honors Program application packet includes the following documents:

- Honors Program Application Form\*
- Resume

\*NOTE: The application **must** be typed.

## Review Process

Applications will be reviewed by the Honors Program Director and other Department faculty members. In some cases, a subsequent interview with the Honors Program Director may be warranted. Ideally, the review process will be completed within one month of student's submission of application materials. Students accepted into the Honors Program will receive notification via formal letter from the Department Chair and the Honors Program Director.

## Requirements

To complete the Department of Social Work Honors Program and, thus, graduate with Honors distinction, students must:

- Complete all required courses for the Social Work major.
- Complete three course credit hours of Honors Seminar (SW 496); the Honors Seminar is usually scheduled as a 3-hour course.
- Complete three course credit hours of the Honors Independent Study (SW 498); the Honors Independent Study is usually scheduled as a 3-hour course, but may be scheduled for 1-3 hours depending on the plan of study agreed upon by the Honors Program student and their faculty mentor.
- Maintain a minimum 3.2 cumulative GPA and minimum 3.6 GPA in social work courses through graduation.
- Complete a professional research presentation at an approved conference or event.

## Contact

For additional information and/or questions about the Social Work Honors Program, please contact:

Dr. D. Scott Batey

Associate Professor and Honors Program Director

UAB Department of Social Work

3154 University Hall

1402 10th Avenue South

Birmingham, AL 35294

[dsbatey@uab.edu](mailto:dsbatey@uab.edu)

(205) 996-7984

## Courses

### **SW 100. Introduction to Social Work. 3 Hours.**

This course introduces students to the value-based profession of social work. Students will have the opportunity to learn about social work's history, mission, professional values and theoretical frameworks (e.g. the systems/ecological perspective). Furthermore, students will explore areas in generalist practice and the varied roles and responsibilities of the social work profession. Students will be afforded the opportunity to examine their own personal values and how those values influence their views on social welfare problems and issues.

### **SW 200. Professional Communication in Social Work. 3 Hours.**

This course introduces the techniques of professional writing for social work practitioners. The course is designed to enhance professional and academic writing skills. Students will study how to craft narratives for funding applications, case records, and advocacy materials. Students will be introduced to the APA style. Additionally, students will complete a technology module focusing on information technology skills such as word processing, using presentation software, and communication skills with digital and social media. This is a writing intensive course.

### **SW 207. Racism, Sexism and Other Isms. 3 Hours.**

This course is intended to provide students with opportunities to examine various aspects of culture and cultural diversity as those aspects impact on the delivery of social services. The course also examines the impact of discrimination and oppression on various social service consumer populations.

### **SW 208. Disaster Preparedness. 3 Hours.**

This course uses a multi-disciplinary perspective on aspects of domestic disaster preparedness and response for natural and man-made disasters. This course provides review of current recommendations on disaster preparedness, local, state and federal response networks and organizations, and psychosocial aspects of response including sheltering, crisis intervention and psychological first aid. This course does not cover international issues.

### **SW 222. Social Work Values. 3 Hours.**

This course offers an introduction to the helping profession of social work with service learning opportunities in local social service agencies. A didactic classroom that focuses on self-awareness related values, professionalism and ethical practice. This is one of four foundation courses that student must successfully complete before fully admitted to the professional program. Must be concurrently taken with SW 222L Social Work Values Lab.

### **SW 222L. Social Work Values Lab. 1 Hour.**

This course offers an introduction to the helping profession of social work with service learning and simulation opportunities in local social service agencies. The service learning lab integrates field observation with self-awareness related values, professionalism and ethical practice (SL).

### **SW 278. Special Topics in Social Work. 3 Hours.**

In this course, students will learn special topics in social work. Students will discuss the history and the current status of social issues. Students will learn policies and programs available to address the special topics.

### **SW 279. Special Topics in Social Work. 3 Hours.**

In this course, students will explore special topics in social work. Students will discuss the history and the current status of social issues. Students will learn policies and programs available to address the special topics. Students in this course will complete a service learning project in consultation with one or more community based organizations. A combination of research and community engagement will provide students with a totally unique experience in scholarship.

### **SW 302. Social Welfare Policy Analysis. 3 Hours.**

This course introduces analytical frameworks with which to evaluate contemporary U.S. social welfare policy. It is designed for students with basic knowledge of the history of social welfare. The course also examines the relationship between current policy and the practice of social work today. Additionally explored is the real-world impact of current policy on the well-being of individuals and communities, within a social justice context.

### **SW 315. Human Behavior and Social Environment. 3 Hours.**

This course examines the interrelationships between the individual, family, small groups, organizations and the community. Special attention is given to diversity, cultural sensitivity, oppression and discrimination.

### **SW 320. Introduction to Research Methods. 3 Hours.**

This course introduces students to research theory, methods and tools; and to expand their appreciation of the quintessential role of research in guiding practice. Qualitative and Quantitative research methodologies, sampling, data collection, and data analysis, as well as skills in critiquing research studies will be taught in the context of ethical standards governing evaluation and research as set forth in the NASW Code of Ethics. This course is a part of the core curriculum of the social work program. Quantitative literacy is a significant component of this course. Honors students will have additional research related assignments.

### **SW 321. Statistics for Social Work Research. 3 Hours.**

This course provides the context for understanding the analysis and interpretation of quantitative data. Descriptive and inferential statistics will be covered, along with hypothesis testing and statistical significance. Students will become more familiarized with research-informed practice and practice-informed research. Quantitative Literacy is a significant component of this course.

**Prerequisites:** SW 320 [Min Grade: C]

### **SW 322. Social Work Practice I. 3 Hours.**

This course provides generalist model application of social work with concentration on the micro-level that provides the student with the opportunity to gain the knowledge, skills, understanding and competence needed for interventions at the beginning professional level. This course includes a service learning lab that allows students to practice a solution-focused relationship with emphasis on self-awareness, cultural-awareness, active listening, interviewing, and recording skills at all systems levels. This course must be taken at UAB. Transfer credits will not be accepted for this course.

**Prerequisites:** (SW 222 [Min Grade: C] and SW 222L [Min Grade: C]) or SW 222 [Min Grade: C]

**SW 322L. Social Work Practice Lab 1. 1 Hour.**

This service learning lab focuses on generalist model application of social work practice at the micro level. The lab emphasizes systems theory and strengths perspectives to examine individuals and families, and gives students the opportunity to discuss and practice necessary skills for practice. This lab allows students to practice working with individuals and/or families in local social service agencies, using ethical and professional standards based on NASW Code of Ethics (SL). Students will complete 32 hours in service learning and/or simulation experiences. This course must be taken at UAB. Transfer credits will not be accepted for this course.

**SW 339. Child Welfare in Social Work. 3 Hours.**

This course addresses issues children face in today's society and identify possible intervention strategies. This course will also identify current trends in service delivery and relevant policy issues concerning the health and well-being of children. Students will have the opportunity to examine the diversity of families in today's society to better understand and appreciate the roles children play in their family systems.

**SW 378. Special Topics in Social Work. 3 Hours.**

The purpose of this special topics course is to expose students to topics that are contemporary issues in social work. These topics are dynamic and change depending on what is happening in the broader society. They present immediate challenges to practitioners and often involve complex policy considerations that provide space for advocacy work in the macro practice of social work. This course will incorporate advanced scholarship through the in-depth review of recent studies on a variety of contemporary topics.

**SW 379. Special Topics in Social Work - Service Learning. 3 Hours.**

The purpose of this special topics course is to expose students to topics that are contemporary issues in social work. These topics are dynamic and change depending on what is happening in the broader society. They present immediate challenges to practitioners and often involve complex policy considerations that provide space for advocacy work in the macro practice of social work. This course will incorporate advanced scholarship through the in-depth review of recent studies on a variety of contemporary topics. Students in this course will complete a service learning project in consultation with one or more community based organizations. A combination of research and community engagement will provide students with a totally unique experience in scholarship.

**SW 422. Social Work Practice II. 3 Hours.**

This course focuses on generalist model application of social work practice at the mezzo and macro levels. The course emphasizes systems theory and strengths perspectives to examine groups, communities and organizations, and gives students the opportunity to discuss and practice necessary skills for practice. This course must be taken in conjunction with the required service learning lab that allows students to practice working with groups, communities and organizations in local social service agencies, using ethical and professional standards based on NASW Code of Ethics. (SL). Must be taken concurrently with SW 422L Practice II Lab. This course must be taken at UAB. Transfer credits will not be accepted for this course.

**Prerequisites:** SW 322 [Min Grade: C] or (SW 322 [Min Grade: C] and SW 322L [Min Grade: C])

**SW 422L. Social Work Practice Lab II. 1 Hour.**

This service learning lab focuses on generalist model application of social work practice at the mezzo and macro level. The lab emphasizes systems theory and strengths perspectives to examine groups, communities and organizations, and gives students the opportunity to discuss and practice necessary skills for practice. This lab allows students to practice working with groups, communities and organizations in local social service agencies, using ethical and professional standards based on NASW Code of Ethics (SL). Students will complete 32 hours in service learning and/or simulation experiences. This course must be taken at UAB. Transfer credits will not be accepted for this course.

**SW 428. Medical and Mental Health Social Work. 3 Hours.**

This course provides an introduction to and overview of working with people called "patients" in medical and mental health. Through this course, students will obtain a basic understanding on how to effectively assist individuals, groups, families, and communities impacted by various illnesses. The role of the social worker on the care team in various settings will be examined. The course also examines special population groups, resource allocation, service delivery, and legal and ethical considerations.

**SW 452. Birmingham Neighborhood Studies. 3 Hours.**

This is an interdisciplinary course that explores the visual and material culture, history, and urban development of four Birmingham neighborhoods in transition. It emphasizes community engagement through active study of Birmingham's historic neighborhoods. Students will study and learn about the history of select Birmingham neighborhoods from different disciplinary lenses (social work, history, and art history), examine artifacts and documents related to them, and engage and collaborate with community members in order to develop written and creative projects based on their research. Projects will be presented at an exhibition at the end of the semester. This course requires significant time spent off-campus, in the Birmingham community. During the first several weeks of class, we will take field trips during class to the four different neighborhoods. Field trip permissions must be completed.

**SW 454. Working in Addiction and Recovery. 3 Hours.**

This course examines the impact of substance use disorder on individuals, families, groups, organizations, institutions and communities. This course is recommended for students who want to expand their knowledge and sensitivity for understanding the special problems that substance use disorder brings to society. Course content includes identification of the various drugs of abuse, major theories of addiction, and examination of the psychological and physiological consequences of substance use disorder.

**SW 478. Special Topics in Social Work. 3 Hours.**

Study of current issues in social work.

**SW 490. Practicum in Social Work/SL. 9 Hours.**

This course integrates social work knowledge and values with application of professional helping skills. Students participate in a full-time placement in approved social service agencies under supervision of master's-level social workers. This is taken concurrently with SW 494. This course must be taken at UAB. Transfer credits will not be accepted for this course.

**Prerequisites:** (SW 422 [Min Grade: C]) or (SW 422 [Min Grade: C] and SW 422L [Min Grade: C])

**SW 494. Practicum Seminar. 3 Hours.**

This capstone course in Social Work is an integrative seminar that must be taken concurrently with SW 490 (Practicum in Social Work). The seminar reviews basic social work tools that will enhance the students' work with client systems by providing opportunities to increase their knowledge of the social work profession, practice collegiate collaboration for the benefit of clients, and engage in strategies for problem-solving. The seminar also provides a forum to review students' practicum experiences, discuss social work practice issues, and reflect on the relationship of these experiences to their overall social work education program. Social Work Honors Students will be required to complete an additional 100 hours involved in community based research. This course must be taken at UAB. Transfer credits will not be accepted for this course.

**SW 496. Social Work Honors Seminar. 3 Hours.**

This course is designed to enhance students' problem solving skills, critical and independent thinking, and application of research/evidence-based practice. Faculty mentors will assist students in exploring social work practice interest areas and will provide preparation for graduate study and/or professional careers in Social Work. This course is required for all Social Work Honors students.

**SW 498. Honors Independent Study I. 1-3 Hour.**

This course provides opportunities for Honors students to initiate their research project and receive one-on-one mentorship. This independent study is required for all Social Work Honors students. Instructor's permission is required. Course may be repeated.

**SW 499. Independent Study II. 1-3 Hour.**

This course provides opportunities for student to pursue their specific interests in social issues and topics. Students will work closely with a faculty member to design readings, assignments, and/or activities to meet their learning goals. Instructor's permission is required.

## Department of Sociology

**Chair:** Dr. Verna Keith

Sociology is the scientific study of human social behavior, from the smallest group interactions to the broadest and most complex social processes. As a social science, the discipline analyzes the patterns of behavior in all types of social relationships. This field has broad scope and relevance and can be crafted to best serve a student's career or post-degree education.

The Department of Sociology offers three majors in sociology: Bachelor of Arts degrees in 1) General Sociology, 2) Social Psychology Concentration in Sociology, and a Bachelor of Science degree in 3) Medical Sociology. Minors are offered in General Sociology, Medical Sociology, and Social Psychology.

The undergraduate program in general sociology is designed to complement UAB's location in a large metropolitan area. Such a location provides an excellent laboratory for study in several areas, including social inequality and urban sociology, as well as, medical sociology and social psychology. Students may choose from several courses in each of these areas to best compliment their career goals. The general sociology major provides a broad background for students who are not planning a career in sociology but who want an understanding of the nature and development of social structures and social issues-knowledge that can be applied to a variety of occupations and careers. Additionally, the general sociology degree serves as useful pre-professional training for careers such as law, business, education, and government. Finally, the program

helps prepare students for graduate study in sociology and other social sciences.

The social psychology concentration provides a perspective on interpersonal relationships that draws on research conducted in sociology and psychology. In the broadest sense, social psychology is the study of how people's behaviors and thoughts influence, and are influenced by, the actions of others. As a field of study, social psychology has typically focused on the study of persons in face-to-face situations and small group settings. The social psychology concentration prepares students for careers in service-oriented fields such as health professions, education, business, and government, and graduate work in social psychology.

Medical sociology provides an analytic framework for understanding the social contexts of health, illness, and health care. The Bachelor of Science degree in Medical Sociology is a research-focused degree that prepares students for graduate studies in medical sociology or a career in health-related services, medical (social) research, or government data analysis. In addition, when the Bachelor of Science in Medical Sociology is paired with pre-professional medical programs, students are provided with additional rigor in the social dynamics of the careers of their choice (nursing, medical school, and the health professions).

## Graduate Program

For information on the graduate program in sociology, please consult the Department of Sociology or the UAB Graduate School Catalog.

## Bachelor of Arts with a Major in Sociology

### Grade and Level Requirement

- A grade of "C" or better is required in all Sociology courses.
- **SOC 489** must be completed at UAB. A total of 9 hours at 400+ must be taken in residence at UAB. Transfer students must earn at least 12 semester hours in residence.

Requirements	Hours
<b>SOC 100</b> Introduction to Sociology	3
<b>SOC 310</b> Sociological Literacy	3
<b>SOC 407</b> Development of Sociological Theory	3
<b>SOC 489</b> The Research Experience	4
<b>Sociology Electives</b>	
Select 24 hours in Sociology (SOC) courses. Three (3) credit hours at any level (100-level or higher). Nine (9) credit hours at the 200-level or higher. Nine (9) credit hours at the 300-level or higher and three (3) credit hours at the 400-level.	24
Total Hours	37

## Additional Requirement

### General Electives

Students must take general electives to reach the 120 semester hour requirement.

## Bachelor of Arts with a Major in Sociology and a Concentration in Social Psychology

### Grade and Level Requirement

- A grade of "C" or better is required in all Sociology courses.
- SOC 489 must be completed at UAB. A total of 9 hours at 400+ must be taken in residence at UAB. Transfer students must earn at least 12 semester hours in residence.

Requirements	Hours
<u>SOC 100</u> Introduction to Sociology	3
<u>PY 101</u> Introduction to Psychology	3
<u>SOC 120</u> Introduction to Social Psychology	3
<u>SOC 310</u> Sociological Literacy	3
<u>PY 372</u> Social Psychology	3
<u>SOC 405</u> Mind, Self and Society	3
<u>SOC 489</u> The Research Experience	4
<b>Psychology Requirements</b>	
Select one of the following:	3
<u>PY 212</u> Developmental Psychology	
<u>PY 218</u> Abnormal Psychology	
<u>PY 319</u> Psychopathology and Culture	
<b>Sociology Electives</b>	
Select nine (9) credit hours at the 300-level or higher, and three (3) hours at 400-level.	12
Total Hours	37

## Bachelor of Science with a Major in Medical Sociology

### Grade and Level Requirement

- A grade of "C" or better is required in all Sociology courses.
- SOC 489 must be completed at UAB. A total of 9 hours at 400+ must be taken in residence at UAB. In addition to UAB policies, transfer students must earn at least 12 semester hours in residence in the major.

Requirements	Hours
SOC 100 Introduction to Sociology	3
SOC 280 Introduction to Medical Sociology	3
SOC 310 Sociological Literacy	3
SOC 408 Medical Sociological Theory	3
SOC 489 The Research Experience	4
<b>Research Methods Requirements</b>	
SOC 410 Social Statistics	4
SOC 484 Quantitative Research Methods	3
SOC 486 Qualitative Research Methods	3
<b>Medical Sociology Electives. Three credit hours at the 100-level or higher (at least ONE of the following):</b>	<b>3</b>
SOC 135 Human Sexuality	
SOC 282 Minority Health	
SOC 283 The Sociology of Mental Health	
SOC 285 Introduction to Aging	
<b>Nine (9) credit hours at the 300-level or higher from the following:<sup>2</sup></b>	<b>9</b>
SOC 335 Human Sexuality: A Comparative Approach	
SOC 383 Drugs and Society	
SOC 395 HIV/AIDS and Society	
SOC 445 Biology and Society	
SOC 456 Death and Dying	
SOC 470 Population Dynamics	
SOC 480 Sociology of Health and Illness	

### SOC 482 Gender and Health

Total Hours	38
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- Students must take general electives to reach 120 semester hour requirement.
- Students can substitute one 3-credit hour SOC class at the 300+ level, for a Medical Sociology Elective

## Proposed Program of Study for a Major in Sociology

### Freshman

First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
MA 110		3 Core Curriculum Area IV: History <sup>1</sup>	3
SOC 100		3 Core Curriculum Area II: Humanities	3
Core Curriculum Area IV: History <sup>1</sup>		3 Core Curriculum Area IV: Social and Behavioral Science	3
Core Curriculum Area II: Fine Art <sup>2</sup>		3 General Elective	3
	15		15

### Sophomore

First Term	Hours	Second Term	Hours
Sociology (SOC) 100-level and above		3 Sociology (SOC) 200-level and above	3
SOC 310		3 Core Curriculum Area III: Natural Science with Lab	4
Core Curriculum Area II: Literature <sup>3</sup>		3 Core Curriculum Area II: Humanities	3
Core Curriculum Area III: Natural Science with Lab		4 General Elective/Minor	3
General Elective/Minor		3 General Elective/Minor	3
	16		16

### Junior

First Term	Hours	Second Term	Hours
Sociology (SOC) 200-level and above		3 Sociology (SOC) 300-level and above	3
Sociology (SOC) 200-level and above		3 Sociology (SOC) 300-level and above	3
General Elective/Minor		3 General Elective/Minor	3
General Elective/Minor		3 General Elective/Minor	3
General Elective/Minor		3 General Elective/Minor	3
	15		15

### Senior

First Term	Hours	Second Term	Hours
SOC 407		3 SOC 489	4
Sociology (SOC) 300-level and above		3 Sociology (SOC) 400-level and above	3
General Elective/Minor		3 General Elective/Minor	3
General Elective/Minor		3 General Elective/Minor	3
General Elective/Minor		3	
	15		13

Total credit hours: 120

- Select One: HY 101, HY 102, HY 104, HY 105, HY 120 or HY 121.
- Select One: ARH 101, ARH 203, ARH 204, ARH 206, MU 120, THR 100, THR 105 or THR 200.

<sup>3</sup> Select One: EH 216, EH 217, EH 218, EH 221, EH 222, EH 223 or EH 224.

## Proposed Program of Study for a Major in Social Psychology

Freshman			
First Term	Hours	Second Term	Hours
EH 101	3	EH 102	3
MA 110	3	PY 101	3
SOC 100	3	Core Curriculum Area II: Humanities	3
Core Curriculum Area IV: History <sup>1</sup>	3	Core Curriculum Area IV: History <sup>1</sup>	3
Core Curriculum Area II: Fine Art <sup>2</sup>	3	General Elective	3
	15		15
Sophomore			
First Term	Hours	Second Term	Hours
SOC 120	3	PY 372	3
Core Curriculum Area II: Literature <sup>3</sup>	3	Core Curriculum Area II: Humanities	3
Core Curriculum Area III: Natural Science with Laboratory	4	Core Curriculum Area III: Natural Sciences with Laboratory	4
General Elective/Minor	3	General Elective/Minor	3
General Elective/Minor	3	General Elective/Minor	3
	16		16
Junior			
First Term	Hours	Second Term	Hours
SOC 310	3	Sociology (SOC) 300-level	3
Sociology (SOC) 300-level and above	3	Psychology Requirement <sup>4</sup>	3
General Elective/Minor	3	General Elective/Minor	3
General Elective/Minor	3	General Elective/Minor	3
General Elective/Minor	3	General Elective/Minor	3
	15		15
Senior			
First Term	Hours	Second Term	Hours
SOC 405	3	SOC 489	4
Sociology (SOC) 300-level and above	3	Sociology (SOC) 400-level and above	3
General Elective/Minor	3	General Elective/Minor	3
General Elective/Minor	3	General Elective/Minor	3
General Elective/Minor	3		
	15		13

Total credit hours: 120

<sup>1</sup> Select One Sequence: HY 101 and HY 102; HY 104 and HY 105; HY 120 and HY 121.

<sup>2</sup> Select One: ARH 101, ARH 204, ARH 206, MU 120, THR 100, THR 105 or THR 200.

<sup>3</sup> Select One: EH 216, EH 217, EH 218, EH 221, EH 222, EH 223 or EH 224.

<sup>4</sup> Select One: PY 212, PY 218, PY 319

## Undergraduate Certificate in Social Science Research Methods

The student must obtain a grade of at least C in any course used to satisfy the certificate requirements, and a cumulative GPA of 3.0 over all courses used for the certificate. 12 of the 15 required credit hours must be earned at UAB, and 12 of the credits must be at the 300-level or above.

Requirements	Hours
<b>Foundations in Research Methods</b>	<b>3</b>
AAS 350 Research Methods in African American Studies	
CMST 494 Communication Research Methods	
CJ 300 Research Methods in Criminal Justice	
HY 300 The Historian's Craft	
PSC 400 Data, Politics, and Policy	
PY 215 Research Literacy in Psychology	
SW 320 Introduction to Research Methods	
SOC 310 Sociological Literacy	
<b>Advanced Data Collection</b>	<b>6</b>
ANTH 409 Peace through Global Governance	
ANTH 421 Technological Monitoring of Cultural Resources, Human Rights and Conflict	
ANTH 437 Real World Remote Sensing Applications	
PY 316 Research Methods in Psychology	
SOC 484 Quantitative Research Methods	
SOC 486 Qualitative Research Methods	
CJ 502 Computer Forensics	
MPA 684 Grants Management	
SOC 613 Intro to Applied Sociology Research Methods	
<b>Advanced Data Analysis</b>	
Select one class from the following:	3-4
CJ 302 Introduction to Statistics	
PY 216 Elementary Statistical Methods & 216L and Elementary Statistical Methods Laboratory	
PY 226 Honors Elementary Statistical Methods	
SW 321 Statistics for Social Work Research	
SOC 410 Social Statistics & 410L and Social Statistics Laboratory	
Select one class from the following:	3-4
CJ 466 Spatial Analysis	
PY 716 Introduction to Statistics and Measurement & 716L and Lab for Introduction to Statistics and Measurement	
SOC 503 Regression Analysis	
SOC 707 Statistical Programming for Social Sciences	
Total Hours	15-17

## General Sociology Minor

Requirements	Hours
<b>Introductory Sociology Courses</b>	
<u>SOC 100</u> Introduction to Sociology <sup>1</sup>	3
<b>Sociology Electives</b>	<b>15</b>
Select 15 hours from Sociology (SOC) courses, with at least nine hours at the 300-level or above. <sup>2</sup>	
Total Hours	18

<sup>1</sup> SOC 100 Introduction to Sociology may also be eligible to count toward Core Curriculum Area IV.

<sup>2</sup> SOC 245 will count toward this requirement, and may also be eligible to count toward Core Curriculum Area IV.

## Grade & Residency Requirement

A "C" or better is required in all courses applied to the minor. At least six hours of the minor must be completed at UAB, including three hours at the 300-level or above.

## Minor in Medical Sociology

Medical sociology focuses on study of the social causes and consequences of health and illness. In addition, it analyzes health organizations and institutions, the social behavior of health personnel and consumers of health care, as well as international patterns of health services. It is a particularly relevant minor for students preparing for a career in a health profession such as medicine, nursing, dentistry, or optometry.

A grade of "C" or Better is required for all courses within the Medical Sociology Minor.

Requirements	Hours
<b>Required Courses</b>	<b>6</b>
SOC 100 Introduction to Sociology	
SOC 280 Introduction to Medical Sociology	
<b>Medical Sociology Electives. Three credit hours at the 100-level or higher (at least ONE of the following):</b>	<b>3</b>
SOC 135 Human Sexuality	
SOC 282 Minority Health	
SOC 283 The Sociology of Mental Health	
SOC 285 Introduction to Aging	
<b>Nine (9) credit hours at the 300-level or higher from the following**:</b>	<b>9</b>
SOC 335 Human Sexuality: A Comparative Approach	
SOC 383 Drugs and Society	
SOC 395 HIV/AIDS and Society	
SOC 408 Medical Sociological Theory	
SOC 445 Biology and Society	
SOC 456 Death and Dying	
SOC 470 Population Dynamics	
SOC 480 Sociology of Health and Illness	
SOC 482 Gender and Health	
PY 305 Medical Psychology	
Total Hours	18

\*\* Students can substitute one 3 credit hour SOC class at the 300+level, for a Medical Sociology Elective.

## Grade and Residency Requirement

Transfer students must take at least 6 semester hours in sociology at UAB including at least 3 semester hours in courses numbered above 300. A grade of C or better is required in all courses applied toward the minor, including transfer courses.

## Minor in Social Psychology

Requirements	Hours
<b>Introductory Sociology Courses</b>	
<u>SOC 100</u> Introduction to Sociology <sup>1</sup>	3
<u>PY 101</u> Introduction to Psychology <sup>2</sup>	3
<u>SOC 120</u> Introduction to Social Psychology	3

<b>Psychology Electives</b>	
Select one (1) of the following courses:	3
<u>PY 212</u> Developmental Psychology <sup>3</sup>	
<u>PY 218</u> Abnormal Psychology	
<u>PY 319</u> Psychopathology and Culture	
<u>PY 372</u> Social Psychology	
<b>Sociology Electives</b>	
Select six (6) credit hours at the 300-level or higher.	6
Total Hours	18

<sup>1</sup> SOC 100 Introduction to Sociology may also be eligible to count toward Core Curriculum Area IV.

<sup>2</sup> PY 101 Introduction to Psychology may also be eligible to count toward Core Curriculum Area IV.

<sup>3</sup> PY 212 Developmental Psychology may also be eligible to count toward Core Curriculum Area IV.

## Grade & Residency Requirement

A "C" or better is required in all courses applied to the minor. At least six hours of the minor must be completed at UAB, including three hours at the 300-level or above.

## Honors Program in Sociology

### Purpose

The Sociology Honors Program is designed to help prepare outstanding undergraduate majors for graduate study in sociology or a career in medical sociology. The program offers a mentored research experience, and under faculty supervision, students will be exposed to a wide range of sociological perspectives and research areas.

### Eligibility

- Acceptance into the Sociology Honors Program requires the following:
- Completion of the required sociology courses including Introduction to Sociology, Theory, Research Methods and Statistics (by the end of the fall term of the year the student enters the honor's program).
  - An undergraduate cumulative GPA of 3.00 or above.
  - A junior or senior level standing (admittance to Honors Program must take place before August 1).
  - A cumulative GPA in Sociology courses of 3.3 or above.

### Requirements

- The following is required to graduate with honors in the Sociology Honors Program:
- Completion of the required sociology courses.
  - Completion of two-semester Honors seminar 498/499.
  - Completion of a senior-level thesis or Service Learning Project or Research Project under faculty supervision.

### Benefits

Participation in the Sociology Honors Program provides a unique opportunity for highly motivated, academically talented undergraduate students to have access to and interact with faculty in an environment that encourages creativity and independent scholarship. Seminar participation and research experience will be important to nurturing the student's sociological imagination. Completion of the Honors

Program is an advantage when applying to graduate school or looking for employment in an appropriate discipline-oriented field. Finally, students who complete the program will graduate "With Honors in Sociology."

## Contact

For additional information and/or admission to the Sociology Honors Program, contact:

The Director of Undergraduate Programs  
Department of Sociology  
460H Heritage Hall Bldg  
Birmingham, AL 35294-1152  
Telephone: (205) 934-3307

## Honors Program in Social Psychology

### Purpose

The Social Psychology Honors Program is designed to help prepare outstanding undergraduate majors for graduate study in Social Psychology or a career in medical Social Psychology. The program offers a mentored research experience, and under faculty supervision, students will be exposed to a wide range of sociological perspectives and research areas.

### Eligibility

Acceptance into the Social Psychology Honors Program requires the following:

- Completion of the required Social Psychology courses; including Introduction to Sociology, Theory, Research Methods and Statistics (by the end of the fall term of the year the student enters the honor's program).
- An undergraduate cumulative GPA of 3.00 or above.
- Junior or senior level standing (admittance to Honors Program must take place before August 1).
- Cumulative GPA in Social Psychology courses of 3.3 or above.

### Requirements

The following is required to graduate with honors in the Social Psychology Honors Program:

- Completion of the required Social Psychology courses.
- Completion of two-semester Honors seminar 498/499.
- Completion of a senior-level Thesis or Service Learning Project or Research Project under faculty supervision.

### Benefits

Participation in the Social Psychology Honors Program provides a unique opportunity for highly motivated, academically talented undergraduate students to have access to and interact with faculty in an environment that encourages creativity and independent scholarship. Seminar participation and research experience will be important to nurturing the student's sociological imagination. Completion of the Honors Program is an advantage when applying to graduate school or looking for employment in an appropriate discipline-oriented field. Finally, students who complete the program will graduate "With Honors in Social Psychology."

## Contact

For additional information and/or admission to the Social Psychology Honors Program, contact:

The Director of Undergraduate Programs  
Department of Sociology  
460H Heritage Hall Bldg  
Birmingham, AL 35294-1152

Telephone (205) 934-3307

## Honors Program in Medical Sociology

*Effective Fall 2019*

### Purpose

The Medical Sociology Honors Program is designed to help prepare outstanding undergraduate majors for graduate study in sociology or a career in medical sociology. The program offers a mentored research experience, and under faculty supervision, students will be exposed to a wide range of sociological perspectives and research areas.

### Eligibility

Acceptance into the Medical Sociology Honors Program requires the following:

- Completion of the required sociology courses including Introduction to Sociology ([SOC 100](#)) , Introduction to Medical Sociology ([SOC 280](#)) and Sociological Literacy ([SOC 310](#)) .
- An undergraduate cumulative GPA of 3.00 or above.
- A junior or senior level standing (admittance to Honors Program must take place before August 1).
- A cumulative GPA in Sociology courses of 3.3 or above.

### Requirements

The following is required to graduate with honors in the Medical Sociology Honors Program:

- Completion of the required medical sociology courses.
- Completion of two-semester Honors seminar SOC 498/499.
- Completion of a senior-level thesis or Service Learning Project or Research Project under faculty supervision.

### Benefits

Participation in the Medical Sociology Honors Program provides a unique opportunity for highly motivated, academically talented undergraduate students to have access to and interact with faculty in an environment that encourages creativity and independent scholarship. Seminar participation and research experience will be important to nurturing the student's sociological imagination. Completion of the Honors Program is an advantage when applying to graduate school or looking for employment in an appropriate discipline-oriented field.

Finally, students who complete the program will graduate "With Honors in Medical Sociology."

### Contact

For additional information and/or admission to the Medical Sociology Honors Program, contact:

The Director of Undergraduate Programs  
Department of Sociology  
460 Heritage Hall Bldg.  
Birmingham, AL 35294-1152  
Telephone: (205) 934-3307

## Courses

### SOC 100. Introduction to Sociology. 3 Hours.

Human social life, its forms and consequences for everyday life. Social inequality and differentiation by race, ethnicity, class and gender. Assessment of the competency is through performance on course examinations, quizzes, and written assignments. This course meets the Core Curriculum requirements for Area IV: Social and Behavioral Sciences.

### SOC 120. Introduction to Social Psychology. 3 Hours.

How societies and groups affect perception of self and others; emotional climate and structure of group interaction; processes and dynamics of group leadership, interaction, and dissolution.

### SOC 130. Intimate Relationships and the Family. 3 Hours.

Contemporary trends of marriage, cohabiting and partnerships; dating and courtship; social and psychological factors in mate selection; marital adjustment; role of sex, money, and children in marriage; divorce, other crisis situations, and changing patterns of family relationships in U.S. including the increase in LGBT families.

### SOC 135. Human Sexuality. 3 Hours.

Social basis of sexual interaction; varieties of sexual interaction; sexuality related to daily life; attitudes, contraceptive use, and fertility and fecundity; sex role controversies; relation to institutions such as family, religion, medicine, and education; social definitions as determinants of behavior.

### SOC 200. Social Change. 3 Hours.

Understanding social change helps us to better anticipate, prepare for, and shape the future. Examination of how and why human societies have changed so profoundly since prehistoric times; focus on information and technology as catalysts for change; patterns of change in contemporary societies from world system and comparative perspectives.

### SOC 220. Sociology of Sex and Gender. 3 Hours.

This course discusses the presumed biological differences; socialization differences of females and males; positions in and treatment by major institutions such as education, religion and economy; influence of gender labeling on development and lives of individuals.

### SOC 222. Sociology in the City. 3 Hours.

SOC 222: Sociology in the City A special topics class using sociological and interdisciplinary approaches to investigate a timely topic within the city, metropolitan area, state, or region, focusing connecting the student to the course material, through high impact practices (experiential learning and/or student research, or collaboration with stake holders, etc.).

### SOC 235. Sociology of Religion. 3 Hours.

Social aspects of individual religious experience; organization of churches and sects; relationships among religion, science, and other institutions; Major faith groups: religion and global conflict.

### SOC 245. Contemporary Social Problems. 3 Hours.

How certain social conditions or behaviors come to be seen as social problems, why they persist and how they can be changed. Emphasis on understanding contemporary issues, and how diverse social groups are impacted by them. This course meets the Core Curriculum requirements for Area IV: Social and Behavioral Sciences.

### SOC 250. Sociology of Race and Ethnicity. 3 Hours.

Various ethnic and racial groups, with emphasis on theory and research on intergroup relations; internal structure, culture, and experiences of ethnic groups, with emphasis on contemporary American society.

### SOC 275. Urban Sociology. 3 Hours.

Lifestyle changes in urban society; social and demographic characteristics of cities; benefits and problems resulting from these characteristics; urban problems compared with rural and suburban problems.

### SOC 278. Our Interconnected World. 3 Hours.

Globalization is a pervasive feature of contemporary social life. A world economy, a world polity, and a world culture are rapidly expanding. This course examines globalization's aspects and impacts to begin understanding its causes, effects, and implications for our own lives.

### SOC 280. Introduction to Medical Sociology. 3 Hours.

Social and cultural factors in defining health and illness; social determinants of health; health and illness behavior; health professionals; organization and delivery of health care in the U.S. (This course was formerly titled Health and Society).

### SOC 282. Minority Health. 3 Hours.

The relationship between race, ethnicity, health, social and behavioral factors, and health policy. Health related issues specific to various racial and ethnic groups will be discussed.

### SOC 283. The Sociology of Mental Health. 3 Hours.

Examination of mental and illness in its social context the social construction of mental health and illness the interrelationships between social structure, social factors, stress, coping resources and mental health experiences of mental health and illness.

### SOC 285. Introduction to Aging. 3 Hours.

Aging experience in modern world. Theories of aging, dimensions of aging, everyday concerns associated with aging, and future prospects of aging.

### SOC 290. Special Topics in Sociology. 1-3 Hour.

Irregularly offered courses on special topics in sociology. Varies in content. May be repeated for credit but topic may not be repeated.

**Prerequisites:** SOC 100 [Min Grade: C]

### SOC 291. Special Topics in Sociology. 1-3 Hour.

Irregularly offered courses on special topics in sociology. Varies in content. May be repeated for credit but topic may not be repeated.

**Prerequisites:** SOC 100 [Min Grade: D]

### SOC 292. Special Topics in Sociology. 1-3 Hour.

Irregularly offered courses on special topics in sociology. Varies in content. May be repeated for credit but topic may not be repeated.

**Prerequisites:** SOC 100 [Min Grade: D]

**SOC 293. Special Topics in Sociology. 1-3 Hour.**

Irregularly offered courses on special topics in sociology. Varies in content. May be repeated for credit but topic may not be repeated.

**Prerequisites:** SOC 100 [Min Grade: D]

**SOC 294. Special Topics in Sociology. 1-3 Hour.**

Irregularly offered courses on special topics in sociology. Varies in content. May be repeated for credit but topic may not be repeated.

**Prerequisites:** SOC 100 [Min Grade: D]

**SOC 295. Special Topics in Sociology. 1-3 Hour.**

Irregularly offered courses on special topics in sociology. Varies in content. May be repeated for credit but topic may not be repeated.

**Prerequisites:** SOC 100 [Min Grade: D]

**SOC 310. Sociological Literacy. 3 Hours.**

Focus on the critical understanding the sociological imagination through social research. This class will advance an understanding of the development, production, and interpretation of social research, including statistical analysis. The goal of the course is to provide students with the tools they need to become better consumers of social science research.

**SOC 315. The Sociology of Terrorism. 3 Hours.**

Examination of the social and social psychological explanations of the phenomenon, with particular emphasis given to theories of social construction of terrorism.

**SOC 316. Popular Culture. 3 Hours.**

Relationship between popular culture, our cultural heritage, and present cultural identity. Connections with big business, music, sports, politics, film and mass media. Analyze cultural objects (movies), compare past mindsets with the present.

**SOC 317. Sociology of Social Media. 3 Hours.**

Communication and information technology as a product of social, economic, political, cultural forces. Its impact on everyday life. Focus on the Internet and how individuals use it to gather, distribute and convey information.

**SOC 318. Passion in Action: Social Movements in America. 3 Hours.**

Theoretical and substantive examination of social movements, including reform, status, equality, and new social movements.

**SOC 319. Sociology of The South. 3 Hours.**

Focus on the South as a unique region. Examining areas such as history, politics, race relations, religion, music, personality, social types and collective behavior.

**Prerequisites:** SOC 100 [Min Grade: C]

**SOC 320. Sociology Through Fiction. 3 Hours.**

Sociological theories and concepts as illustrated in contemporary fiction. Classes will vary in terms of the fictional genre explored.

**SOC 323. Social Structure and Personality. 3 Hours.**

Interaction of social structure and personality; motivation, cognition, and impact of family, social class, and other institutions on personality development and mental illness.

**SOC 335. Human Sexuality: A Comparative Approach. 3 Hours.**

Sexual identity from a sociological perspective. Topics include: theories of sexual orientation, social movements related to sexual identity, development of sexual identity over the life course, and relationship to social institutions such as the family, medical community, and legal system.

**SOC 336. Sport and Society. 3 Hours.**

Sociological analysis of sport in contemporary societies. Sport as microcosm of society and modern institution; socialization process, problems of racial and sexual inequality, aggression and violence, mass media, and societal change.

**SOC 340. Deviant Behavior. 3 Hours.**

How and why certain behaviors, thoughts, and characteristics are labeled deviant; how and why certain individuals are labeled; consequences of being labeled; individual and group conflict; socialization to deviance; education; law enforcement; institutions; influence on family and friends.

**SOC 350. Sociology of Hip Hop. 3 Hours.**

Examines the emergence and impact of Hip Hop music and culture from historical, aesthetic, and sociopolitical perspectives.

**SOC 370. Population Problems. 3 Hours.**

Scope and method of population analysis; analysis of growth, distribution of characteristics, and changes of population of U.S.; impact of changes in population structure on American and world society.

**SOC 383. Drugs and Society. 3 Hours.**

Variety of legal and illegal drugs in use in our society, their history, their social effects, and strategies for control and prevention of their abuse.

**SOC 395. HIV/AIDS and Society. 3 Hours.**

This course explores the social impact of HIV/AIDS in local, national, and international contexts, focusing on how society has responded to and changed as a result of HIV/AIDS, including public health surveillance and interventions, policies and funding for prevention/research, and broader cultural changes.

**SOC 405. Mind, Self and Society. 3 Hours.**

Symbolic interaction as major theoretical perspective of sociological social psychology; origins of approach in Mead, Blumer, and Goffman. Significance of concepts such as role-taking, impression management, self, identity and symbolic interaction.

**SOC 407. Social Theory and Modern Life. 3 Hours.**

In this class, we examine multiple theoretical frameworks that scholars use in sociology, ranging from the earliest social theories to postmodernism. The readings are challenging, but they contain a treasure trove of useful tools that we will use to better understand age-old questions about human nature and social life, as well as contemporary social problems in the U.S.

**SOC 408. Medical Sociological Theory. 3 Hours.**

This course provides a basic introduction to the use of sociological theory in medical sociology. The course begins with an examination of the relevant work of classical theorists, such as Marx, Durkheim, and Weber, and extends to contemporary theory. Each body of theory is applied to pressing questions in medical sociology.

**Prerequisites:** SOC 310 [Min Grade: C]

**SOC 410. Social Statistics. 4 Hours.**

Elementary techniques and analysis; preparation and use of graphs and tables; measures of central tendency and dispersion; probability and sampling; tests of significance and measurements of association. Quantitative Literacy is a significant component of this course.

**Prerequisites:** MA 102 [Min Grade: D] or MA 110 [Min Grade: D]

**SOC 410L. Social Statistics Laboratory. 0 Hours.**

Laboratory component of SOC 410. Required for all sociology majors. Cross listed as SW 321L. Quantitative Literacy is a significant component of this course.

**SOC 415. Social Stratification. 3 Hours.**

Inequality of wealth, prestige, and power distribution examined as caste-class differences; effect of stratification on individuals and their behavior, lifestyle, and life chances.

**SOC 417. Political Sociology. 3 Hours.**

Political sociology traces the relationships between political ideas, government structures, social life, and the neverending efforts of individuals and groups to modify these relationships to achieve their best notions of the good life.

**SOC 431. Environmental Sociology. 3 Hours.**

Examines the interaction between the biophysical environment and human society, how social processes, define, construct, and alter the environment, and human causes and consequences of environmental problems.

**SOC 445. Biology and Society. 3 Hours.**

This course introduces students to the basic techniques and theoretical models through which modern sociologists and other social scientists incorporate genetic and biological information and processes into their understanding of society.

**SOC 456. Death and Dying. 3 Hours.**

Death, dying and bereavement from sociological and social psychological perspectives.

**SOC 457. Family Relations over the Life Course. 3 Hours.**

This course examines family relationships from middle to late adulthood from a sociological perspective. We examine issues such as caregiving, preparing for retirement, family relationships and how they vary depending on family structure, effects of divorce and remarriage, parenting at older ages and assisted reproductive technologies, transfers and saving, family ties etc. Much of the class is oriented towards how later life experiences are guided by earlier life situations.

**SOC 460. Sociology of Work. 3 Hours.**

Social organization of occupations; role and function in modern industrial society; gender and race; professionalism, job choices, and careers and stress; labor force composition, unemployment, and retirement. This class often does a field trip to a local business.

**SOC 470. Population Dynamics. 3 Hours.**

Scope and method of population analysis; analysis of growth, distribution of characteristics, and changes of population of U.S.; impact of changes in population structure on American and world society.

**SOC 472. Sociological Internship. 1-3 Hour.**

Students will participate in an internship related to a substantive area of sociology. Combines hands-on work experience with academic training by applying sociological principles to the real world. Contact the Sociology Internship Director for information, including deadlines for applying. May be repeated up to a maximum of 6 credit hours. Prerequisites: 12 credit hours in Sociology (Min Grade: C). Instructor Permission Required.

**SOC 480. Sociology of Health and Illness. 3 Hours.**

Critical evaluation of medical care system and health policy; social consequences of current health issues; social causes of health and illness; alternative practitioners and self-help groups. (This course was formerly titled Medical Sociology).

**SOC 482. Gender and Health. 3 Hours.**

Sociological, psychological and biological explanations of gender differences in mental and physical health across the life course.

**SOC 484. Quantitative Research Methods. 3 Hours.**

Comprehensive introduction to quantitative research in the social sciences, with an overview of the scientific method and the philosophy of science. Detailed study of quantitative research designs, sampling techniques, and measurement.

**Prerequisites:** SOC 310 [Min Grade: C]

**SOC 486. Qualitative Research Methods. 3 Hours.**

Learn methods for conducting qualitative sociological research including participant observation, interviews, and content analysis; ethics of qualitative research; ethnographic field strategies; preparing for and conducting in-depth interviewing and focus groups; analyzing the interrelationships between research and thinking theoretically; reading and evaluating qualitative research; proposing own research projects using appropriate qualitative methods.

**Prerequisites:** SOC 310 [Min Grade: C]

**SOC 488. Sociological Practice/SL. 3 Hours.**

Students will be involved in community research and/or service-learning projects related to a substantive area of sociology or gerontology. Placement in community organizations to focus on research or practice related to social policy.

**SOC 489. The Research Experience. 4 Hours.**

Capstone includes application of the basic tools of inquiry in sociological research; basic ethical issues in research; forming the research question; hypothesis testing; measurement, sampling, validity and reliability; data gathering techniques; research design; data management; disciplinary standards for writing the research proposal and reporting findings. For students in their last 30 hours.

**SOC 489L. The Research Experience Laboratory. 0 Hours.**

Laboratory component of the Capstone course, required of all Sociology majors.

**SOC 490. Independent Study: Sociology. 1-3 Hour.**

Individually designed programs for semi-independent research or guided readings in areas and subjects otherwise unavailable. Irregularly offered courses on special topics in sociology. Varies in content. May be repeated for credit but topic may not be repeated. This is a designated service-learning course integrating academic learning, civic learning and meaningful service to the community.

**SOC 491. Independent Study and Special Courses in Sociology. 1-3 Hour.**

Peer-facilitated, structured dialogues on topics related to social identity in a diverse society. Separate topics on gender, race, religion, sexualities. May be repeated for credit but topic may not be repeated.

**SOC 492. Independent Study and Special Courses in Sociology. 1-3 Hour.**

Individually designed programs for semi-independent research or guided readings in areas and subjects otherwise unavailable. Irregularly offered courses on special topics in sociology. Varies in content. May be repeated for credit but topic may not be repeated.

**SOC 493. Independent Study and Special Courses in Sociology. 1-3 Hour.**

Individually designed programs for semi-independent research or guided readings in areas and subjects otherwise unavailable. Irregularly offered courses on special topics in sociology. Varies in content. May be repeated for credit but topic may not be repeated.

**SOC 494. Independent Research in Sociology. 1-3 Hour.**

Individually designed programs for semi-independent research. Irregularly offered course on research topics in sociology. Varies in content. May be repeated for credit and continued topic with advancement.

**SOC 495. Independent Research in Sociology. 1-3 Hour.**

Individually designed programs for semi-independent research. Irregularly offered course on research topics in sociology. Varies in content. May be repeated for credit and continued topic with advancement.

**SOC 498. Sociology Honors Seminar. 3 Hours.**

Special seminar for sociology honors students. Prerequisite: admission to the Sociology Honors Program and permission of the Undergraduate Director in Sociology.

**SOC 499. Sociology Honors Thesis. 3 Hours.**

Sociology Honors Thesis.

## Department of Theatre

**Chair:** Mr. Kelly Dean Allison, MFA

The Department of Theatre subscribes to the philosophy that classroom study and practical experience are complementary and of equal value. A wide array of courses related to the performing arts are taught in well equipped studios and smart classrooms. Production opportunities are available in state-of-the-art production facilities, the Morris K. Sirote Theatre, and the Odess Theatre in the Alys Robinson Stephens Performing Arts Center.

## Majors

The Department of Theatre offers a Bachelor of Arts (BA) in Theatre with a General Concentration, a Pre-Professional Performance Concentration, a Pre-Professional Design and Technology Concentration, a Bachelor of Fine Arts (BFA) in Musical Theatre, and a minor in Theatre. The department also offers an honors program for qualified students.

BA Theatre majors may be admitted on a General Concentration without an audition or portfolio presentation. The General Concentration provides a student with a broad education in all areas of theatre. Those who wish to specialize in performance may audition for admission to the Pre-Professional Concentration in Performance, and those who wish to specialize in design and production may present a portfolio for admission to the Pre-Professional Concentration in Design and Production. The Pre-Professional Performance Concentration focuses on acting, with an emphasis on movement and vocal training. The Pre-Professional Design and Technology Concentration focuses on developing design and production skills in the areas of scenery, costume, lighting and audio. Auditions and portfolio reviews are held on campus two times during the academic year starting in November. Additional auditions and portfolio reviews are held at a variety of state, regional and national events.

The Musical Theatre BFA training program focuses on musical theatre performance skills with 78 semester hours in theatre, music, and dance. An audition is required to declare a Musical Theatre major. Auditions are held on campus two times during the academic year starting in November and additional auditions are conducted at a variety of state, regional and national events. Enrollment is limited so students who wish to pursue a Musical Theatre BFA are encouraged to audition early.

Theatre faculty provide individual mentoring and advising to help students matriculate and achieve their academic and professional goals. All students are expected to show progress toward completing university core requirements, participate in the department's productions, and to be professional both in attitude and actions while representing the department.

## Scholarships, Stipends, and Other Financial Aid

In addition to university financial aid, stipends and scholarships are available through the Department of Theatre to qualified students. Students awarded Theatre stipends and scholarships are expected to remain in academic good standing. Department scholarships require an overall GPA of 2.5 and a GPA of 3.0 for accumulated Theatre coursework. Students with department stipends must maintain an overall GPA of 2.25. For more information, call (205) 934-3236 or visit the department web site at [www.uab.edu/cas/theatre](http://www.uab.edu/cas/theatre).

## Bachelor of Arts with Major in Theatre and a General Theatre Concentration

Requirements		Hours
<b>Required Courses</b>		
THR 124	Theatre Technology: Scenery and Lighting	3
THR 125	Theatre Technology: Costumes and Makeup	3
THR 154	Beginning Acting	3
THR 160	Theatre Cornerstone	1
THR 210	Introduction to Theatrical Design	3
THR 235	Analysis of Dramatic Literature	3
THR 365	Directing I	3
THR 481	Theatre History to 1860	3
THR 482	Theatre History from 1860 to Present	3
THR 491	Theatre Capstone	2
<b>Theatre Design</b>		
Select three hours from the following:		3
THR 323	Lighting Design	
THR 325	Theatre Sound Design and Technology	
THR 326	Scenic Design	
THR 327	Costume Design	
<b>Theatre Performance</b>		
Select six hours from the following:		6
THR 202	Voice and Movement for the Actor I	
THR 203	Voice and Movement for the Actor II	
THR 230	Stage Management	
THR 254	Intermediate Acting	
THR 318	Stage Combat	
THR 343	Experimental Performance	
THR 355	Advanced Acting	
THR 377	Acting for the Camera	
THR 430	Auditioning	
THR 435	Dialects	
THR 455	Advanced Studio in Performance	
THR 460	Acting and Voicing with Archetypes	
THR 465	Directing II	
<b>Theatre Writing</b>		
Select three hours from the following:		3
THR 215	Playwriting I	
THR 216	Screenwriting I	
THR 300	Exploring the African-American Creative Experience	
THR 450	Costume History and Period Style for the Theatre	
<b>Theatre Practicum</b>		
Complete three hours <sup>1</sup>		3
THR 204	Beginning Production Practicum	
THR 205	Beginning Performance Practicum	

**Theatre Electives**

Select six hours from the following:	6
THR 105 Introduction to Dance <sup>2</sup>	
THR 200 Plays on Film <sup>2</sup>	
THR 202 Voice and Movement for the Actor I	
THR 203 Voice and Movement for the Actor II	
THR 204 Beginning Production Practicum	
THR 215 Playwriting I	
THR 216 Screenwriting I	
THR 226 Drawing and Rendering for the Theatre	
THR 230 Stage Management	
THR 254 Intermediate Acting	
THR 300 Exploring the African-American Creative Experience	
THR 315 Playwriting II	
THR 316 Screenwriting II	
THR 318 Stage Combat	
THR 323 Lighting Design	
THR 325 Theatre Sound Design and Technology	
THR 326 Scenic Design	
THR 327 Costume Design	
THR 343 Experimental Performance	
THR 355 Advanced Acting	
THR 360 Internship	
THR 377 Acting for the Camera	
THR 404 Advanced Production Practicum	
THR 405 Advanced Performance Practicum	
THR 425 Pattern Drafting	
THR 430 Auditioning	
THR 435 Dialects	
THR 450 Costume History and Period Style for the Theatre	
THR 455 Advanced Studio in Performance	
THR 460 Acting and Voicing with Archetypes	
THR 462 Special Topics	
THR 465 Directing II	
THR 470 Individual Project in Design and Production	
THR 471 Advanced Studio in Scenery	
THR 472 Advanced Studio in Costumes	
THR 473 Advanced Studio in Lighting	
THR 474 Advanced Studio in Audio	
THR 496 Honors Project	
THR 499 Individual Studies	
Total Hours	48

<sup>1</sup> One hour may be THR 205 performance, two hours must be technical THR 204.

<sup>2</sup> Students may NOT apply THR 105 or THR 200 toward both this requirement and the Core Curriculum Area II requirement.

## Bachelor of Arts with a Major in Theatre and a Concentration in Pre-Professional Design & Technology

Requirements	Hours
<b>Required Courses</b>	
THR 124 Theatre Technology: Scenery and Lighting	3
THR 125 Theatre Technology: Costumes and Makeup	3
THR 154 Beginning Acting	3

THR 160 Theatre Cornerstone	1
THR 210 Introduction to Theatrical Design	3
THR 235 Analysis of Dramatic Literature	3
THR 365 Directing I	3
THR 481 Theatre History to 1860	3
THR 482 Theatre History from 1860 to Present	3
THR 491 Theatre Capstone	2
<b>Theatre Design</b>	
THR 323 Lighting Design	3
THR 326 Scenic Design	3
THR 327 Costume Design	3
<b>Theatre Practicum</b> <sup>1</sup>	
Complete three hours:	3
THR 204 Beginning Production Practicum	
THR 205 Beginning Performance Practicum	
<b>Design &amp; Technology Requirements</b>	
THR 226 Drawing and Rendering for the Theatre	3
THR 450 Costume History and Period Style for the Theatre	3
<b>Design &amp; Technology Electives</b>	
Select six hours from the following:	6
THR 325 Theatre Sound Design and Technology	
THR 425 Pattern Drafting	
THR 470 Individual Project in Design and Production	
THR 471 Advanced Studio in Scenery	
THR 472 Advanced Studio in Costumes	
THR 473 Advanced Studio in Lighting	
THR 474 Advanced Studio in Audio	
Total Hours	51

<sup>1</sup> One hour may be THR 205 performance, two hours must be THR 204 technical .

## Bachelor of Arts with a Major in Theatre and a Concentration in Pre-Professional Performance

Requirements	Hours
<b>Required Courses</b>	
THR 124 Theatre Technology: Scenery and Lighting	3
THR 125 Theatre Technology: Costumes and Makeup	3
THR 154 Beginning Acting	3
THR 160 Theatre Cornerstone	1
THR 202 Voice and Movement for the Actor I	3
THR 203 Voice and Movement for the Actor II	3
THR 204 Beginning Production Practicum	2
THR 205 Beginning Performance Practicum	1
THR 210 Introduction to Theatrical Design	3
THR 235 Analysis of Dramatic Literature	3
THR 254 Intermediate Acting	3
THR 355 Advanced Acting	3
THR 365 Directing I	3
THR 430 Auditioning	3
THR 481 Theatre History to 1860	3
THR 482 Theatre History from 1860 to Present	3
THR 491 Theatre Capstone	2
<b>Performance Electives</b>	
Select six hours from the following:	6

THR 343	Experimental Performance	
THR 435	Dialects	
THR 455	Advanced Studio in Performance (May be repeated)	
THR 460	Acting and Voicing with Archetypes	
Total Hours		51

## Bachelor of Fine Arts in Musical Theatre

Requirements		Hours
THR 100	Introduction to the Theatre	3
or THR 105	Introduction to Dance	
THR 200	Plays on Film	3
THR 106	Jazz I	2
THR 107	Tap I	2
THR 108	Ballet I	2
THR 124	Theatre Technology: Scenery and Lighting	3
THR 125	Theatre Technology: Costumes and Makeup	3
THR 140	Musical Theatre Class Voice	1
THR 140 must be taken a second time		1
THR 154	Beginning Acting	3
THR 160	Theatre Cornerstone	1
THR 202	Voice and Movement for the Actor I	3
THR 203	Voice and Movement for the Actor II	3
THR 204	Beginning Production Practicum <sup>1</sup>	2
THR 205	Beginning Performance Practicum	1
THR 206	Jazz II	2
THR 208	Ballet II	2
THR 258	Musical Theatre Performance I	3
THR 259	Musical Theatre Performance II	3
THR 261	Musical Theatre Showcase I	1
THR 254	Intermediate Acting	3
THR 306	Jazz III	2
THR 361	Musical Theatre Showcase II	1
THR 355	Advanced Acting	3
THR 411	Contemporary Musical Theatre Dance Styles I	2
THR 412	Contemporary Musical Theatre Dance Styles II	2
THR 430	Auditioning	3
THR 451	Musical Theatre History and Script Analysis	3
THR 461	Musical Theatre Showcase III	1
THR 493	Musical Theatre Capstone	2
THR 401	NYC Showcase	1
MUP 124	Class Piano <sup>1</sup>	1
MUP 124 must be taken a second time		1
MUP 140	Private Lessons: Voice <sup>1</sup>	1
MUP 140 must be taken a second time		1
<b>Music Theory Requirement</b>		
MU 100	Fundamentals of Music	3
MU 221	Music Theory I	3
<b>Aural Skills Requirement</b>		
2 hours required:		2
MU 224	Aural Skills I	
Choose one from:		1
MUP 110	Gospel Choir	
MUP 120	University Chorus	
MUP 220	Concert Choir	
MUP 320	Chamber Singers	

MUP 321	Women's Chorale	
MUP 240	Private Lessons: Voice <sup>1</sup>	1
MUP 240 must be taken a second time		1
MUP 340	Private Lessons: Voice <sup>1</sup>	1
MUP 340 must be taken a second time		1
Total Hours		84

<sup>1</sup> This course must be repeated once

## Proposed Program of Study for a Major in Theatre with a General Concentration

### Freshman

First Term	Hours	Second Term	Hours
THR 124 or 125		3 THR 124 or 125	3
THR 154		3 THR 204	1
THR 160	1		
		7	4

### Sophomore

First Term	Hours	Second Term	Hours
THR 204		1 THR 204 or 205 (May be taken any semester)	1
THR 210		3 Performance Component or Writing Component <sup>1, 2</sup>	3
THR 235	3		
		7	4

### Junior

First Term	Hours	Second Term	Hours
THR 365 (or Design Component) <sup>4</sup>		3 THR 365 (or Design Component) <sup>4</sup>	3
THR 481 <sup>3</sup>		3 THR 482 <sup>3</sup>	3
		THR 491	2
		6	8

### Senior

First Term	Hours	Second Term	Hours
Theatre Elective <sup>5</sup>		3 Theatre Elective <sup>5</sup>	3
Performance Component or Writing Component <sup>1, 2</sup>		3 Performance Component or Writing Component <sup>1, 2</sup>	3
		6	6

Total credit hours: 48

- <sup>1</sup> Performance Component - Select six hours from the following courses: THR 202, THR 203, THR 230, THR 254, THR 318, THR 343, THR 355, THR 377, THR 430, THR 435, THR 455, THR 460, THR 465
- <sup>2</sup> Writing Component - Select three hours from the following: THR 215, THR 216, THR 300, THR 450.
- <sup>3</sup> Theatre History - Six required hours (do not have to be taken in sequence): THR 481 and THR 482.
- <sup>4</sup> Design Component - Select three hours from the following: THR 323, THR 325, THR 326, or THR 327.
- <sup>5</sup> Theatre Electives - Select six hours from the approved list of Theatre Electives for the General Concentration.

## Proposed Program of Study for a Theatre Major with a Concentration in Design and Production

Freshman			
First Term	Hours	Second Term	Hours
THR 124 or 125		3 THR 124 or 125	3
THR 154		3 THR 204	1
THR 160		1 THR 210	3
		7	7
Sophomore			
First Term	Hours	Second Term	Hours
THR 204		1 THR 204	1
THR 226		3 THR 323	3
THR 235		3 THR 450	3
		7	7
Junior			
First Term	Hours	Second Term	Hours
THR 326 or 327		3 THR 482 <sup>1</sup>	3
THR 481 <sup>1</sup>		3 THR 491	2
		Design and Production Elective <sup>2</sup>	3
		6	8
Senior			
First Term	Hours	Second Term	Hours
THR 326 or 327		3 THR 365	3
Design and Production Elective <sup>2</sup>		3	
		6	3
Total credit hours: 51			

<sup>1</sup> Theatre History - Six required hours (Do not have to take in sequence): THR 481 and THR 482.

<sup>2</sup> Design & Production Electives - Select six hours from the following: THR 230, THR 325, THR 470, THR 472, THR 474, THR 471, THR 473, or THR 474

## Proposed Program of Study for a Major in Theatre with a Concentration in Theatre Performance

Freshman			
First Term	Hours	Second Term	Hours
THR 124 or 125		3 THR 124 or 125	3
THR 154		3 THR 202	3
THR 160		1 THR 204	1
		7	7
Sophomore			
First Term	Hours	Second Term	Hours
THR 204		1 THR 210	3
THR 235		3 THR 343 or 455	3
THR 254		3	
		7	6
Junior			
First Term	Hours	Second Term	Hours
THR 203		3 THR 482 <sup>1</sup>	3
THR 365		3 THR 491	2

THR 481 <sup>1</sup>	3		
	9		5
Senior			
First Term	Hours	Second Term	Hours
THR 355		3 THR 205 (May be taken any semester)	1
THR 430		3 THR 435, 455, or 460	3
		6	4
Total credit hours: 51			

<sup>1</sup> Theatre History - Six required hours. (Do not have to take in sequence): THR 481 and THR 482.

## Proposed Program of Study for a Bachelor of Fine Arts in Musical Theatre

Freshman			
First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
THR 106 or 108 <sup>1</sup>		2 THR 140	1
THR 140		1 THR 154	3
THR 160		1 THR 203	3
THR 202		3 THR 206 or 208 <sup>1</sup>	2
MU 221 (Music Theory Sequence Only. University Core for Fundamentals of Music Sequence)		3 MU 222 (Music Theory Sequence Only. MU 100 for Fundamentals of Music Sequence)	3
MU 224 (or THR 204 Production Practicum)		1 MU 225 (Music Theory Sequence Only)	1
Freshman Year Experience		1	
		15	16
Sophomore			
First Term	Hours	Second Term	Hours
THR 106 or 108 <sup>1</sup>		2 MUP 124	1
MUP 124		1 MUP 140	1
MUP 140		1 THR 206 or 208 <sup>1</sup>	2
THR 204 (Music Theory Sequence Only. MU 224 Aurel Skills for Fundamentals Sequence)		1 THR 254	3
THR 261		1 THR 259	3
THR 258		3 Choral Ensemble (Fundamentals Sequence Only - add one credit)	
University Core (Music Theory Sequence Only. MU 221 for Fundamentals of Music Sequence)		3 University Core	3
University Core		3 University Core	3
		15	16
Junior			
First Term	Hours	Second Term	Hours
THR 107		2 THR 207	2
THR 125		3 MUP 240	1
THR 204		1 THR 430	3
MUP 240		1 THR 451	3
THR 361		1 University Core	3
University Core w/Lab		4 University Core	3

University Core	3		
	15		15
<b>Senior</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
THR 205 (May be taken any semester)	1	THR 124	3
MUP 340	1	THR 306	2
THR 411	2	MUP 340	1
THR 461	1	THR 355	3
THR 493	2	THR 401	1
University Core	3	University Core w/Lab	4
University Core	3		
Elective	1		
	14		14
Total credit hours: 120			

<sup>1</sup> Department will make assignment.

## Minor in Theatre

<b>Requirements</b>		<b>Hours</b>
<b>Required Theatre</b>		
THR 154	Beginning Acting	3
THR 210	Introduction to Theatrical Design	3
THR 235	Analysis of Dramatic Literature	3
<b>Theatre Technology</b>		
THR 124	Theatre Technology: Scenery and Lighting	3
THR 125	Theatre Technology: Costumes and Makeup	3
<b>Theatre History</b>		
Select one of the following:		3
THR 481	Theatre History to 1860	
THR 482	Theatre History from 1860 to Present	
<b>Theatre Electives</b>		
Select six hours from the following: <sup>1</sup>		6
THR 106	Jazz I	
THR 107	Tap I	
THR 108	Ballet I	
THR 202	Voice and Movement for the Actor I	
THR 203	Voice and Movement for the Actor II	
THR 204	Beginning Production Practicum	
THR 206	Jazz II	
THR 207	Tap II	
THR 208	Ballet II	
THR 215	Playwriting I	
THR 216	Screenwriting I	
THR 226	Drawing and Rendering for the Theatre	
THR 230	Stage Management	
THR 254	Intermediate Acting	
THR 300	Exploring the African-American Creative Experience	
THR 306	Jazz III	
THR 315	Playwriting II	
THR 316	Screenwriting II	
THR 318	Stage Combat	
THR 323	Lighting Design	
THR 325	Theatre Sound Design and Technology	
THR 326	Scenic Design	
THR 327	Costume Design	

THR 343	Experimental Performance	
THR 355	Advanced Acting	
THR 365	Directing I	
THR 377	Acting for the Camera	
THR 404	Advanced Production Practicum	
THR 420	Teaching Theatre in the Secondary School	
THR 425	Pattern Drafting	
THR 430	Auditioning	
THR 435	Dialects	
THR 450	Costume History and Period Style for the Theatre	
THR 455	Advanced Studio in Performance	
THR 460	Acting and Voicing with Archetypes	
THR 462	Special Topics	
THR 465	Directing II	
THR 470	Individual Project in Design and Production	
THR 471	Advanced Studio in Scenery	
THR 472	Advanced Studio in Costumes	
THR 473	Advanced Studio in Lighting	
THR 474	Advanced Studio in Audio	
THR 481	Theatre History to 1860	
THR 482	Theatre History from 1860 to Present	
Total Hours		24

<sup>1</sup> A course may not be used to satisfy this requirement and the core curriculum.

A grade of C or better is required for courses applying to this minor.

## Honors Program in Theatre

### Purpose

The Theatre Honors Program is designed for outstanding students majoring in Theatre. Through mentored work on an individually developed creative project or research topic, students will develop skills in preparation for graduate school or a professional career.

### Eligibility

Acceptance into the Theatre Honors Program requires the student to:

- Be a Theatre major.
- Have earned a 3.5 GPA in Theatre courses attempted.
- Have earned a 3.0 GPA overall.
- Have completed:

<b>Requirements</b>		<b>Hours</b>
THR 124	Theatre Technology: Scenery and Lighting	3
THR 125	Theatre Technology: Costumes and Makeup	3
THR 154	Beginning Acting	3
THR 210	Introduction to Theatrical Design	3
THR 235	Analysis of Dramatic Literature	3

- Have completed 60 hours toward the BA degree.
- Have completed at least two UAB Theatre production practicum.

### Requirements

- Completion of required courses for the Theatre major.
- Arrangement with a faculty mentor for a creative or research project.
- Submission of a formal project proposal to the faculty mentor and the Honor's committee.

- Registration for 3 credit hours of THR 496.
- Public presentation of the honors project.
- Acceptance of the completed project by the faculty mentor and the Honor's committee.
- Submission of an archival copy of the project to the Theatre Department.

## Benefits

In addition to the educational benefits of working on a mentored, individually designed project, honors majors receive a certificate at the Spring UAB Honors Convocation and will graduate "With Honors in Theatre."

## Contact

For more information and/or admission to the Theatre Honors Program, please contact:

Lee Shackelford  
Department of Theatre  
leeshack@uab.edu

## Courses

### THR 100. Introduction to the Theatre. 3 Hours.

Understanding the theatre experience through class lectures, reading and writing assignments, demonstrations, discussions, and viewing live evening performances. Writing is a significant component of this course. This course meets the Core Curriculum requirements for Area II: Fine Arts.

### THR 102. Introduction to Cinema. 3 Hours.

A survey of the world's greatest films and filmmakers emphasizing historical context and development of the art form over time. This course meets the Core Curriculum requirements for Area II: Fine Arts.

### THR 105. Introduction to Dance. 3 Hours.

Understanding the dance experience through class lectures, demonstrations, discussions, and viewing performances.

### THR 106. Jazz I. 2 Hours.

Basic movement and combinations based on modern jazz, Broadway/theatrical styles, and popular jazz forms. May be taken 3 times for a total of 6 hours.

### THR 107. Tap I. 2 Hours.

Basic rhythmic studies and combinations based on Broadway/theatrical tap styles. May be taken 3 times for a total of 6 hours.

### THR 108. Ballet I. 2 Hours.

Fundamentals of classic ballet technique with emphasis on analysis and proper execution. May be taken 3 times for a total of 6 hours.

### THR 124. Theatre Technology: Scenery and Lighting. 3 Hours.

Scenic construction techniques and execution of stage lighting via lectures, demonstrations, and practical application. Emphasis in tools, materials and procedure. 40 lab hours outside of scheduled classes required.

### THR 125. Theatre Technology: Costumes and Makeup. 3 Hours.

Fundamentals of costume construction, finishing and manipulation. Basic stage makeup techniques. Lectures, demonstrations and practical experience. 30 lab hours outside of scheduled classes required. Need instructor permission.

### THR 140. Musical Theatre Class Voice. 1 Hour.

In Musical Theatre Voice I, students will begin an exploration of musical theatre singing voice by focusing on vocal production, specifically the Estill Voice Training System. Students will learn the 13 Figures for the voice and the foundations for the Estill Voice Training System.

### THR 154. Beginning Acting. 3 Hours.

Introduction to the basic principles of acting. Exercises in talking and listening, actions and objectives, subtext and internal monologue.

### THR 160. Theatre Cornerstone. 1 Hour.

The objective of this course is to introduce incoming freshmen to the professional performing arts industry and the UAB Department of Theatre community. Its primary objective is to prepare students for a successful collegiate career in the study and practice of theatre. Course required for majors in the first fall semester of residency.

### THR 200. Plays on Film. 3 Hours.

Understanding major genres of drama through lecture, analysis, reading scripts, and viewing performances. This course meets the Core Curriculum requirements for Area II: Fine Arts.

### THR 202. Voice and Movement for the Actor I. 3 Hours.

This course seeks to integrate voice and body in order to develop a free, flexible, and dynamic voice and body for the actor. Students will explore body work in order to develop kinesthetic awareness in the centering, grounding, and release of tension which are essential to the freeing of the voice. Students will explore expanded field of awareness as well as breath release, support for sound, resonance, embodying sounds, vocal hygiene, and vocal dynamics with applications to speaking text.

### THR 203. Voice and Movement for the Actor II. 3 Hours.

A continuation of Voice and Movement for the Actor I with special emphasis on voice/body integration, field of awareness, breath support, range, dynamics, phrasing, tempo-rhythms. Students will explore how to use the voice working with a variety of dramatic texts. Additionally, students will explore principles of the Alexander Technique. May be repeated two times with permission of instructor.

**Prerequisites:** THR 202 [Min Grade: C]

### THR 204. Beginning Production Practicum. 1-2 Hour.

Practical directed production experience in conjunction with actual production. THR 204 and THR 404 may be repeated for a combined total of 8 hours.

### THR 205. Beginning Performance Practicum. 1 Hour.

Practical directed performance experience in conjunction with actual production. Requires audition. THR 205 and THR 405 may be repeated for a combined total of 8 hours. Requires permission of instructor.

### THR 206. Jazz II. 2 Hours.

Intermediate exploration of jazz idiom, musicality, and technique, with emphasis on theatrical and choreographic styles. May be taken 3 times for a total of 6 hours.

**Prerequisites:** THR 106 [Min Grade: C]

### THR 207. Tap II. 2 Hours.

Advanced exploration of tap genre, with emphasis on musicality and technique. May be taken 3 times for a total of 6 hours.

**Prerequisites:** THR 107 [Min Grade: C]

### THR 208. Ballet II. 2 Hours.

Continued study of classic ballet technique. May be taken 3 times for a total of 6 hours.

**Prerequisites:** THR 108 [Min Grade: C]

**THR 210. Introduction to Theatrical Design. 3 Hours.**

Study and application of elements of design in theatre setting. Roles of scenic, lighting, and costume designers and their collaborative relationship with director.

**THR 215. Playwriting I. 3 Hours.**

Study and practicum in fundamentals of scriptwriting for live performance. Writing is a significant component of this course.

**Prerequisites:** EH 101 [Min Grade: C]

**THR 216. Screenwriting I. 3 Hours.**

Study and practicum in fundamentals of scriptwriting for screens large and small. Writing is a significant component of this course.

**Prerequisites:** EH 101 [Min Grade: C]

**THR 226. Drawing and Rendering for the Theatre. 3 Hours.**

Emphasis on rendering styles and drawing skills used in developing costume, scenic, and lighting designs. Studies in color theory, basic perspective, illustrating light source and figure drawing. Work in a variety of media and styles.

**THR 230. Stage Management. 3 Hours.**

The role and responsibilities of the stage manager for live theatrical events. Emphasis on managerial theory and practice.

**THR 235. Analysis of Dramatic Literature. 3 Hours.**

An examination of seminal dramatic works from the Ancient Greeks to the present day. Students will apply structural analysis to these works, focusing on their dramatic action, character development and language, in order to mine the ideas contained in them and determine how these ideas might be articulated to audiences in a live stage production.

**Prerequisites:** EH 101 [Min Grade: C]

**THR 254. Intermediate Acting. 3 Hours.**

Second part of a three part sequence. This course explores and applies the techniques of the acting process as prescribed in Constantin Stanislavski's text, AN ACTOR PREPARES: given circumstances, character objectives, physical objectives, internal and external characterization techniques.

**Prerequisites:** THR 154 [Min Grade: C]

**THR 258. Musical Theatre Performance I. 3 Hours.**

This course offers an exploration of musical theatre performance by focusing on vocal production and historical style. Emphasis will be placed on specificity of performance, both vocally and physically, so that students will be able to accurately and successfully perform in different styles of musical theatre from early musicals through the 1960s. This course will also look at the relationship of the written vocal score to performance and the historical context of each piece.

**Prerequisites:** THR 154 [Min Grade: C]

**THR 259. Musical Theatre Performance II. 3 Hours.**

This course continues an exploration of musical theatre performance by focusing on vocal production and historical style. Emphasis will be placed on specificity of performance, both vocally and physically, so that students will be able to accurately and successfully perform in different styles of musical theatre from the 1970s through the present. This course will also look at the relationship of the written vocal score to performance and the historical context of each piece.

**Prerequisites:** THR 258 [Min Grade: C]

**THR 261. Musical Theatre Showcase I. 1 Hour.**

This course focuses on rehearsal and performance techniques through practical exploration of ensemble songs from assigned musical theatre selections leading to proficiency in performance skills and preparation for graduation and the profession.

**THR 300. Exploring the African-American Creative Experience. 3 Hours.**

Contributions of African Americans to theatre and dance. Creative process and application of creative process through live performance.

**Prerequisites:** THR 100 [Min Grade: C] or THR 200 [Min Grade: C] or THR 235 [Min Grade: C]

**THR 303. History of Film I: Origins to 1960. 3 Hours.**

From the first silent movies to the development of the modern color sound movie of Hollywood in the fifties: comparison and contrast of the views of major film makers of the first sixty years of the 20th Century.

**Prerequisites:** EH 101 [Min Grade: C]

**THR 304. History of Film II: 1960 to Present. 3 Hours.**

From the modern color sound movie of the fifties and the Nouvelle Vague to the latest movies produced around the globe: comparison and contrast of the views of filmmakers since the 1960s.

**Prerequisites:** THR 303 [Min Grade: C]

**THR 306. Jazz III. 2 Hours.**

Advanced study in Jazz technique and musicality with complex combinations and understanding of theatrical style. May be taken 3 times for a total of 6 hours.

**Prerequisites:** THR 206 [Min Grade: C]

**THR 315. Playwriting II. 3 Hours.**

Advanced Study and practicum in playwriting with emphasis on creating works for production and/or publication. Writing is a significant component of this course.

**Prerequisites:** THR 215 [Min Grade: C]

**THR 316. Screenwriting II. 3 Hours.**

Advanced study and practicum in writing feature-length screenplays, with emphasis on creating works for production, sale, and/or publication. May be repeated 1 time for a total of 6 hours.

**Prerequisites:** THR 216 [Min Grade: C]

**THR 318. Stage Combat. 3 Hours.**

Fighting for the stage and screen.

**THR 323. Lighting Design. 3 Hours.**

Exploration of the theory and practice of lighting design for live performance.

**Prerequisites:** THR 124 [Min Grade: C] and THR 210 [Min Grade: C] and THR 235 [Min Grade: C]

**THR 325. Theatre Sound Design and Technology. 3 Hours.**

Principles and practice of designing, engineering and propagating audio for live theatrical productions.

**THR 326. Scenic Design. 3 Hours.**

Exploration of the theory and practice of scene design for live performance.

**Prerequisites:** THR 210 [Min Grade: C] and THR 235 [Min Grade: C]

**THR 327. Costume Design. 3 Hours.**

Exploration of the theory and practice of costume design for live performance through individual projects and collaborative work. Basic principles of design, characterization and rendering techniques are emphasized.

**Prerequisites:** THR 210 [Min Grade: C] and THR 235 [Min Grade: C]

**THR 343. Experimental Performance. 3 Hours.**

This course explores alternative approaches to creating performance. In addition, the course focuses on the psychology of the actor and examines techniques to reduce performance anxiety. The work culminates in the creation of a solo piece.

**Prerequisites:** THR 154 [Min Grade: C]

**THR 355. Advanced Acting. 3 Hours.**

Advanced level class in actor training. Students will be introduced to specific period styles acting techniques for Shakespearean drama, restoration drama, and emerging changes for performance techniques in the plays of Henric Ibsen and Anton Chekhov.

**Prerequisites:** THR 202 [Min Grade: C] and THR 254 [Min Grade: C]

**THR 360. Internship. 3 Hours.**

Experience in non-academic theatre under supervision of professional staff. Interns may work in single area of specialty or in rotation throughout host theatre operation and may contract for single term or academic year.

**THR 361. Musical Theatre Showcase II. 1 Hour.**

This course focuses on rehearsal and performance techniques through practical exploration of duet scenes and songs from assigned musical theatre selections leading to proficiency in performance skills and preparation for graduation and the profession.

**Prerequisites:** THR 261 [Min Grade: C]

**THR 365. Directing I. 3 Hours.**

Basic principles of staging, picturization, composition, focus, and movement. Text analysis, directorial scoring, and actor/director dynamics.

**Prerequisites:** THR 210 [Min Grade: C] and THR 235 [Min Grade: C]

**THR 377. Acting for the Camera. 3 Hours.**

A study of acting techniques for film and television.

**THR 400. Production Participation. 0 Hours.**

Practical, directed experience in performance, stage management, scenery, properties, costumes, lights, or sound in conjunction with a Theatre UAB production.

**THR 401. NYC Showcase. 1-2 Hour.**

Preparation of songs, monologues and scenes for presentation to casting directors and agents. Students enrolled in this course will be required to cover costs associated with travel to New York City.

**THR 404. Advanced Production Practicum. 1-2 Hour.**

Practical directed production experience in conjunction with actual production. Prior to taking THR 404, student must have completed the 3 required practicum credits. THR 204 and THR 404 may be repeated for a combined total of 8 credits.

**THR 405. Advanced Performance Practicum. 1 Hour.**

Practical directed performance experience in conjunction with actual production. Requires audition. Prior to taking THR 405, student must have completed the 3 required practicum credits. THR 205 and THR 405 may be repeated for a combined total of 8 hours.

**THR 406. Special Topics in Dance. 1-3 Hour.**

Specialized subjects in dance taught as opportunity allows. Musical Theatre major or Permission of Instructor.

**THR 410. Production Participation. 0 Hours.**

Directed experience in performance and production participation for a Theatre UAB production. Enrollment limited to Theatre and Musical Theatre majors and Theatre minors who have completed all required Production and Performance Practicum requirements. Requires permission of instructor.

**THR 411. Contemporary Musical Theatre Dance Styles I. 2 Hours.**

An advanced level of analysis and practice of contemporary musical theatre dance styles. Physical awareness, alignment, muscular tone, coordination, strength, and flexibility will be emphasized and analyzed for control and communication. There will be various styles introduced: Contemporary, Jazz, Street-Funk, House, Locking, and Hip-Hop.

**Prerequisites:** THR 206 [Min Grade: C]

**THR 412. Contemporary Musical Theatre Dance Styles II. 2 Hours.**

A continuation of Contemporary Musical Theatre Dance Styles I. An advanced level of analysis and practice of contemporary musical theatre dance styles reflecting the contemporary commercial musical theatre market. Physical awareness, alignment, muscular tone, coordination, strength, and flexibility will be emphasized and analyzed for control and communication. There will be various styles introduced: Contemporary, Jazz, Street-Funk, House, Locking, and Hip-Hop.

**Prerequisites:** THR 411 [Min Grade: C]

**THR 420. Teaching Theatre in the Secondary School. 3 Hours.**

Course provides the student with a complete understanding and utilization of the knowledge and skills needed to teach theatre at the secondary school level.

**THR 425. Pattern Drafting. 3 Hours.**

Students will learn garment terms, their application, and flat pattern techniques for garment development. The course requires 20 lab hours, in addition to regular class meetings.

**Prerequisites:** THR 125 [Min Grade: B]

**THR 430. Auditioning. 3 Hours.**

This course prepares the actor for graduate school and professional auditions. A working method is explored for the preparation of classical and contemporary audition pieces.

**Prerequisites:** THR 154 [Min Grade: C] and THR 202 [Min Grade: C]

**THR 435. Dialects. 3 Hours.**

Students will develop the knowledge and skills to describe and recreate oral postures, placement, and rhythms of various stage dialects.

**Prerequisites:** THR 202 [Min Grade: C]

**THR 450. Costume History and Period Style for the Theatre. 3 Hours.**

A selective study of clothing, architecture, furniture and decorative arts of different historical eras, with emphasis on popular theatrical eras and styles. Includes an examination of the societal, cultural, and economic influences which shape historical style.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C]

**THR 451. Musical Theatre History and Script Analysis. 3 Hours.**

Exploration of the origins and development of musical theatre, from the mid-18th century to the present day. Students will develop a critical sensitivity to the medium and will learn to analyze the music, plots, characters and situations of musical theatre.

**Prerequisites:** EH 102 [Min Grade: C] or EH 102 [Min Grade: C]

**THR 455. Advanced Studio in Performance. 3 Hours.**

Advanced exploration of special topics related to acting through performance including but not restricted to period styles, dialects, ensemble work, solo performance, or any other specialized genre.

**Prerequisites:** THR 154 [Min Grade: C]

**THR 460. Acting and Voicing with Archetypes. 3 Hours.**

A study of the archetypes found in stories and myths leading to the embodiment of these archetypes through movement, voice, imagination, and breath work in practical application with characters from dramatic texts.

**Prerequisites:** THR 202 [Min Grade: C] or THR 203 [Min Grade: C]

**THR 461. Musical Theatre Showcase III. 1 Hour.**

This course focuses on rehearsal and performance techniques through practical exploration of scenes and solo songs from assigned musical theatre selections leading to proficiency in performance skills and preparation for graduation and the profession.

**Prerequisites:** THR 361 [Min Grade: C]

**THR 462. Special Topics. 1-3 Hour.**

Specialized subjects taught as opportunity allows.

**THR 465. Directing II. 3 Hours.**

Preparing performances. Director/actor communication in rehearsal, rehearsal motifs, rehearsal organization, and finishing production. Actual direction of one-act play for laboratory performance.

**Prerequisites:** THR 365 [Min Grade: C]

**THR 470. Individual Project in Design and Production. 1-3 Hour.**

Directed individual study in topics related to theatrical design and production. Individual Project in Design: The design of costumes, scenery, lighting, audio, or makeup for a mainstage production under the supervision of a faculty mentor. Individual Project in Production: Assume the position and execute the responsibilities of a specific production position, such as a cutter/drafter or technical director, while under the supervision of a faculty mentor. Proposals for individual projects must be approved prior to registration.

**THR 471. Advanced Studio in Scenery. 3 Hours.**

Advanced exploration of special topics related to scenic design and production. May be repeated for credit.

**THR 472. Advanced Studio in Costumes. 3 Hours.**

Advanced exploration of special topics related to costume design and production. May be repeated for credit.

**THR 473. Advanced Studio in Lighting. 3 Hours.**

Advanced exploration of special topics related to lighting design and production. May be repeated for credit.

**THR 474. Advanced Studio in Audio. 3 Hours.**

Advanced exploration of special topics related to audio design and production. May be repeated for credit.

**Prerequisites:** THR 210 [Min Grade: C] and THR 235 [Min Grade: C] and THR 325 [Min Grade: C]

**THR 481. Theatre History to 1860. 3 Hours.**

An exploration of Western theatre from 500 B.C. to 1860 by focusing on the Classical, Medieval, Renaissance, Restoration, and Enlightenment periods. The original historical and performance contexts of plays written during the period will be considered to illuminate the cultural and political role of theatre through the ages. The class format includes lectures, class discussions, group exercises, and creative and research projects.

**Prerequisites:** THR 235 [Min Grade: C]

**THR 482. Theatre History from 1860 to Present. 3 Hours.**

An exploration of nineteenth and twentieth century Western theatre, focusing on Romanticism, Realism and Non-Realism. Also introduces students to the most popular forms of traditional non-Western theatre to explain their influence on the European avant-garde. Emphasis will be placed on seminal plays, theatre spaces and design, acting techniques, and directing styles. The class format includes lectures, class discussions, group exercises, and creative and research projects.

**Prerequisites:** THR 235 [Min Grade: C]

**THR 489. Individual Studies in Film. 1-3 Hour.**

An opportunity for students to study a specific aspect of film production or history.

**THR 491. Theatre Capstone. 2 Hours.**

A synthesis experience for students as they apply what they have learned to a culminating collaborative project, define a personal philosophy of theatre and prepare themselves for the next steps after graduation by developing such items as a detailed career plan, resumes, and websites and learning about contracts, agents, taxes and other life strategies. Required for graduation in last year of residency.

**THR 493. Musical Theatre Capstone. 2 Hours.**

An exploration of the business of musical theatre including information about contracts, unions, agents/managers, casting directors, taxes and other life strategies in order to develop a specific plan for the next steps after graduation. Students prepare themselves for professional careers by developing such items as resumes, audition material, headshots and websites.

**THR 496. Honors Project. 3 Hours.**

Admission into the departmental honors program.

**THR 499. Individual Studies. 1-3 Hour.**

Directed individual study in theatre topics unrelated to design and production. Proposals for individual projects must be approved prior to registration. May be repeated for credit.

## Department of World Languages and Literatures

**Chair:** Dr. Julian Arribas

The Department of World Languages and Literatures offers a multifaceted foreign language program that will meet the diverse global challenges facing students of the 21<sup>st</sup> century. The Department offers programs of study leading to the degree of Bachelor of Arts in World Languages with concentrations in French and Spanish, and a concentration in Applied Professional Spanish. The Department offers minor programs in Chinese, French, German, Japanese, Spanish and Spanish for Business, as well as a Certificate of Spanish for Specific Purposes. There are also opportunities for students to take courses in Arabic, Italian, Portuguese, and courses about foreign cultures and literatures in English. Additional courses in foreign languages may be taken through the Birmingham Area Consortium for Higher Education (BACHE). Promoting a comprehensive view of foreign cultures, languages and literatures enhances the students' ability to compete in the job market and/or pursue graduate or professional studies.

Our programs are rooted in diversity within and across cultures, and foster the international exchange of knowledge and information between humanities scholars, teachers and other professionals. Our instructional methods are aligned with national standards. The foreign language experience at UAB includes classroom learning, scholarship and research, experiential learning, and extracurricular opportunities.

The UAB Department of World Languages and Literatures offers traditional language, culture, civilization, linguistics and literature classes and also enrolls students in such fields as literature in translation, film and cultural studies, foreign media and society, US Latino topics, applied linguistics and languages for the professions.

The Department also offers an Honors Track Program and internships in World Languages to students in Spanish for Specific Purposes, and for qualified majors with Departmental approval. Furthermore, we promote and sponsor opportunities for study abroad in conjunction with UAB Education Abroad programs. UAB Distinguished Professor Emeritus of French, William C. Carter has built one of the world's largest collections of books by and about French author Marcel Proust. The collection is housed on campus in Mervyn H. Sterne Library and includes original letters and other documents.

For more information about our programs, online placement exams, internships, events and sponsored study abroad opportunities, visit the Department of World Languages and Literatures web site at <http://www.uab.edu/cas/languages/>.

## Language Placement

To assure that students taking foreign language courses are properly placed, all students must take a placement exam in the language before enrolling in foreign language classes. Students enrolling in Arabic, Chinese, Italian, Japanese, and Portuguese will work directly with designated foreign language faculty members to ensure proper placement. Placement exams in French, Spanish, and German are available online at the Department of World Languages and Literatures web site: <https://www.uab.edu/cas/languages/student-resources/placement-tests>. The level at which native/heritage language speakers may begin formal language study will be determined by the appropriate foreign language advisor after the student has taken the online placement exam. Exceptional native/heritage language students may apply for Credit by Examination (CBE). The College Level Examination Program (CLEP) is available in French, German, and Spanish.

## Major

The Department of World Languages and Literatures offers programs of study leading to the degree of Bachelor of Arts in World Languages with concentrations in Japanese, French, Spanish, and Applied Professional Spanish. Students who major or minor in foreign languages are encouraged to consult the Department web page to identify the appropriate departmental advisor to assist in formulating an individual program of study.

The world language major requires completion of the introductory sequence (Introductory Japanese I and II, Introductory French I and II, or Introductory Spanish I and II) or the equivalent.

## Concentration in Japanese

The Japanese concentration/track at UAB offers an articulated approach to the study of the Japanese language and the culture, civilization and literature of the Japanese-speaking world. Literacy skills and understanding (e.g., listening, reading, writing, speaking) are developed throughout the course of study, as is the nurturing of critical and analytical skills. Majors will leave the program with the ability to engage in critical and cross-cultural analysis. Students have the opportunity to do in-depth work in special topics seminars (e.g., Advanced language structure, Japanese culture and civilization, Contemporary Japan, Japanese Business, Film, Literature, Translation, and Japanese current issues.) Typically, Japanese concentration majors have more than one major or a complement minor to facilitate the applied aspect of language study (e.g., art anime, business, digital forensics, education, international studies, and pre-health and public health). Students graduating from UAB with a concentration in Japanese may go on to graduate or professional schools and/or employment in such fields as business, education, engineering, entertainment, industry, international relations, medicine, and public health.

The Japanese concentration provides opportunities for community outreach activities (e.g., internships, service learning) in Alabama, and has diverse study abroad opportunities from which to choose. We work very closely with students to personalize their studying experience. We also help them to find ways to enhance their language and culture skills

through unique experiences abroad (e.g., Fulbright, teaching in Japan, and teaching exchanges).

The Department recommends students to enroll in more than one language to learn about varied linguistic structures and receive a broader cross-cultural perspective.

## Concentration in French

The French concentration/track at UAB offers an articulated approach to the study of the French language and the culture, civilization and literature of the French-speaking world. Literacy skills and understanding (e.g., reading, writing, speaking) are developed throughout the course of study, as is the nurturing of critical and analytical skills. Majors will leave the program with the ability to engage in critical and cross-cultural analysis. Students have the opportunity to do in-depth work in special topics seminars (e.g., Advanced Grammar, French Civilization, Contemporary France, French Film, Environment in the French-Speaking World, Francophone literature and current issues.) Typically, French concentration majors have more than one major or a complement of minors to facilitate the applied aspect of language study (e.g., pre-health, international studies, public health, digital forensics, education, art, anthropology, communication studies, business, criminal justice). Students graduating from UAB with a concentration in French have gone on to graduate or professional school and/or employment in such fields as business, education, government, industry, international relations, law, public health, medicine, hotel and restaurant management, and publishing.

The French concentration has opportunities for community outreach activities (e.g., internships, service learning) in Alabama, and has diverse study abroad opportunities from which to choose. We work very closely with students to personalize their studying experience. We also help them to find ways to enhance their language and culture skills through unique experiences abroad (e.g., application for French government youth grants and internships, teaching exchanges).

The Department recommends students to enroll in more than one language to learn about varied linguistic structures and receive a broader cross-cultural perspective.

## Concentration in Spanish

The Spanish concentration/track at UAB offers an articulated approach to the study of the Spanish language and the culture, civilization and literature of the Spanish-speaking world. Literacy skills and understanding (e.g., listening, reading, writing, speaking) are developed throughout the course of study, as well as the nurturing of critical and analytical skills.

Our Spanish curriculum emphasizes the gradual development of the three principal Modes of Communication: Interpretive, Interpersonal, and Presentational. Majors will leave the program with the ability to engage in critical and cross-cultural analysis. Students have the opportunity to do in-depth work in special topics seminars like Afro-Hispanic writers, Hispanic and Latino topics, peninsular film, and applied linguistics, and sociolinguistics. Typically, Spanish concentration majors have more than one major or a complement of minors to facilitate the applied aspect of language study (e.g., criminal justice and digital forensics, neuroscience, pre-health, nursing, education, communication studies, business, and international studies). Students graduating from UAB with a concentration in Spanish have gone on to graduate or professional school and/or employment in such fields as business, education, government, industry, international relations, law, medicine, publishing, translation, and interpretation.

The Spanish concentration major has diverse study abroad opportunities from which to choose.

The Department recommends students to enroll in more than one language to learn about varied linguistic structures and receive a broader cross-cultural perspective.

## Concentration in Applied Professional Spanish (APSP)

The concentration/track in Applied Professional Spanish at UAB is a program intended to prepare students to develop the necessary communicative skills and cultural knowledge to serve the needs of the U.S. Spanish-speaking community in professional settings (such as health care, business and management, social work, criminology, education, translation, and interpretation) and better prepare students for a career with an international scope. This carefully-designed, progressive coursework is a combination of professionally-focused Spanish courses, advanced Spanish linguistics and phonology courses, contemporary Hispanic culture courses, and practical experience (community service learning and internship). Our Spanish curriculum emphasizes the gradual development of the three principal Modes of Communication: Interpretive, Interpersonal, and Presentational.

While maintaining a firm Humanities foundation within the tradition of the Liberal Arts, the overarching goal of the APS program is to enhance students' professional preparation for a global job market as well as for domestic positions that require proficiency in Spanish and understanding of U.S. Hispanic cultures. Courses are offered in various formats (seated, online, hybrid) and schedules (morning, afternoon, and evening) to accommodate both regular and returning students with a full-time job.

This program is especially adaptable as a double major.

## Minor

Twelve semester hours at the 200 level or above are required for the minor in Chinese, French, German, Japanese, Spanish, or Business Spanish. No course in which a grade below C has been earned may be counted toward the minor requirement. The Department of World Languages and Literatures strongly recommends that more than half of student course work for the minor be completed on the UAB campus. Students that transfer courses from non-UAB programs into the UAB minor programs will be examined for placement and proficiency level. At least 6 hrs. of the credits applied toward the minor must be taken at UAB.

Exceptions to this rule can be granted with the permission of the Chair.

## Foreign Language Media Services

The computer-based Foreign Language Media Services (FLMS) at UAB enables students, faculty and community users to access and utilize foreign languages and cultures in a digital environment in order to provide multi-dimensional learning and research opportunities. The FLMS plays an integral role in the activities and services of the UAB Department of World Languages and Literatures and also serves as a support center for the University. The FLMS enables the UAB Department of World Languages and Literatures to respond to the demand for additional language resources, the requirements for a wider range of tasks being performed in the languages, a greater number of language learners of different types and a broader array of instructional modes.

For more information about FLMS, online placement exams and internships, visit the Department of World Languages and Literatures web site: <http://www.uab.edu/cas/languages/>.

## Foreign Language Education

The Department of World Languages and Literatures regularly offers graduate foreign language classes as content courses in French and Spanish for graduate degrees in foreign language education. Students interested in seeking one of the graduate degrees in foreign language education should contact the UAB Department of Curriculum and Instruction (School of Education).

## Bachelor of Arts with a Major in World Languages & Literatures (Concentration in French)

\*At least 18 credits must be taken at UAB

Requirements		Hours
FLL 120	Foreign Cultures <sup>1</sup>	3
FLL 121	Songs of Social Change through World Cultures <sup>2</sup>	3
FLL 485	Foreign Language Capstone Seminar	3
FR 201	Intermediate French I <sup>3</sup>	3
<b>Select at least three (3) 200 level courses from this group:</b>		<b>9</b>
FR 202	Intermediate French II	
FR 206	French and Business Culture	
FR 210	Exploring French-speaking Culture	
FR 211	Intermediate Survey of French Literature	
FR 220	Intermediate French Composition	
FR 230	Practical Conversation	
FR 240	French for Health	
FR 250	Food for Thought: French Culture through Cuisine	
FR 290	Study Abroad	
<b>Advanced French Courses</b>		
<b>Select at least three (3) 300 level courses from this group:</b>		<b>9</b>
FR 305	French-Speaking Cinema	
FR 306	Parlons affaires! Global Engagement in the French-Speaking World	
FR 307	Advanced Grammar and Composition I	
FR 308	Advanced Grammar and Composition II	
FR 310	Exploring French-Speaking Culture	
FR 311	Greatest Hits of French Literature	
FR 315	Bande-dessinée: Reading French Language Comics	
FR 320	Creative Writing in French	
FR 330	Practical Conversation	
FR 340	Approaches to Translation	
FR 350	Soccer, History, and Politics in the French-Speaking World	
FR 360	La Chanson Française: French Culture through Songs	
FR 390	Study Abroad	
FR 399	Special Readings in French	
<b>Select at least three (3) 400 level courses from this group:</b>		<b>9</b>
FR 401	Histoires de France: French History Through Stories	
FR 402	Aux Armes! Revolutions in the French-speaking World	
FR 403	Fin-de-Siecle France (1895-1940)	
FR 404	French Literature since 1940	
FR 405	Race, Gender, and Transnationalism in Francophone Literature and Thought	

FR 410	Special Topics in French
FR 412	French Civilization: before 1789 Pre-Revolutionary
FR 413	French Civilization after 1789 Post-Revolutionary
FR 421	Literature and the Environment in the French-Speaking World
FR 490	Study Abroad: French
FR 499	Directed Studies
<hr/>	
Total Hours	39

- <sup>1</sup> Also counts in Core Curriculum Area II: Humanities and Fine Art
- <sup>2</sup> A choice of a second language may substitute: ARA 101, CHI 101, FLL 101, GN 101, ITL 101, JPA 101, POR 101, SPA 101
- <sup>3</sup> May not be required, based on language placement exam results

## Grade Requirement

No course in which a grade below C has been earned may be counted toward the major.

## Beginning Language Requirement

To enroll in any 200-level French (FR) course, students must either complete 8 hours of 100-level French (FR) courses or complete the equivalent placement test.

## Bachelor of Arts with a Major in World Languages and Literatures with a Concentration in Japanese

At least 18 credit hours must be taken at UAB.

Requirements		Hours
FLL 120	Foreign Cultures <sup>1</sup>	3
FLL 121	Songs of Social Change through World Cultures <sup>2</sup>	3
FLL 485	Foreign Language Capstone Seminar	3
JPA 201	Intermediate Japanese I <sup>3</sup>	3
<b>Intermediate Japanese Courses</b>		
Select three 200-level courses from below:		9
JPA 202	Intermediate Japanese II	
JPA 203	Intermediate Japanese Language & Culture I	
JPA 204	Intermediate Japanese Language & Culture II	
JPA 206	Business Japanese	
JPA 210	Discourse and Culture in Japanese	
JPA 211	Contemporary Issues in Japanese Society	
JPA 290	Japanese for Study Abroad	
JPA 299	Directed Readings in Japanese	
<b>Advanced Japanese Courses</b>		
Select three 300-level courses from below:		9
JPA 301	Advanced Japanese I	
JPA 302	Advanced Japanese II	
JPA 303	Japanese Pragmatics I	
JPA 304	Japanese Culture and Civilization	
JPA 305	Japanese Children Stories	
JPA 306	Advanced Business Japanese	
JPA 307	Japanese Translation I	
JPA 308	Japanese Cinema I	
JPA 390	Study Abroad	
Select three 400-level courses from below:		9
JPA 401	Advanced Japanese III	

JPA 402	Advanced Japanese IV
JPA 403	Japanese Pragmatics II
JPA 404	Japanese Popular Culture
JPA 405	Japanese Literature
JPA 406	Advanced Japanese for the Professions
JPA 407	Japanese Translation II
JPA 408	Japanese Cinema II
JPA 490	Study Abroad: Japan
JPA 499	Directed Readings: Japanese

Total Hours 39

- <sup>1</sup> Also counts in Core Curriculum Area II: Humanities and Fine Art
- <sup>2</sup> A choice of a second language may substitute: ARA 101, CHI 101, FLL 101, FR 101, GN 101, ITL 101, POR 101, SPA 101
- <sup>3</sup> May not be required, based on language placement exam results

## Grade Requirement

No course in which a grade below C has been earned may be counted toward the major.

## Beginning Language Requirement

To enroll in any 200-level French (FR) course, students must either complete 8 hours of 100-level French (FR) courses or complete the equivalent placement test.

## Bachelor of Arts with a Major in World Languages and Literatures (Concentration in Spanish)

Requirements		Hours
FLL 120	Foreign Cultures <sup>1</sup>	3
FLL 121	Songs of Social Change through World Cultures <sup>2</sup>	3
FLL 485	Foreign Language Capstone Seminar	3
SPA 201	Intermediate Spanish I <sup>3</sup>	3
<b>Select at least three (3) 200 level courses from this group:</b>		9
SPA 202	Intermediate Spanish II	
SPA 203	Intermediate Spanish Review	
SPA 206	Intermediate Spanish for the Professions	
SPA 210	Conversation and Culture	
SPA 214	Introduction to Translation for the Professions	
SPA 233	Intermediate Spanish Grammar in Context	
SPA 290	Study Abroad	
SPA 299	Special Readings in Spanish	
<b>Advanced Spanish Courses</b>		
Select at least three (3) 300 level courses from this group:		9
SPA 300	Advanced Grammar in Context	
SPA 304	Phonetics and Phonology	
SPA 310	Cultures of the Spanish-Speaking World	
SPA 311	Greatest Hits of Hispanic Literature I	
SPA 312	Greatest Hits of Hispanic Literature II	
SPA 350	Hispanic Children Stories	
SPA 390	Study Abroad	
SPA 399	Special Readings in Spanish	
Select at least three (3) 400 level courses from this group:		9
SPA 401	Voices of Imperial Spain	
SPA 402	Voices of Colonial Latin America	
SPA 403	Contemporary Spanish Literature and Film	

SPA 404	Medicine and Literature in the Spanish-Speaking World
SPA 405	US Latino Writers
SPA 407	Indigenous and Indigenist Latin America
SPA 409	Spanish-Speaking Nobel Laureates
SPA 411	Cervantes and the Quixote
SPA 412	Voices of Contemporary Latin America 1920-Present
SPA 414	Afro-Latin American Literature and Culture
SPA 416	Special Topics in Spanish
SPA 420	Introduction to Hispanic Linguistics
SPA 430	Spanish Sociolinguistics
SPA 440	History of Spanish Language
SPA 450	Spanish Second Language Acquisition
SPA 455	Pop Culture in Translation
SPA 460	Globalization in the Hispanic World
SPA 461	Contemporary Spain
SPA 490	Study Abroad: Spanish
SPA 499	Directed Studies

Total Hours 39

- <sup>1</sup> Also counts in Core Curriculum Area II: Humanities and Fine Art
- <sup>2</sup> A choice of a second language may substitute: ARA 101, CHI 101, FLL 101, FR 101, GN 101, ITL 101, JPA 101, POR 101
- <sup>3</sup> May not be required, based on language placement exam results

## Other Requirements (Concentration in Spanish)

### Grade Requirement

No course in which a grade below C has been earned may be counted toward the major.

### Beginning Language Requirement

To enroll in any 200-level Spanish (SPA) course, students must either complete 8 hours of 100-level Spanish (SPA) courses or complete the equivalent placement test.

## Major in World Languages and Literatures with a Concentration in Applied Professional Spanish

### Beginning Language Requirement

To enroll in any 200-level Spanish (SPA) course, students must either complete 8 hours of 100-level Spanish (SPA) courses or complete the equivalent placement test.

Requirements	Hours
FLL 120 Foreign Cultures <sup>1</sup>	3
FLL 121 Songs of Social Change through World Cultures <sup>2</sup>	3
FLL 485 Foreign Language Capstone Seminar	3
SPA 201 Intermediate Spanish I <sup>3</sup>	3
SPA 485 Spanish for Leadership at the Workplace <sup>4</sup>	3
Select at least three 200 level courses from this group:	9
SPA 206 Intermediate Spanish for the Professions	
SPA 214 Introduction to Translation for the Professions	
SPA 233 Intermediate Spanish Grammar in Context	
SPA 280 Spanish for Health Professionals	
SPA 290 Study Abroad <sup>5</sup>	

### Advanced Spanish Courses

Select at least three 300 level courses from this group: 9

SPA 300	Advanced Grammar in Context
SPA 304	Phonetics and Phonology
SPA 313	Business Spanish
SPA 314	Applied Spanish Translation and Interpretation
SPA 320	Hispanic Cultures Through Culinary Art
SPA 380	Advanced Spanish for Health Professionals
SPA 390	Study Abroad <sup>5</sup>

Select at least two 400 level courses from this group: 6

SPA 404	Medicine and Literature in the Spanish-Speaking World
SPA 420	Introduction to Hispanic Linguistics
SPA 430	Spanish Sociolinguistics
SPA 450	Spanish Second Language Acquisition
SPA 455	Pop Culture in Translation
SPA 460	Globalization in the Hispanic World
SPA 461	Contemporary Spain
SPA 462	Contemporary Latin America

Total Hours 39

- <sup>1</sup> Also counts in Core Curriculum Area II: Humanities and Fine Arts
- <sup>2</sup> A choice of a second language may substitute: ARA 101, CHI 101, FLL 101, FR 101, GN 101, ITL 101, JPA 101, POR 101
- <sup>3</sup> May not be required, based on language placement exam results
- <sup>4</sup> May be replaced with SPA 490 (Internship Abroad) with departmental approval
- <sup>5</sup> Must be related to Spanish for the professions. Only similar intermediate-level courses related to Spanish for the professions in approved foreign institutions are transferable for this concentration.

### Grade Requirement

No course in which a grade below C has been earned may be counted toward the major.

## Proposed Program of Study for a Major in World Languages and Literatures with a Concentration in French

Freshman			
First Term	Hours	Second Term	Hours
FLL 120	3	FLL 121	3
FR 101	3	FR 102	3
	6		6
Sophomore			
First Term	Hours	Second Term	Hours
French (200-level or above)	6	French (200-level or above)	6
	6		6
Junior			
First Term	Hours	Second Term	Hours
French (300 level or above)	6	French (300 level or above)	6
		French 400 level	3
	6		9
Senior			
First Term	Hours	Second Term	Hours
One or Two French (400 level)	3-6	FLL 485	3

One or Two French (400 level)	3-6
3-6	6-9
Total credit hours: 48-54	

Proposed Program of Study for a Major in World Languages and Literatures with a Concentration in Spanish

Freshman			
First Term	Hours	Second Term	Hours
FLL 120		3 FLL 121	3
SPA 101		3 SPA 102	3
	6		6
Sophomore			
First Term	Hours	Second Term	Hours
SPA 201		3 Spanish (200 level or above)	6
Spanish (200 level or above)	3		
	6		6
Junior			
First Term	Hours	Second Term	Hours
Spanish Courses (300 level or above)		6 Spanish (300 level or above)	3
		Spanish (400 level or above)	3
	6		6
Senior			
First Term	Hours	Second Term	Hours
Spanish Courses (400 level)		6 FLL 485	3
		Spanish Course (400 level)	3
	6		6
Total credit hours: 48			

Proposed Program of Study for a Major in World Languages and Literatures with a Concentration in Applied Professional Spanish

Freshman			
First Term	Hours	Second Term	Hours
FLL 120		3 FLL 121	3
SPA 101		3 SPA 102	3
	6		6
Sophomore			
First Term	Hours	Second Term	Hours
SPA 201		3 Spanish 200-Level <sup>1</sup>	3
Spanish 200-Level <sup>1</sup>	3		
	6		3
Junior			
First Term	Hours	Second Term	Hours
Spanish 300-Level <sup>2</sup>		6 Spanish 300-Level <sup>2</sup>	3
		Spanish 400-Level <sup>3</sup>	3
	6		6
Senior			
First Term	Hours	Second Term	Hours
Spanish 400-Level <sup>3</sup>		6 FLL 485	3

SPA 485 or 490	1-9
6	4-12
Total credit hours: 43-51	

- 1 Select from: SPA 206, SPA 214, SPA 280, SPA 233
- 2 Select from: SPA 300, SPA 304, SPA 313, SPA 314, SPA 320, SPA 380, SPA 390
- 3 Select from: SPA 404, SPA 420, SPA 450, SPA 460, SPA 461, SPA 490

Minor in French

Requirements	Hours
Beginning Language Requirement	8
To enroll in any 200-level French (FR) course, students must either complete 8 hours of 100-level French (FR) courses or complete the equivalent placement test.	
No course in which a grade below C has been earned may be counted toward a minor.	
French Courses	12
Select 12 credit hours from 200-level, 300-level, or 400-level French (FR)	
FR 201	Intermediate French I
FR 202	Intermediate French II
FR 206	French and Business Culture
FR 210	Exploring French-speaking Culture
FR 211	Intermediate Survey of French Literature
FR 220	Intermediate French Composition
FR 230	Practical Conversation
FR 240	French for Health
FR 250	Food for Thought: French Culture through Cuisine
FR 290	Study Abroad
At least 6 hrs. of the credits applied toward the minor must be taken at UAB. Exceptions to this rule can be granted with the permission of the Chair.	
Total Hours	20

Minor in Spanish

Requirements	Hours
Beginning Language Requirement	8
To enroll in any 200-level Spanish (SPA) course, students must either complete 8 hours of 100-level Spanish (SPA) courses or complete the equivalent placement test.	
No course in which a grade below C has been earned may be counted toward a minor.	
Spanish Courses	12
Select 12 credit hours from 200-level, 300-level, or 400-level Spanish (SPA)	
SPA 201	Intermediate Spanish I
SPA 202	Intermediate Spanish II
SPA 203	Intermediate Spanish Review
SPA 206	Intermediate Spanish for the Professions
SPA 210	Conversation and Culture
SPA 214	Introduction to Translation for the Professions
SPA 233	Intermediate Spanish Grammar in Context
SPA 280	Spanish for Health Professionals
SPA 290	Study Abroad
SPA 299	Special Readings in Spanish

At least 6 hrs. of the credits applied toward the minor must be taken at UAB. Exceptions to this rule can be granted with the permission of the Chair.

Total Hours 20

## Minor in Spanish for Business

Requirements	Hours
<b>Required Courses</b>	
SPA 206 Intermediate Spanish for the Professions	3
SPA 313 Business Spanish	3
<b>Spanish Electives</b>	
Select two of the following:	6
SPA 202 Intermediate Spanish II	
SPA 203 Intermediate Spanish Review	
SPA 210 Conversation and Culture	
SPA 214 Introduction to Translation for the Professions	
SPA 233 Intermediate Spanish Grammar in Context	
SPA 280 Spanish for Health Professionals	
SPA 290 Study Abroad	
SPA 299 Special Readings in Spanish	

At least 6 hrs. of the credits applied toward the minor must be taken at UAB. Exceptions to this rule can be granted with the permission of the Chair.

Total Hours 12

\* A grade of C or better is required for courses applying to this minor.

## Minor in Chinese

Requirements	Hours
<b>Beginning Language Requirement</b>	6
To enroll in any 200-level Chinese (CHI) course, students must either complete 8 hours of 100-level Chinese (CHI) courses or complete the equivalent placement test.	
No course in which a grade below C has been earned may be counted toward a minor.	
<b>Chinese Courses</b>	12
Select 12 credit hours from 200-level Chinese (CHI) or higher:	
CHI 201 Intermediate Chinese I	
CHI 202 Intermediate Chinese II	
CHI 203 Intermediate Chinese Language & Culture I	
CHI 204 Intermediate Chinese Language and Culture II	
CHI 220 Chinese Through Culinary Art	
CHI 280 Chinese for Health Professionals	
CHI 290 Study Abroad: Chinese	
CHI 206 Chinese for the Professions	
CHI 299 Directed Readings in Chinese	

At least 6 hrs. of the credits applied toward the minor must be taken at UAB. Exceptions to this rule can be granted with the permission of the Chair.

Total Hours 18

## Minor in German

Requirements	Hours
<b>Beginning Language Requirement</b>	8
To enroll in any 200-level German (GN) course, students must either complete 8 hours of 100-level German (GN) courses or complete the equivalent placement test.	

No course in which a grade below C has been earned may be counted toward a minor.

**German Courses** 12

Select 12 credit hours from 200-level German (GN) or higher:

GN 201	Intermediate German I
GN 202	Intermediate German II
GN 203	German Culture and Civilization
GN 204	Readings in German Literature
GN 205	German for the Professions
GN 206	German for Technology and Media
GN 210	German Culture and Civilization II
GN 290	Study Abroad

At least 6 hrs. of the credits applied toward the minor must be taken at UAB. Exceptions to this rule can be granted with the permission of the Chair.

Total Hours 20

## Minor in Japanese

Requirements	Hours
<b>Beginning Language Requirement</b>	6
To enroll in any 200-level Japanese (JPA) course, students must either complete 6 hours of 100-level Japanese (JPA) courses or complete the equivalent placement test.	
No course in which a grade below C has been earned may be counted toward a minor.	
<b>Japanese Courses</b>	12
Select 12 credit hours from 200-level Japanese (JPA) or higher:	
JPA 201 Intermediate Japanese I	
JPA 202 Intermediate Japanese II	
JPA 203 Intermediate Japanese Language & Culture I	
JPA 204 Intermediate Japanese Language & Culture II	
JPA 206 Business Japanese	
JPA 210 Discourse and Culture in Japanese	
JPA 211 Contemporary Issues in Japanese Society	
JPA 290 Japanese for Study Abroad	
JPA 299 Directed Readings in Japanese	
JPA 390 Study Abroad	

At least 6 hrs. of the credits applied toward the minor must be taken at UAB. Exceptions to this rule can be granted with the permission of the Chair.

Total Hours 18

## Spanish for Specific Purposes

The Department of World Languages and Literatures offers a *Spanish for Specific Purposes (SSP) Certificate*. The certificate is built upon the existing Spanish program and course offerings with modifications and additions. The courses are designed for traditional as well as non-traditional candidates. The objective of this certificate is not only to fulfill UAB degree candidates' academic and future needs, but also to reach out to local professionals. The courses are content-, vocabulary-, and culture-based. Students learn the vocabulary, language and cultural background that they will use in their professional field through extensive practice in class and beyond the classroom as well. Upon successful completion of the program, candidates will receive an official UAB Certificate of Completion, which will also be recorded on their transcript.

Candidates who wish to obtain a UAB Spanish for Specific Purposes Certificate must fulfill the following requirements:

1. Have the Spanish prerequisites specific to each SSP class.
2. Enter with and maintain a minimum 2.8 GPA in Spanish courses.
3. Submit an application online following the link provided below and receive formal acceptance to the SSP program.
4. Obtain a B grade or above in all SSP courses.
5. Complete a minimum of 18 credit hours of SSP classes (6 courses) in the UAB Department of World Languages and Literatures, of which a minimum of 12 credits (4 courses) must be at the 300 level (SPA 304, FLL 333, and two other 300 level SPA courses).
6. Complete a successful SSP Service Learning course (FLL 333, 3 credit hours) as part of the 18 credit hour requirement.
7. Upon completion of the program, take the Oral Proficiency Interview by computer (OPIc) in Spanish and earn the performance rank of Intermediate-Mid or above.
8. Have a minimum of 12 credit hours of successful college level work (grade C or above in all courses), with the following distribution (minimum): at least 6 credit hours in Area 1 (English Composition), at least 3 credit hours in Area 2 (Arts and Humanities), at least 3 credit hours in Area 4 (Social Sciences) (non-degree-seeking candidates only).

Requirements		Hours
SPA 304	Phonetics and Phonology <sup>1</sup>	3
FLL 333	Foreign Language Service Learning <sup>1</sup>	3
<b>Directed Electives <sup>1</sup></b>		<b>12</b>
Select twelve credits from the following:		
SPA 206	Intermediate Spanish for the Professions	
SPA 214	Introduction to Translation for the Professions	
SPA 280	Spanish for Health Professionals	
SPA 313	Business Spanish	
SPA 314	Applied Spanish Translation and Interpretation	
SPA 380	Advanced Spanish for Health Professionals	
SPA 390	Study Abroad <sup>5</sup>	
SPA 490	Study Abroad: Spanish <sup>5</sup>	
<b>Core Courses <sup>2</sup></b>		
EH 101	English Composition I	3
EH 102	English Composition II	3
Select One Fine Art & Humanities Course <sup>3</sup>		3
Select One Social Science <sup>4</sup>		

<sup>1</sup> A grade of B or better is required.

<sup>2</sup> A grade of C or better is required.

<sup>3</sup> Fine Arts & Humanities Course Selection: AAS 200, ARA 101, ARA 102, ARH 101, ARH 203, ARH 204, ARH 206, CHI 101, CHI 102, CMST 101, EH 216, EH 217, EH 218, EH 221, EH 222, EH 223, EH 224, FLL 120, FLL 220, FR 101, FR 102, FR 108, FR 201, FR 202, GN 101, GN 102, GN 201, GN 202, GN 204, ITL 101, ITL 102, MU 120, PHL 100, PHL 115, PHL 116, PHL 120, PHL 125, PHL 203, SPA 101, SPA 102, SPA 108, SPA 201, SPA 202, THR 100, THR 105, THR 200.

<sup>4</sup> Social Science Requirements: ANTH 101, ANTH 106, ANTH 120, CMST 105, EC 210, EC 211, GEO 121, HY 101, HY 102, HY 104, HY 105, HY 120, HY 121, ITS 101, PSC 101, PSC 102, PSC 103, PSC 221, PY 101, PY 212, SOC 100, SOC 245, WS 100.

<sup>5</sup> Course requires pre-approval of Program Director or Department Chair.

For detailed information about the SSPC courses, registration process and procedures, online registration application and other updates, please visit our web site at <http://www.uab.edu/cas/languages/>

## Honors in World Languages and Literatures

### Purpose

The World Languages and Literatures Honors Program is designed for qualified, self-motivated foreign languages majors. Through special course distribution and credit hours requirements, as well as a directed honors thesis, students are prepared for in-depth foreign language research and related graduate or professional opportunities.

### Eligibility

Acceptance into the World Languages and Literatures Honors Program requires the student to:

- Be a Foreign Languages major
- Have at least sophomore standing
- Have at least 6 hours at the 300-level in UAB foreign languages courses
- Have at least a 3.25 GPA in UAB foreign languages courses
- Have at least an overall 3.0 GPA
- Have submitted a Formal Application for the World Languages and Literatures Honors Program to the Department Chair or have been recommended to the program by a member of the department.

### Requirements

- Completion of required courses for the World Languages and Literatures major
- Submission of a formal project proposal to DFLL faculty Mentor and DFLL Chair
- Agreement and acceptance by a DFLL faculty Mentor and DFLL Chair of a research project
- Constitution of a former Honors Committee with membership that consists of the DFLL faculty Mentor and two faculty Consultants
- Registration for 3 credit hours of FLL 410
- Public Defense of the research project
- Acceptance of the completed project by the student's Honors Committee
- Submission of an archival copy of the completed project signed by the Honors Committee to the office of the DFLL

### Contact

For more information and/or admission to the World Languages and Literatures Honors Program, please contact:

Chair of the Department

Department of World Languages and Literatures

## ARA - Arabic Courses

### ARA 101. Introductory Arabic I. 3 Hours.

This course introduces students to the language by focusing on the acquisition of essential elements for basic communication and development of the practical language skills (listening, speaking, reading, and writing) for communicating in daily life situations, as well as provides a broader awareness of and appreciation for the cultures of the countries where Modern Standard Arabic (MSA) is spoken. This course meets the Core Curriculum requirements for Area II: Humanities.

### ARA 101L. Introductory Arabic I Lab. 1 Hour.

Lab for Introductory Arabic I.

### ARA 102. Introductory Arabic II. 3 Hours.

This course continues to develop the language-learning process by focusing on the acquisition of essential elements for basic communication and development of the practical language skills (listening, speaking, reading, and writing) for communicating in daily life situations, as well as provides a broader awareness of and appreciation for the cultures of the countries where MSA Arabic is spoken. This course meets the Core Curriculum requirements for Area II: Humanities.

### ARA 102L. Introductory Arabic II Lab. 1 Hour.

Lab for Introductory Arabic II.

### ARA 190. Study Abroad: Arabic. 1-8 Hour.

Approved novice level study abroad program in an Arabic-speaking country. Course of study will vary according to array of approved offerings and student interest. Permission of department chair required.

### ARA 201. Intermediate Arabic I. 3 Hours.

This is a continuation of ARA 102. Emphasis is placed on reading authentic Arabic materials and communicative competence. There will be a focus on the meaning of sentences rather than words, which would enable the students to read and speak with more fluency and better comprehension. Students will not only engage in studying authentic Arabic materials (written, audio, and/or video, official forms, etc.), but are also required to evaluate them for others. They will also be guided to function in specific situations where they have to use only the target language to communicate their ideas and then write about them. Additionally, they will be exposed to some particular aspects of the cultures, customs, literary traditions and other artistic expressions of the Arabic-speaking world.

### ARA 202. Intermediate Arabic II. 3 Hours.

This course focuses on enhancing students' linguistic and cultural competence in the Arabic speaking-world. Class activities will include role-playing, individual student presentations and extramural group projects. While the class is focused on content instruction, attention will also be paid to Arabic Language through selected activities that enhance the students' reading, writing, and conversational skills. Intermediate-high proficiency in reading, writing, listening and speaking Arabic is the targeted outcome.

**Prerequisites:** ARA 201 [Min Grade: C]

### ARA 290. Arabic for Study Abroad. 1-12 Hour.

This study-abroad Arabic course aims at improving students' oral fluency. It will help students develop intermediary conversational skills as they study in total immersion. The emphasis will be on efficient target language production at the intermediate level, as well as an oral and comprehension skills, communicative strategies, and the acquisition of vocabulary relating to a variety of domains. The course content will also include discussion and analysis of current cultural topics. Arabic 290 will be conducted entirely in Arabic.

### ARA 299. Directed Readings in Arabic. 1-3 Hour.

This is an individualized course of directed readings and activities for intermediate Arabic students. Course design is determined by the instructor and student, and will be tailored to the needs of the student. The goal of the course is to increase general literacy in and knowledge of Arabic language and culture. Intermediate proficiency in reading, writing, listening and speaking Arabic is the targeted outcome.

### ARA 390. Study Abroad: Arabic. 1-6 Hour.

Approved advanced level study abroad program in an Arabic-speaking country. Course of study will vary according to array of approved offerings. Permission of the department chair required.

### ARA 399. Directed Readings: Arabic. 1-3 Hour.

This is an individualized course of directed readings and activities for advanced students of Arabic language and culture. Course design is determined by the instructor and student and will be tailored to the needs of the student. The goal of the course is to increase general literacy in and knowledge of Arabic language and culture. Intermediate-high or Advanced-low proficiency in reading, writing, listening and speaking Arabic is the targeted outcome. 6 hours in Intermediate Arabic or equivalent and permission of the department chair required.

## CHI-Chinese Courses

### CHI 101. Introductory Chinese I. 3 Hours.

This course introduces students to the language by focusing on the acquisition of essential elements for basic communication and development of the practical language skills (listening, speaking, reading, and writing) for communicating in daily life situations, as well as provides a broader awareness of and appreciation for the cultures of the countries where Chinese is spoken. The online version of this course is Quality Matters (QM) certified. This course meets the Core Curriculum requirements for Area II: Humanities.

### CHI 101L. Introductory Chinese I Lab. 1 Hour.

Lab for Introductory Chinese I.

### CHI 102. Introductory Chinese II. 3 Hours.

This course continues to develop the language-learning process by focusing on the acquisition of essential elements for basic communication and development of the practical language skills (listening, speaking, reading, and writing) for communicating in daily life situations, as well as provides a broader awareness of and appreciation for the cultures of the countries where Chinese is spoken. This course meets the Core Curriculum requirements for Area II: Humanities.

### CHI 102L. Introductory Chinese II Lab. 1 Hour.

Lab for Introductory Chinese II.

### CHI 190. Study Abroad: Chinese. 1-8 Hour.

Approved novice level study abroad program in a Chinese-speaking country. Course of study will vary according to array of approved offerings and student interest. Permission of department chair required.

### CHI 201. Intermediate Chinese I. 3 Hours.

This course is designed to help students make the transition to natural communication and develop the language-learning process by focusing on the expansion of necessary elements for development of the practical language skills (listening, speaking, reading, and writing) by using cultural and literary readings as well as grammatical exercises. It also provides a broader awareness of and appreciation for the cultures of the countries where Chinese is spoken. Conducted in Chinese. (CORE AREA II).

**CHI 202. Intermediate Chinese II. 3 Hours.**

Continuation of Chinese 201. Continued development of grammar, vocabulary, reading, writing and cultural proficiency. Conducted in Chinese.

**CHI 203. Intermediate Chinese Language & Culture I. 3 Hours.**

This course aims to improve student linguistic and cultural fluency necessary for functioning in the Chinese-speaking world. The course examines several cultural topics as well as language patterns in everyday speech. While emphasis will be placed on oral skills, attention will also be given to the written Chinese that one encounters in daily life. Topics may include: Life of the Chinese People, Chinese Folk Customs, Chinese Arts and Crafts, Chinese Architecture, Traditional Chinese Ideology, Traveling around China, and etc.

**CHI 204. Intermediate Chinese Language and Culture II. 3 Hours.**

This course uses film as a medium to explore various aspects of Chinese culture and helps students understand the Chinese language. A wide range of movie genres are covered, including drama, action and thriller movies, etc. Students develop skills in reading, writing, speaking, listening and critical thinking. In addition, students will be introduced to the field of film studies and learn how to critically analyze and critique a movie.

**Prerequisites:** CHI 201 [Min Grade: C]

**CHI 206. Chinese for the Professions. 3 Hours.**

Intensive conversation and acquisition of vocabulary for the professionals while focusing on culture(s) of the Chinese-speaking world. This course aims to further develop communicative competence within the cultural context of the Chinese-speaking world; to foster critical thinking skills, such as, problem-identification and solving, decision-making, anticipation and planning, client understanding, and negotiation techniques; to expand students' functional vocabulary, in particular, the language of the Chinese-speaking professional world; to promote a better understanding of Chinese business culture; and to develop professional basic writing skills.

**CHI 220. Chinese Through Culinary Art. 3 Hours.**

This intermediate course focuses on Chinese language and cooking, combining two outstanding elements for a perfect experience of the Chinese culture. It continues developing the students' skills in Chinese by introducing them to additional advanced grammar, vocabulary, and idiomatic expressions that are specific to cooking. Students will be able to improve Chinese writing and oral skills as well as grammar; learn a wide range of vocabulary and specific expressions; and discover Chinese food culture and its characteristics. Prerequisite: CHI 201 or equivalent level. Conducted in Chinese.

**CHI 280. Chinese for Health Professionals. 3 Hours.**

This intermediate course aims at building the vocabulary of students with common words and useful expressions in Chinese in order to facilitate basic communication between medical professionals and their patients. Students will be able to demonstrate proper pronunciation and usage of basic Chinese medical expressions; understand cultural beliefs and practices unique to the Chinese-speaking community; utilize support and resources to encourage future self-directed learning. Prerequisite: CHI 201 or equivalent level. Conducted in Chinese.

**CHI 290. Study Abroad: Chinese. 1-12 Hour.**

This study-abroad Chinese course helps students develop intermediary conversational skills as they study in total immersion. The emphasis will be on efficient target language production at the intermediate level, as well as an oral and comprehension skills, communicative strategies, and the acquisition of vocabulary relating to a variety of domains. The course content also includes discussion and analysis of current cultural topics. Conducted in Chinese. Permission of the Department Chair and Director of Education Abroad required.

**CHI 299. Directed Readings in Chinese. 1-3 Hour.**

This is an individualized course of directed readings and activities for intermediate Chinese students. Course design is determined by the instructor and student, and will be tailored to the needs of the student. The goal of the course is to increase general literacy in and knowledge of Chinese language and culture. Intermediate proficiency in reading, writing, listening and speaking Chinese is the targeted outcome.

**CHI 390. Study Abroad: Chinese. 1-6 Hour.**

Advanced program in a Chinese-speaking country. Course of study will vary according to array of approved offering and student interest. Permission of the Department Chair and Director of Education Abroad required.

**CHI 399. Directed Readings: Chinese. 1-3 Hour.**

This is an individualized course of directed readings and activities for advanced students of Chinese language and culture. Course design is determined by the instructor and student and will be tailored to the needs of the student. The goal of the course is to increase general literacy in and knowledge of the Chinese language and culture. Intermediate-high or Advanced-low proficiency in reading, writing, listening and speaking Chinese is the targeted outcome. Permission of the Department Chair required.

**CHI 490. Study Abroad: Chinese. 1-9 Hour.**

Advanced program in a Chinese-speaking country. Course of study will vary according to array of approved offering and student interest. Conducted in Chinese. Permission of the Department Chair and Director of Education Abroad required.

## FLL-Foreign Languages Courses

**FLL 101. Introductory Foreign Language I. 3 Hours.**

Introduction to a less commonly taught Foreign Language and culture. Essentials of language and culture needed for communication. Includes listening comprehension, speaking, writing, and reading. Offered on demand in target language. Language selection rotates. (Core Area II).

**FLL 102. Introductory Foreign Language II. 3 Hours.**

This course continues introducing students to a less commonly taught Foreign Language and culture. Essentials of language and culture needed for communication. Includes listening comprehension, speaking, writing, and reading. Offered on demand in target language. Language selection rotates.

**Prerequisites:** FLL 101 [Min Grade: D]

**FLL 120. Foreign Cultures. 3 Hours.**

Exploration of the customs, traditions, languages, ancestry, religions, values, and institutions of varied western and non-western nations through the use of humanities disciplines. Strong emphasis on the epistemology, production, and reception of culture, within and beyond the borders of a particular nation-state. Ethics and Civic Responsibility are significant components of this course. This course meets the Core Curriculum requirements for Area II: Humanities.

**FLL 121. Songs of Social Change through World Cultures. 3 Hours.**

This course has been designed to introduce students to some of the most significant cultural topics across the languages and civilizations represented in the DFLL through a cultural medium, such as music. The course, team-taught by selected faculty of the different languages, will explore and reflect on ideas and attitudes, customs and traditions, identities and values of diverse western and non-western civilizations. Offered in English, it does not require previous knowledge of foreign languages.

**FLL 160. Freshman Year Experience: Foreign Languages. 1 Hour.**

The objective of this course is to introduce incoming freshmen to an education in foreign languages and world cultures in context of the university. It is meant to help prepare students for a successful collegiate career in the study of foreign languages.

**FLL 190. Study Abroad: Foreign Language. 1-8 Hour.**

Approved novice level study abroad program for a foreign language not regularly offered at UAB, which takes place in a foreign country. Permission of the Department Chair and the Study Abroad Director.

**FLL 199. Directed Reading: Foreign Lang. 3 Hours.**

This is an individualized course of directed readings and activities for novice Foreign Language students in a foreign language that is not offered regularly at UAB. The course may be offered in the case of a visiting professor in a language that is beyond the scope of regular instructional languages. Course design is determined by the instructor and student and will be tailored to the needs of the student. The goal of the course is to increase general literacy and knowledge of foreign languages.

**FLL 220. Foreign Literatures in English Translation. 3 Hours.**

Introduction to cross-cultural theory of genre and human experience with a particular emphasis on the historical and cultural context in which literary traditions are shaped, interpreted and reinvented. FLL 220 invites the students to think critically about the formation of literary canons and the ethics of translating cultural difference/sameness. Ethics and Civic Responsibility are significant components of this course.

**FLL 290. Study Abroad: Foreign Language. 1-12 Hour.**

Approved novice level study abroad program for a foreign language not regularly offered at UAB, which takes place in a foreign country. Permission of the Department Chair and the Study Abroad Director.

**FLL 299. Directed Reading: Foreign Lang. 3 Hours.**

This is an individualized course of directed readings and activities for intermediate Foreign Language students in a foreign language that is not offered regularly at UAB. Course design is determined by the instructor and student and will be tailored to the needs of the student. The goal of the course is to increase general literacy and knowledge of foreign languages. Permission of Department Chair required.

**FLL 303. History of World Movies I: The Origins to 1960. 3 Hours.**

From the first silent movies to the development of the modern color sound movie of Hollywood in the fifties: comparison and contrast of the views of major film makers of the sixty years of the 20th century.

**FLL 304. History of World Movies II. 3 Hours.**

From the modern color sound movie of the fifties and the Nouvelle Vague to the latest movies produced around the globe: comparison and contrast of the views of filmmakers of the last forty years.

**FLL 333. Foreign Language Service Learning. 1-6 Hour.**

This blended course (online and service learning) presents a faculty-supervised opportunity to engage in local service learning related to international communities with a designated Community Partner. The course provides tasks of international scope with applications of cultural knowledge. This is an official UAB service learning designated course.

**FLL 334. Foreign Language Internship. 1-6 Hour.**

Faculty-supervised opportunity for practical experience in tasks of international scope, may provide opportunities to use language(s) studied or applications of cultural knowledge.

**FLL 350. Intro to Romance Linguistics. 3 Hours.**

This course provides an introduction to the grammar of Romance languages, with emphasis on French and Spanish. Students will learn about the phonology (sound system), morphology, and syntax of French and Spanish. The course content is presented in a contrastive way, and it is related to the historical background that led to the separation of Latin into the modern Romance languages.

**Prerequisites:** EH 102 [Min Grade: C] or EH 107 [Min Grade: C]

**FLL 410. Undergraduate Foreign Language Research. 1-6 Hour.**

This is an individualized course of directed readings and research for Foreign Language students. Course design is determined by the instructor and student and will be tailored to a specific research project. The goal of the course is to increase knowledge of research design and practices in the foreign language discipline. Permission of the Department Chair.

**FLL 485. Foreign Language Capstone Seminar. 3 Hours.**

Advanced seminar on broad cultural and cross-cultural topics in foreign languages, literatures, and critical theory. Students must complete a Capstone project including substantial Writing assessments with a strong emphasis on Ethics and Civic Responsibility, where they apply cultural literacy in a critical and reasoned manner toward understanding contemporary and/or past foreign cultures. Selected courses may also include a Quantitative Literacy component. Taught in English, readings assignments in English and/or foreign languages. Senior standing, FLL 120 or FLL 121 and at least 6 semester hours at the 300 level of student's target language track.

**Prerequisites:** FLL 120 [Min Grade: C] or FLL 121 [Min Grade: C]

## FR-French Courses

**FR 101. Introductory French I. 3 Hours.**

This course introduces students to the language by focusing on the acquisition of essential elements for basic communication and development of the practical language skills (listening, speaking, reading, and writing) for communicating in daily life situations, as well as provides a broader awareness of and appreciation for the cultures of the countries where French is spoken. This course meets the Core Curriculum requirements for Area II: Humanities.

**FR 101L. Introductory French I Lab Practice. 1 Hour.**

Lab for Introductory French I.

**FR 102. Introductory French II. 3 Hours.**

This course continues to develop the language-learning process by focusing on the acquisition of essential elements for basic communication and development of the practical language skills (listening, speaking, reading, and writing) for communicating in daily life situations, as well as provides a broader awareness of and appreciation for the cultures of the countries where French is spoken. This course meets the Core Curriculum requirements for Area II: Humanities.

**FR 102L. Introductory French II Lab Practice. 1 Hour.**

Lab for Introductory French II.

**FR 108. Introductory Intensive French. 4 Hours.**

Intensive study of the essentials of language needed for proficient communication. This is a high-paced course, which includes basic exercises in listening comprehension, speaking, writing and reading, as it combines FR 101 and 102. Includes a one-hour lab requirement. This course meets the Core Curriculum requirements for Area II: Humanities.

**FR 190. Study Abroad. 1-8 Hour.**

First-year level of approved study-abroad program in a French-speaking country.

**FR 201. Intermediate French I. 3 Hours.**

This course is designed to help students make the transition to natural communication and develop the language-learning process by focusing on the expansion of necessary elements for development of the practical language skills (listening, speaking, reading, and writing) by using cultural and literary readings as well as grammatical exercises. It also provides a broader awareness of and appreciation for the cultures of the countries where French is spoken. This course meets the Core Curriculum requirements for Area II: Humanities.

**FR 202. Intermediate French II. 3 Hours.**

Continuation of french 201. Continued review of grammar and composition through written exercises of reading, writing, listening comprehension, and speaking skills. Conducted in French. This course meets the Core Curriculum requirements for Area II: Humanities.

**FR 206. French and Business Culture. 3 Hours.**

The overarching goal of this intermediate course is to develop tools to function in a professional francophone setting. Students will closely examine the international job market while developing a personal professional dossier. Upon completion of this course, students may take the exam for the DFP (Diplôme de Français Professionnel), an internationally recognized validation of students' proficiency in Professional French.

**FR 210. Exploring French-speaking Culture. 3 Hours.**

Overview of contemporary French cultural identity, in the context of geographical, social and educational dynamics. Conducted in French. May not concurrently enroll in FR 310.

**FR 211. Intermediate Survey of French Literature. 3 Hours.**

Intermediate-level overview of French literature and civilization from the seventeenth century to the present. Conducted in French. May not concurrently enroll in FR 311.

**FR 220. Intermediate French Composition. 3 Hours.**

Fundamental composition course focusing on syntactical patterns of French, vocabulary building, correct usage, stylistic control, writing skills, and free composition. Conducted in French. May not concurrently enroll in FR 320. Writing is a significant component of this course.

**FR 230. Practical Conversation. 3 Hours.**

Acquisition of conversational and listening skills, vocabulary, and oral automatism. Conducted in French. May not concurrently enroll in FR 330.

**FR 240. French for Health. 3 Hours.**

This course focuses on the French healthcare system, presenting practical vocabulary, idiomatic expressions, medical terminology, and cultural attitudes of French-speaking patients towards health issues. Current issues related to health, illnesses, and healthcare in France and the French-speaking world will be discussed. This course builds and develops speaking, listening, and reading skills by emphasizing intensive conversation, technical reading, and vocabulary acquisition. Conducted in French.

**FR 250. Food for Thought: French Culture through Cuisine. 3 Hours.**

French gastronomy is renowned worldwide. This course aims to explore how French cuisine has had such a global culinary impact while analyzing the variety and specificities of French cuisine. Moving beyond France, it also tackles how food embodies different cultures, histories, nations, regions in the French-speaking world. By studying and cooking national or local dishes, students will explore the French food culture in film, literature, and historical texts to explore questions of national and individual identity, immigration, tradition, modernity, global and local markets. Conducted in French.

**FR 290. Study Abroad. 1-12 Hour.**

Approved program in a French-speaking country. Prerequisite: Permission of Department Chair.

**FR 305. French-Speaking Cinema. 3 Hours.**

Overview of French-speaking cinema from the end of the nineteenth century to the present. Emphasis on the cinema of l'Entre-deux Guerres, la Nouvelle Vague, and French-speaking movies from Africa. Conducted in French.

**FR 306. Parlons affaires! Global Engagement in the French-Speaking World. 3 Hours.**

In this task-based course, we will use departments of a company (human resources, production, sales, finance, and administration) to examine business practices. Students will gain real-world practical French experience through company web sites, the business press, case studies, and exchanges with francophone professionals. Upon completion of this course, students may take the exam for the DFP (Diplôme de Français Professionnel), an internationally recognized validation of students' proficiency in Professional French.

**FR 307. Advanced Grammar and Composition I. 3 Hours.**

Thorough review of principles of French grammar, vocabulary, and idioms. Also comparative linguistics and phonetics. Conducted in French.

**FR 308. Advanced Grammar and Composition II. 3 Hours.**

Continuation of FR 307. Continued review of principles of French grammar, Vocabulary, and idioms. Also comparative linguistics and phonetics. Conducted in French.

**FR 310. Exploring French-Speaking Culture. 3 Hours.**

Overview of contemporary French-speaking cultural identity, in the context of geographical, social and educational dynamics. This course also focuses on building advanced-level French language skills and a stronger vocabulary. Conducted in French. May not take concurrently with FR 210.

**FR 311. Greatest Hits of French Literature. 3 Hours.**

This course is an overview of French civilization, culture, literature, and the arts from early to contemporary times. Highlights of best selling works of various authors, with emphasis on fundamental literary concepts and distinctive stylistic features of French discourse, will be reviewed. Conducted in French. May not be taken concurrently with FR 211.

**FR 315. Bande-dessinée: Reading French Language Comics. 3 Hours.**

This course offers an introduction to the vast universe of bandes dessinées in the French-speaking world, considering comics from France, Belgium, Africa, the Middle East, Québec, and the Caribbean. An extremely popular genre in the French-speaking world, bandes dessinées engages with contemporary culture with themes such as national identity, gender, immigration, colonization, and religion. The course also provides students with the appropriated vocabulary as well as the literary styles related to bandes dessinées. Conducted in French.

**FR 320. Creative Writing in French. 3 Hours.**

Students will have the opportunity to develop their knowledge of the French language around creative writing. Based on workshop activities, students will discuss short readings ranging from autobiographical to experimental in a variety of literary genres (poetry, prose, short story, and essay) and then write their own. Students will also critique and help other classmates in order to perfect their crafts. This is a fundamental writing course which focuses on the syntactical patterns of French, vocabulary building, correct usage, stylistic control, writing skills. Conducted in French.

**FR 330. Practical Conversation. 3 Hours.**

Acquisition of conversational and listening skills, vocabulary, and oral automatism. Conducted in French. Preq: 6 hours of French at the minor level (or equivalent) or permission of instructor. May not concurrently enroll in FR 230.

**FR 340. Approaches to Translation. 3 Hours.**

This course develops the practice of the art of translation. The class will be devoted to translating a variety of genre of writing in French and in English (poetry, prose, journalism or subtitling) and that tackle various contemporary themes. Through translating – and reflecting on translation – students will acquire vocabulary, grammatical structures and writing styles. Conducted in French.

**FR 350. Soccer, History, and Politics in the French-Speaking World. 3 Hours.**

This course explores the importance of soccer in the French-speaking world and how the sport has become part of different cultures over the years. By looking at specific players' stories or larger soccer events, the course specifically reflects on the politics behind the beautiful game. It will particularly examine the sport's relationship with issues such as colonialism, decolonization, migration, race, gender, and national identity. Conducted in French.

**FR 360. La Chanson Française: French Culture through Songs. 3 Hours.**

This course offers students a unique insight into French culture through la chanson française, or "French Song." This genre of music often termed "la musique populaire" is the music of the French people in which the language and lyrics are more important than the melody itself. Through the study of songs, students trace the Medieval Troubadour tradition of storytelling to the contemporary poetry of songs. Through cross-cultural analysis, students will connect the songs of these performers to French identity. Course themes include national identity, gender, immigration, and religion. Conducted in French.

**FR 390. Study Abroad. 1-9 Hour.**

Approved program in a French-speaking country.

**FR 399. Special Readings in French. 1-3 Hour.**

Individualized course of directed readings and activities for students of French. Permission of Department Chair required.

**FR 401. Histoires de France: French History Through Stories. 3 Hours.**

Literature, culture, and civilization of seventeenth- and eighteenth-century France, reflecting the historical and literary ambience in which Ancient Regime writers, philosophers, and artists worked. Selected works of representative authors. Conducted in French.

**FR 402. Aux Armes! Revolutions in the French-speaking World. 3 Hours.**

This course reflects on the major revolutions that occurred in the 18th and 19th century, illustrating the impact of the French Revolution on the history and thought of Europe and the Americas. 3 hours. Conducted in French.

**FR 403. Fin-de-Siecle France (1895-1940). 3 Hours.**

Major literary and artistic movements of fin-de-siecle France, from La Belle Epoque period through World War I. Selected works of representative authors. Selections will vary according to instructor. Conducted in French.

**FR 404. French Literature since 1940. 3 Hours.**

Cultural trends and literary movements from World War II to the present, including existentialism and the Nouveau Roman. Selected works of representative authors. Selections will vary according to instructor. Conducted in French.

**FR 405. Race, Gender, and Transnationalism in Francophone Literature and Thought. 3 Hours.**

French-speaking literature outside France that developed through colonization, decolonization, revolution, and emigration. Representative writers from Francophone countries with emphasis on Africa and the Caribbean. Selected works of representative authors. Selections will vary according to instructor. Conducted in French.

**FR 410. Special Topics in French. 3 Hours.**

Seminar on individual authors, specific genres, important literary movements, or literary discourse/theory. Selected works of representative authors. Selections will vary according to instructor. Conducted in French. May be repeated for credit.

**FR 412. French Civilization: before 1789 Pre-Revolutionary. 3 Hours.**

Historical and cultural foundation of France, from its conquest by Julius Caesar to the French Revolution. Conducted in French.

**FR 413. French Civilization after 1789 Post-Revolutionary. 3 Hours.**

The history and myths of France after the French Revolution that produced French civilization. Conducted in French.

**FR 421. Literature and the Environment in the French-Speaking World. 3 Hours.**

This course examines the poetics of the environment, known as ecopoetics, in the 20th- and 21st-century literary and cultural productions of the Francophone world, notably France, the Caribbean and Africa. It explores how francophone poets, fiction writers and philosophers write and think about the environment in relation to tradition, memory, sexuality, law, poverty and global capitalism. This course pays particular attention to the role of the environment as a space to discuss historical and cultural events, ranging from colonization to the Anthropocene. Conducted in French.

**FR 490. Study Abroad: French. 1-9 Hour.**

Approved program in a French-speaking country.

**FR 499. Directed Studies. 1-3 Hour.**

Individualized course of directed readings and activities for students of French. Permission of Department Chair required.

## GN-German Courses

### GN 101. Introductory German I. 3 Hours.

This course introduces students to the language by focusing on the acquisition of essential elements for basic communication and development of the practical language skills (listening, speaking, reading, and writing) for communicating in daily life situations, as well as provides a broader awareness of and appreciation for the cultures of the countries where German is spoken. This course meets the Core Curriculum requirements for Area II: Humanities.

### GN 101L. Introductory German I Lab Practice. 1 Hour.

Lab for Introductory German I.

### GN 102. Introductory German II. 3 Hours.

This course continues to develop the language-learning process by focusing on the acquisition of essential elements for basic communication and development of the practical language skills (listening, speaking, reading, and writing) for communicating in daily life situations, as well as provides a broader awareness of and appreciation for the cultures of the countries where German is spoken. This course meets the Core Curriculum requirements for Area II: Humanities.

### GN 102L. Introductory German II Lab Practice. 1 Hour.

Lab for Introductory German II.

### GN 190. Study Abroad. 1-8 Hour.

Approved novice-level program in German-speaking country. Course of study will vary according to array of approved offering and student interest. Permission of the Department Chair and Director of Education Abroad required.

### GN 201. Intermediate German I. 3 Hours.

This course is designed to help students make the transition to natural communication and develop the language-learning process by focusing on the expansion of necessary elements for development of the practical language skills (listening, speaking, reading, and writing) by using cultural and literary readings as well as grammatical exercises. It also provides a broader awareness of and appreciation for the cultures of the countries where German is spoken. This course meets the Core Curriculum requirements for Area II: Humanities.

### GN 202. Intermediate German II. 3 Hours.

Continuation of GN 201. Conducted in German. This course meets the Core Curriculum requirements for Area II: Humanities.

### GN 203. German Culture and Civilization. 3 Hours.

Introduction to historical and contemporary aspects of German culture through readings and other media. Emphasizes continued development of oral and written skills. Conducted in German.

### GN 204. Readings in German Literature. 3 Hours.

Selections from representative modern authors. Emphasis on oral and written practice. Conducted in German. This course meets the Core Curriculum requirements for Area II: Humanities.

### GN 205. German for the Professions. 3 Hours.

Intensive conversation course designed to acquaint students with more extensive vocabulary of German-speaking professionals. Students also learn about the cultural context in which German is used in various professions. Conducted in German.

### GN 206. German for Technology and Media. 3 Hours.

Practice in the use of technology and media in German Studies. Conducted in German.

### GN 210. German Culture and Civilization II. 3 Hours.

Highlights of cultural history from the Middle Ages to the present.

### GN 290. Study Abroad. 1-12 Hour.

Approved program in a German-speaking country.

### GN 299. Special Readings in German. 1-3 Hour.

This is an individualized course of directed readings and activities for intermediate students of German. Course design is determined by the instructor and the student, and will be tailored to the needs of the student. The goal of the course is to increase general literacy in and knowledge of German language and culture. Intermediate proficiency in reading, writing, listening and speaking German is the targeted outcome. Permission of Department Chair required.

**Prerequisites:** GN 201 [Min Grade: D]

### GN 390. Study Abroad. 1-9 Hour.

Approved program in a German-speaking country.

### GN 399. Directed Readings in German. 3 Hours.

Special Readings in German.

### GN 480. Special Topics in German Literature. 3 Hours.

Emphasis on particular authors, genres, or topics. May be repeated for credit.

### GN 490. Study Abroad: German. 1-9 Hour.

Approved program in a German-speaking country.

### GN 499. Directed Studies in German. 3 Hours.

Directed studies. Permission of Department Chair required.

## ITL-Italian Courses

### ITL 101. Introductory Italian I. 3 Hours.

This course introduces students to the language by focusing on the acquisition of essential elements for basic communication and development of the practical language skills (listening, speaking, reading, and writing) for communicating in daily life situations, as well as provides a broader awareness of and appreciation for the cultures of the countries where Italian is spoken. This course meets the Core Curriculum requirements for Area II: Humanities.

### ITL 101L. Introductory Italian I Lab. 1 Hour.

Lab for Introductory Italian I.

### ITL 102. Introductory Italian II. 3 Hours.

This course continues to develop the language-learning process by focusing on the acquisition of essential elements for basic communication and development of the practical language skills (listening, speaking, reading, and writing) for communicating in daily life situations, as well as provides a broader awareness of and appreciation for the cultures of the countries where Italian is spoken. This course meets the Core Curriculum requirements for Area II: Humanities.

**Prerequisites:** ITL 101 [Min Grade: D]

### ITL 102L. Introductory Italian II Lab. 1 Hour.

Lab for Introductory Italian II.

### ITL 190. Study Abroad: Italian. 1-8 Hour.

Approved novice level study abroad program in an Italian-speaking country.

### ITL 201. Intermediate Italian I. 3 Hours.

This course is designed to help students make the transition to natural communication and develop the language-learning process by focusing on the expansion of necessary elements for development of the practical language skills (listening, speaking, reading, and writing) by using cultural and literary readings as well as grammatical exercises. It also provides a broader awareness of and appreciation for the cultures of the countries where Italian is spoken.

**ITL 290. Study Abroad. 1-12 Hour.**

Approved program in an Italian-speaking country.

**ITL 299. Directed Readings in Italian. 1-3 Hour.**

This is an individualized course of directed readings and activities for intermediate Italian students. Course design is determined by the instructor and student, and will be tailored to the needs of the student. The goal of the course is to increase general literacy in and knowledge of Italian language and culture. Intermediate proficiency in reading, writing, listening and speaking Italian is the targeted outcome. Permission of Department Chair required.

**ITL 390. Study Abroad. 1-6 Hour.**

Approved upper level study abroad program in an Italian-speaking country. Permission of Department Chair and Study Abroad Director.

**ITL 399. Independent Study. 3 Hours.**

This is an individualized course of directed readings and activities for advanced students of Italian language and culture. Course design is determined by the instructor and student and will be tailored to the needs of the student. The goal of the course is to increase general literacy in and knowledge of the Italian language and culture. Intermediate-high or Advanced-low proficiency in reading, writing, listening and speaking Italian is the targeted outcome. Permission of the Department Chair required.

## JPA-Japanese Courses

**JPA 101. Introductory Japanese I. 3 Hours.**

This course introduces students to the language by focusing on the acquisition of essential elements for basic communication and development of the practical language skills (listening, speaking, reading, and writing) for communicating in daily life situations, as well as provides a broader awareness of and appreciation for the cultures of the countries where Japanese is spoken. This course meets the Core Curriculum requirements for Area II: Humanities.

**JPA 101L. Introductory Japanese I Lab. 1 Hour.**

Lab for Introductory Japanese I.

**JPA 102. Introductory Japanese II. 3 Hours.**

This course continues to develop the language-learning process by focusing on the acquisition of essential elements for basic communication and development of the practical language skills (listening, speaking, reading, and writing) for communicating in daily life situations, as well as provides a broader awareness of and appreciation for the cultures of the countries where Japanese is spoken. This course meets the Core Curriculum requirements for Area II: Humanities.

**Prerequisites:** JPA 101 [Min Grade: D]

**JPA 102L. Introductory Japanese Lab II. 1 Hour.**

Lab for Introductory Japanese II.

**JPA 190. Study Abroad. 1-8 Hour.**

Approved novice level study abroad program in Japan. Permission of Department Chair required.

**JPA 201. Intermediate Japanese I. 3 Hours.**

This course is designed to help students make the transition to natural communication and develop the language-learning process by focusing on the expansion of necessary elements for development of the practical language skills (listening, speaking, reading, and writing) by using cultural and literary readings as well as grammatical exercises. It also provides a broader awareness of and appreciation for the cultures of the countries where Japanese is spoken. (CORE AREA II).

**Prerequisites:** JPA 102 [Min Grade: D]

**JPA 202. Intermediate Japanese II. 3 Hours.**

Continuation of JPA 201. Conducted in Japanese. (CORE AREA II).

**Prerequisites:** JPA 201 [Min Grade: D]

**JPA 203. Intermediate Japanese Language & Culture I. 3 Hours.**

This course aims at improving students' linguistic and cultural fluency necessary for functioning in Japanese. Class activities will consist of communicative exercises such as role-playing. While emphasis will be placed on oral skills, attention will also be given to the written Japanese that one encounters in daily life, particularly in signage and forms. Topics may include: Conversational Japanese in such settings as restaurant, store, public transportation, airport, post office, hospital, home-stay, hotel, and local attractions.

**Prerequisites:** JPA 102 [Min Grade: D]

**JPA 204. Intermediate Japanese Language & Culture II. 3 Hours.**

This course focuses on developing students' reading and writing skills to increase Japanese literacy. It will also expand students' vocabulary, grammatical understanding, listening and speaking. Topics may include: Examples will be taken from authentic popular literature, manga and anime, folktales, letters, e-mails and songs. Students will learn how to write basic compositions and make speeches.

**Prerequisites:** JPA 202 [Min Grade: C]

**JPA 205. Japanese Anime and Manga. 3 Hours.**

This course is a survey of Japanese popular visual culture – Anime (animation) and manga (comic books) – from their beginnings in the middle of the 20th century to the present. This course explores each as a Japanese medium and critically examines how they interact with history and society in Japan. Through analyzing manga and anime, this course gives students an opportunity to learn Japanese language in an enjoyable way. Conducted in Japanese.

**Prerequisites:** JPA 202 [Min Grade: C]

**JPA 206. Business Japanese. 3 Hours.**

Japanese course focusing on the effective communication skills essential in professional fields and the understanding of the Japanese business world. Students develop their verbal, listening, reading, and writing proficiency in business Japanese and acquire culturally appropriate interpersonal communication skills needed to deal with a variety of business situations. Students are expected to effectively employ their language skills to explore and analyze current business trends and issues in Japan. Conducted in Japanese.

**Prerequisites:** JPA 203 [Min Grade: C]

**JPA 210. Discourse and Culture in Japanese. 3 Hours.**

Study of the significance of cultural knowledge in understanding the meaning of language. The course focuses Japanese learners to understand values, expectations and appropriate behavior in Japanese culture, as well as the theoretical underpinnings of pragmatics and discourse analysis. Conducted in Japanese.

**Prerequisites:** JPA 202 [Min Grade: C]

**JPA 211. Contemporary Issues in Japanese Society. 3 Hours.**

Study of selected themes in contemporary Japanese society and culture, through reading and discussion of contemporary debates in periodicals, news sources and other media. Readings will focus on such themes as work and social pressure, gender inequality, social alienation, declining birthrates, aging and social support, media images, and education. Conducted in Japanese.

**Prerequisites:** JPA 202 [Min Grade: C]

**JPA 290. Japanese for Study Abroad. 1-12 Hour.**

This study-abroad Japanese course aims at improving students' oral fluency. It will help students develop intermediary conversational skills as they study in total immersion. The emphasis will be on efficient target language production at the intermediate level, as well as an oral and comprehension skills, communicative strategies, and the acquisition of vocabulary relating to a variety of domains. The course content will also include discussion and analysis of current cultural topics. JPA 290 will be conducted entirely in Japanese. Permission of department chair required.

**JPA 299. Directed Readings in Japanese. 1-3 Hour.**

This is an individualized course of directed readings and activities for intermediate Japanese students. Course design is determined by the instructor and student and will be tailored to the needs of the student. The goal of the course is to increase general literacy in and knowledge of Japanese language and culture. Intermediate proficiency in reading, writing, listening and speaking Japanese is the targeted outcome.

Prerequisites: JPA 202 or equivalent.

Prerequisites: JPA 202 [Min Grade: C]

**JPA 301. Advanced Japanese I. 3 Hours.**

Continued development of Japanese speaking, listening, reading, and writing abilities, using materials dealing primarily with everyday life and civilization in Japan from a variety of sources. Conducted primarily in Japanese.

Prerequisites: JPA 204 [Min Grade: C]

**JPA 302. Advanced Japanese II. 3 Hours.**

Further work to develop speaking, listening, reading, and writing abilities in Japanese, on the basis of materials dealing with the ideas and events that have shaped present-day Japan. Conducted primarily in Japanese.

Prerequisites: JPA 301 [Min Grade: C]

**JPA 303. Japanese Pragmatics I. 3 Hours.**

This course integrates understanding the learning of the language and the understanding of the culture. Students will be able to learn Japanese culture and acquire language proficiency by incorporating the four skills: speaking, listening, reading, and writing. Speaking and listening skills will be practiced through various classroom activities. The course will discuss five Japanese speech acts: 1) giving/responding to compliments, 2) thanking, 3) requesting, 4) refusing and 5) apologizing. Students will be required to read materials intensively and extensively, and write compositions. Conducted in Japanese.

**JPA 304. Japanese Culture and Civilization. 3 Hours.**

Survey of the origins and development of Japanese culture: art, literature, religion, philosophy, political and social institutions from earliest to modern times. An overview of cultural traditions for those with a general interest in Japan. Conducted in Japanese.

**JPA 305. Japanese Children Stories. 3 Hours.**

Readings of and discussions on selected modern Japanese Children literary texts of different genres including poetry, short stories, novels and plays. When available, relevant video materials will be shown in class. Conducted in Japanese.

**JPA 306. Advanced Business Japanese. 3 Hours.**

Advanced Japanese course focusing on the effective advanced communication skills essential in professional fields and the understanding of the Japanese business world. Students develop their advanced verbal, listening, reading, and writing proficiency in business Japanese and acquire culturally appropriate inter-personal communication skills needed to deal with a variety of business situations. Students are expected to effectively employ their language skills to explore and analyze current business trends and issues in Japan. Conducted in Japanese.

Prerequisites: JPA 204 [Min Grade: C]

**JPA 307. Japanese Translation I. 3 Hours.**

This advanced-low level course focuses on training students in skills in translating Japanese into English to prepare them for a career in which such skills are required, such as the business world or foreign relations. Cannot be taken concurrently with JPA 407. Conducted in Japanese.

**JPA 308. Japanese Cinema I. 3 Hours.**

This course offers a survey of Japanese cinema in 21st century and it focuses on the viewing and discussion of films. Through taking this course, students will understand Japanese culture and social behavior and their role in effective interpersonal communication. Conducted in Japanese.

**JPA 390. Study Abroad. 1-9 Hour.**

Approved upper-level study abroad program in a Japanese-speaking country. Permission of Department Chair and Study Abroad Director.

**JPA 399. Directed Readings: Japanese. 1-3 Hour.**

This is an individualized course of directed readings and activities for advanced students of Japanese language and culture. Course design is determined by the instructor and student and will be tailored to the needs of the student. The goal of the course is to increase general literacy in and knowledge of the Japanese language and culture. Intermediate-high or Advanced-low proficiency in reading, writing, listening and speaking Japanese is the targeted outcome. Permission of the Department Chair required.

Prerequisites: JPA 201 [Min Grade: C]

**JPA 401. Advanced Japanese III. 3 Hours.**

Advanced work on the development of Japanese speaking, reading, and writing abilities, focusing on materials dealing with culture and the arts of Japan. Extensive readings in advanced general and specialized texts in contemporary Japanese, and discussion on the content of the reading materials. Online materials also used. Conducted in Japanese.

**JPA 402. Advanced Japanese IV. 3 Hours.**

Further advanced work on speaking, listening, reading, and writing abilities in Japanese. Course materials will cover a variety of topics illustrated in film and other media, both print and non-print. Extensive readings in advanced general and specialized texts in contemporary Japanese, and discussion on the content of the reading materials. Online materials also used. Conducted in Japanese.

**JPA 403. Japanese Pragmatics II. 3 Hours.**

Developing pragmatic competence is crucial for second language learners. However, previous researchers have argued that pragmatic competence is often learned late. It is crucial that students communicate in an accurate and appropriate way if they wish to become good communicators. This course is designed for students to become proficient in conveying their ideas and feelings appropriately in Japanese. Students will be able to use Japanese appropriately in various situations. Conducted in Japanese.

**JPA 404. Japanese Popular Culture. 3 Hours.**

The main goal is primarily intended to increase students' knowledge of contemporary Japanese popular culture through exploration of various topics from historical and theoretical perspectives. In this course, students are expected to make the shift from gaining knowledge of broaden intellectual information, to apply the knowledge to critically analyze the target culture, develop critical insights into the nature of the culture through comparing the target culture and their own, and express their judgments about the knowledge. Conducted in Japanese.

**JPA 405. Japanese Literature. 3 Hours.**

Readings of and discussions on selected modern Japanese literary texts of different genres including poetry, short stories, novels and plays. When available, relevant video materials will be shown in class. Conducted in Japanese.

**JPA 406. Advanced Japanese for the Professions. 3 Hours.**

Advanced Japanese for the Professions focuses on the effective advanced communication skills essential in professional fields and the understanding of the Japanese business world. Students further develop their advanced verbal, listening, reading, and writing proficiency in business Japanese and acquire culturally appropriate inter-personal communication skills needed to deal with a variety of business situations. Students will effectively learn to employ their language skills to explore and analyze current business and professional trends, and cultural issues in Japan. Conducted in Japanese.

**JPA 407. Japanese Translation II. 3 Hours.**

This advanced course focuses on training students in skills in translating Japanese into English, and vice versa, to prepare them for a career in which such skills are required, such as the business world or foreign relations. Cannot be taken concurrently with JPA 307. Conducted in Japanese.

**JPA 408. Japanese Cinema II. 3 Hours.**

This advanced course offers a survey of Japanese cinema in 21st century and focuses on the viewing and discussion of films. Through taking this course, students will understand Japanese culture and social behavior and their role in effective interpersonal communication. Students will gain sociolinguistic awareness and competency in the appropriate use of politeness. Cannot be taken concurrently with JPA 308. Conducted in Japanese.

**JPA 490. Study Abroad: Japan. 1-9 Hour.**

Approved upper-level study-abroad program in Japan. Permission of Department Chair and Study-Abroad Director.

**JPA 499. Directed Readings: Japanese. 1-3 Hour.**

This is an individualized course of directed readings and research for advanced students of Japanese language and culture. Course design is determined by the instructor and student and will be tailored to the needs of the student. The goal of the course is to increase general literacy in and knowledge of the Japanese language and culture. Advanced-mid or advanced-high proficiency in reading, writing, listening and speaking Japanese is the targeted outcome. Permission of the Department Chair required.

**Prerequisites:** JPA 301 [Min Grade: C]

## LT-Foreign Literature English Courses

**LT 420. World Literature I. 3 Hours.**

Selections in translation from Greek, Latin, and Hebrew classics as well as other world literature, and from oral tradition.

**LT 421. World Literature II. 3 Hours.**

Selections in translation from world writers. Overview of a rotating selection of genres, texts, author, societies and regions of the world.

**LT 425. French Literature in English Translation. 3 Hours.**

Selections in translation from major Francophone writers. Overview of a rotating selection of genres texts and authors. Focus on the relevant questions of genre and on the French-speaking societies in which the works were produced.

**LT 426. German Literature in English Translation. 3 Hours.**

Selections in translation from major Spanish or Hispano-American writers. Overview of rotating selection of genres, texts, authors, and regions of the Hispanic World. Focus on the relevant questions of genre and on the German-speaking society in which the works were produced.

**LT 427. Spanish and/or Spanish- American Literature in English. 3 Hours.**

Selections in translation from major Spanish or Hispano-American writers. Overview of a rotating selection of genres, texts, authors and regions of the Hispanic World. Focus on the relevant questions of genre and on the Spanish-speaking societies in which the works were produced.

**LT 430. Brazilian or Portuguese Literature in English Translation. 3 Hours.**

Selections in translation from major Portuguese or Brazilian writers. Overview of a rotating selection of genres, text, authors, and regions of the Lusophone World. Focus on the relevant questions of genre and on the Portuguese-speaking societies in which the works were produced.

**LT 431. Individual Studies. 1-3 Hour.**

Individualized course of directed readings and activities for students of languages other than those commonly taught at UAB. Permission of department chair required.

## POR - Portuguese Courses

**POR 101. Introductory Portuguese I. 3 Hours.**

This course introduces students to the language by focusing on the acquisition of essential elements for basic communication and development of the practical language skills (listening, speaking, reading, and writing) for communicating in daily life situations, as well as provides a broader awareness of and appreciation for the cultures of the countries where Portuguese is spoken.

**POR 101L. Introductory Portuguese I Lab Practice. 1 Hour.**

Lab for Introductory Portuguese I.

**POR 102. Introductory Portuguese II. 3 Hours.**

This course continues to develop the language-learning process by focusing on the acquisition of essential elements for basic communication and development of the practical language skills (listening, speaking, reading, and writing) for communicating in daily life situations, as well as provides a broader awareness of and appreciation for the cultures of the countries where Portuguese is spoken.

**Prerequisites:** POR 101 [Min Grade: C]

**POR 102L. Introductory Portuguese II Lab Practice. 1 Hour.**

Lab for Introductory Portuguese II.

## SPA-Spanish Courses

### SPA 101. Introductory Spanish I. 3 Hours.

This course introduces students to the language by focusing on the acquisition of essential elements for basic communication and development of the practical language skills (listening, speaking, reading, and writing) for communicating in daily life situations, as well as provides a broader awareness of and appreciation for the cultures of the countries where Spanish is spoken. This course meets the Core Curriculum requirements for Area II: Humanities.

### SPA 101L. Introductory Spanish I Lab Practice. 1 Hour.

Lab for Introductory Spanish I.

### SPA 102. Introductory Spanish II. 3 Hours.

This course continues to develop the language-learning process by focusing on the acquisition of essential elements for basic communication and development of the practical language skills (listening, speaking, reading, and writing) for communicating in daily life situations, as well as provides a broader awareness of and appreciation for the cultures of the countries where Spanish is spoken. This course meets the Core Curriculum requirements for Area II: Humanities.

### SPA 102L. Introductory Spanish II Lab Practice. 1 Hour.

Lab for Introductory Spanish II.

### SPA 108. Introductory Intensive Spanish. 4 Hours.

Accelerated essentials of language and culture needed for communication. Includes listening comprehension, speaking, writing, and reading. Fast-paced review of SPA 101 and SPA 102. Conducted in Spanish. This course meets the Core Curriculum requirements for Area II: Humanities.

### SPA 180. Spanish for Health Professionals. 3 Hours.

Intensive conversation course to expose health professionals to basic vocabulary of Spanish-speaking patients. Focus on practical vocabulary, idiomatic expressions, and cultural patterns of Spanish-speaking patients with little or no proficiency in English. Conducted in Spanish.

### SPA 190. Study Abroad. 1-8 Hour.

Approved program in a Spanish-speaking country.

### SPA 201. Intermediate Spanish I. 3 Hours.

This course is designed to help students make the transition to natural communication and develop the language-learning process by focusing on the expansion of necessary elements for development of the practical language skills (listening, speaking, reading, and writing) by using cultural and literary readings as well as grammatical exercises. It also provides a broader awareness of and appreciation for the cultures of the countries where Spanish is spoken. This course meets the Core Curriculum requirements for Area II: Humanities.

### SPA 202. Intermediate Spanish II. 3 Hours.

Continuation of SPA 201. Conducted in Spanish. This course meets the Core Curriculum requirements for Area II: Humanities.

### SPA 203. Intermediate Spanish Review. 3 Hours.

This course is designed as a review of the content covered in Introductory Spanish I, Introductory Spanish II, Intermediate Spanish I, and Intermediate Spanish II, while deepening the knowledge and understanding about different grammatical and cultural topics. This course is especially useful for students who have already taken Spanish courses at the intermediate level but whose exposure has been limited or fragmented in recent times. The primary focus of this course is to improve communication skills in Spanish. Therefore, Spanish is the language of instruction.

**Prerequisites:** SPA 201 [Min Grade: D]

### SPA 206. Intermediate Spanish for the Professions. 3 Hours.

This intermediate course bridges the gap between personal and professional contexts. Course aims to facilitate acquisition of more sophisticated vocabulary related to the professional world, increased grammatical accuracy, sentence- to paragraph-level discourse, and a deeper understanding of Spanish-speaking cultures. Both course and online learning management system, Canvas, are delivered in Spanish. The online version of this course is Quality Matters (QM) certified.

**Prerequisites:** SPA 201 [Min Grade: C] or SPA 202 [Min Grade: C]

### SPA 210. Conversation and Culture. 3 Hours.

Development of oral expression within the context of contemporary Spanish-speaking cultures. Intermediate Spanish course recommended for students who have completed Spanish 201. Oral proficiency developed through conversation partners and teams. Internet technology is used to facilitate communication. Culture is learned through film and other authentic texts. Final project synthesizes cultural topics and oral language skills. Conducted in Spanish.

**Prerequisites:** SPA 201 [Min Grade: C] or SPA 202 [Min Grade: C]

### SPA 214. Introduction to Translation for the Professions. 3 Hours.

This course focuses on the improvement of the Spanish language through translation. While studying basic aspects of translation and translating short texts from a variety of sources in the context of contemporary situations, students review the most important and complex structures of the Spanish language as they relate to English. Students will work in a collaborative workshop format—in Spanish—in order to better understand the process of translating and editing one's work.

**Prerequisites:** SPA 206 [Min Grade: C]

### SPA 233. Intermediate Spanish Grammar in Context. 3 Hours.

This course is an intermediate-level Spanish course that focuses on the language skills of writing and speaking. It has been designed to help students improve their proficiency and fluidity in the language and in the cultures of the Spanish-speaking world, focusing on grammatical understanding, and written and oral communication in formal and informal situations. All the while, the course exposes students to a variety of authentic cultural contexts in the Hispanic world.

**Prerequisites:** SPA 201 [Min Grade: C] or SPA 202 [Min Grade: C]

### SPA 280. Spanish for Health Professionals. 3 Hours.

This course focuses on the Spanish-speaking health-related culture, presenting practical vocabulary, idiomatic expressions, medical terminology, and cultural attitudes of Spanish-speaking patients towards health issues. This course builds and develops the speaking, listening, and reading skills by emphasizing intensive conversation, technical reading, and vocabulary acquisition. Conducted in Spanish.

**Prerequisites:** SPA 201 [Min Grade: C] or SPA 202 [Min Grade: C]

### SPA 290. Study Abroad. 1-12 Hour.

Approved program in a Spanish-speaking country.

### SPA 299. Special Readings in Spanish. 1-3 Hour.

Directed readings in intermediate Spanish. Studies select texts of the Spanish-speaking world to increase overall literacy in Spanish.

### SPA 300. Advanced Grammar in Context. 3 Hours.

Designed to improve the use of fundamental grammatical structures of Spanish in diverse contexts. Strong emphasis is given to the development of writing skills that are appropriate for this level. Six hours of SPA courses at the minor level required. Writing is a significant component of this course. Conducted in Spanish.

**SPA 304. Phonetics and Phonology. 3 Hours.**

Course focuses on how the Spanish sound system functions in various regions. Development of pronunciation through oral practice. Conducted in Spanish.

**SPA 310. Cultures of the Spanish-Speaking World. 3 Hours.**

Historical overview of the heritage of Spain, Latin America, and the Hispanic U.S., with emphasis on social, political, and economic institutions. Conducted in Spanish.

**SPA 311. Greatest Hits of Hispanic Literature I. 3 Hours.**

This course is an overview of Spanish civilization, culture, literature, and the arts from early to contemporary times. Highlights of best selling works of various authors, with emphasis on fundamental literary concepts and distinctive stylistic features of Spanish discourse, will be reviewed. Conducted in Spanish.

**SPA 312. Greatest Hits of Hispanic Literature II. 3 Hours.**

This course is an overview of Latin American civilization, culture, literature, and the arts from early to contemporary times. Highlights of best selling works of various authors, with emphasis on fundamental literary concepts and distinctive stylistic features of Spanish discourse, will be reviewed. Conducted in Spanish.

**SPA 313. Business Spanish. 3 Hours.**

This advanced course introduces the student to essential business terminology and language situations in common business contexts. Course reinforces strategies for understanding, interpreting, responding to new information and the importance of cultural awareness in doing business in Spanish-speaking countries or with Hispanics in the United States. Both course and the online learning management system, Canvas, are delivered in Spanish. The online version of this course is Quality Matters (QM) Certified.

**SPA 314. Applied Spanish Translation and Interpretation. 3 Hours.**

This course focuses on the improvement of the Spanish language for the professions through translation. While studying general aspects of translation and interpretation, and translating short texts from a variety of sources within the context of the professions, such as business, health, journalism (magazines, papers, and TV), legal, sports, and technology, students review the most important and complex structures of the Spanish language as they relate to English with an emphasis on vocabulary building. Students will work in a collaborative workshop format –in Spanish– in order to improve the process of translating, interpreting, and editing one's work. Conducted in Spanish.

**SPA 320. Hispanic Cultures Through Culinary Art. 3 Hours.**

This course has been designed for advanced Spanish students to develop an understanding of cultural differences within the Spanish-speaking world through culinary art. The course focuses on cultural competence in order to appreciate the importance of food in culture and the different cooking styles of the Hispanic World. Students will discover how Hispanics shape cultural values around the kitchen table, such as business, family, holidays, and traditions. Such a thematic approach will allow students to penetrate into the universal commonalities among cultures, as well as to appreciate important differences in the various cultures. This course also develops necessary communicative skills for a professional career in the culinary sector. Offered in Spanish.

**SPA 350. Hispanic Children Stories. 3 Hours.**

This course has been designed to help students of Spanish transition from an intermediate to an advanced level of proficiency in the language, and move students to learn content through language and language through content. It focuses on the language skill of reading, through the exploration and understanding of Hispanic Children's literature. This is an innovative way to introduce the literatures and cultures of the Spanish-speaking world. Conducted in Spanish.

**SPA 380. Advanced Spanish for Health Professionals. 3 Hours.**

This advanced course emphasizes intensive Spanish conversation, technical readings and vocabulary pertinent to the medical field. The course focuses on practical vocabulary, idiomatic expressions, medical terminology and cultural patterns of Spanish-speaking patients, and further expands on functions and notions of the language related to the medical field. Course conducted in Spanish.

**SPA 390. Study Abroad. 1-9 Hour.**

Approved program in a Spanish-speaking country.

**SPA 399. Special Readings in Spanish. 1-3 Hour.**

Directed readings in Spanish.

**SPA 401. Voices of Imperial Spain. 3 Hours.**

Culture and civilization of Imperial Spain from the age of the Catholic Monarchs to the close of the Hapsburg Dynasty (1469-1716). Includes a study of the art, historical documents and literature from both the center and periphery of the Empire. Selected works by representative authors will vary according to instructor. Conducted in Spanish.

**SPA 402. Voices of Colonial Latin America. 3 Hours.**

Culture and civilization of Colonial Latin America from the advent of European dominance to the decades following the Spanish American War (1492-1920). Emphasis on the blending of Spanish, Amerindian, and African cultural forms and their diverse literary expressions. Selected works by representative authors will vary according to instructor. Conducted in Spanish.

**SPA 403. Contemporary Spanish Literature and Film. 3 Hours.**

Cultural and literary trends of Spain from the transformation of Spanish society in the late nineteenth century to the post-Franco era. Conducted in Spanish.

**SPA 404. Medicine and Literature in the Spanish-Speaking World. 3 Hours.**

How does literature help us to understand the relationship between medicine, culture, and politics? This class, which seeks answers and related questions, focuses on the role of medical science in literary and cultural texts from Latin American countries, Spain, and the United States. Students will read short stories, poems, novel excerpts, and essays, and they will interpret films and visual art to discuss how science and the humanities supplement one another to create a richer understanding of the human body and its role in the historical development of Europe and the Americas. Offered in Spanish.

**SPA 405. US Latino Writers. 3 Hours.**

Focus on the growing body of literature written by Latinos in the United States. Explores Latino issues and cultural identity through the analysis of their narrative works and experience. Conducted in Spanish.

**SPA 407. Indigenous and Indigenist Latin America. 3 Hours.**

Cultural and literary forms of Amerindian, Hispanic or mixed-descent writers of Latin America. Focus on the concepts of hybridity, syncretism and mestizaje. Conducted in Spanish.

**SPA 409. Spanish-Speaking Nobel Laureates. 3 Hours.**

This course offers a survey of the Hispanic authors who have been awarded the Nobel Prize in Literature since the award's founding in 1901, such as Gabriela Mistral (1945), Pablo Neruda (1971), Gabriel García Márquez (1982), Camilo José Cela (1989), and Octavio Paz (1990). The panorama will include critical discussions and reflections on the writings of these authors. Conducted in Spanish.

**SPA 411. Cervantes and the Quixote. 3 Hours.**

This course will review the major episodes of *Don Quixote de La Mancha*, one of the most influential works of Spanish and World literature, as well as other selected works written by Cervantes. Emphasis will be given to the author's unique contribution to the birth of the modern novel and his ingenuity to create stories that transformed all literary genres. These readings will be analyzed within the civilization of the Golden Age of Spain, while exploring a diverse array of topics, such as: love and marriage, religion, race, class, magic, madness, and honor. Conducted in Spanish.

**SPA 412. Voices of Contemporary Latin America 1920-Present. 3 Hours.**

Cultural and literary trends of Latin America from la nueva narrativa through the Boom and post-Boom periods. Focus on Mexico, Northern Latin America, and the Southern Cone. Conducted in Spanish.

**SPA 414. Afro-Latin American Literature and Culture. 3 Hours.**

The diverse cultures of many Latin American nations will be discussed with a focus on the descendants of Africa in the Americas. Slavery will be discussed during the colonial and independence periods. Black identity and cultural forms will be discussed through the writers, musicians, and filmmakers of the twentieth and twenty-first centuries. Parallels and connections will be drawn to race and history in the United States. Conducted in Spanish.

**SPA 416. Special Topics in Spanish. 3 Hours.**

Seminar on individual authors, specific genres, literary movements, literary discourse/theory, or transatlantic studies. Conducted in Spanish. May be repeated for credit.

**SPA 420. Introduction to Hispanic Linguistics. 3 Hours.**

This advanced Spanish linguistics course is intended to analyze, clarify and expand upon critical aspects of the Spanish language. The course will provide a general understanding of the Spanish sound system (phonetics and phonology), morphology and syntax, as well as an introduction to relevant topics within the field of Hispanic linguistics.

**SPA 430. Spanish Sociolinguistics. 3 Hours.**

This advanced Spanish linguistics course provides a general overview of sociolinguistics and the pragmatics of oral communication in Spanish. This course studies the Spanish language in its social context. In addition to specific regional linguistic features, social factors such as geography, social class, politics, race, gender, economics, education and history are discussed as determiners of the linguistic landscape.

**SPA 440. History of Spanish Language. 3 Hours.**

This advanced Spanish linguistics course provides a general overview of the evolution of Spanish language, while relating it to relevant historical events. It pays special attention to diachronic change in order to understand the phenomenon of language variation in a multicultural society.

**SPA 450. Spanish Second Language Acquisition. 3 Hours.**

This course describes the cognitive, developmental and linguistic processes involved in the acquisition of Spanish as a second language while exploring the basic research techniques used in the field.

**Prerequisites:** SPA 300 [Min Grade: D]

**SPA 455. Pop Culture in Translation. 3 Hours.**

This course aims at further developing students' proficiency in the language as well as an understanding of the process of translation through translation from English into Spanish and vice versa. Students will develop their translation skills through a number of activities translating cartoons, popular songs, professional documents, and slam poetry. Students will also increase their theoretical understanding of the translation process from a linguistic point of view. This course involves a translation project originated and connected with the professional needs of the Birmingham area and beyond. Offered in Spanish.

**SPA 460. Globalization in the Hispanic World. 3 Hours.**

This course develops a constructivist framework for the study of contemporary globalization issues in the Hispanic world by engaging students in higher-level discussions and critical thinking. Through films, music and literature, and guided research, course explores history, politics, economics and sociocultural issues of the recent Spanish-speaking world. Conducted in Spanish.

**SPA 461. Contemporary Spain. 3 Hours.**

This course develops a constructivist framework for the study of contemporary Spain by engaging students in higher-level discussions and critical thinking. Through films, music and literature, and guided research, course explores recent Spanish history, politics, economics and sociocultural issues. Conducted in Spanish.

**SPA 462. Contemporary Latin America. 3 Hours.**

This course develops a constructivist framework for the study of contemporary Latin America by engaging students in higher-level discussions, critical thinking, and active learning. Through films, music and literature (poems, short stories and novel excerpts), and guided research, course explores recent Latin American history (late 20th and 21st centuries), politics, economics and sociocultural issues and their global impact, such as the construction of a new Hispanic American identity and nationalism; the new Mexico after the Revolution; the Cuban Revolution and its aftermath; Central American revolutions and their peace processes; and the processes of democratization, development and integration in South America. Course conducted in Spanish.

**SPA 480. Applied Spanish and Medical Interpreting. 3 Hours.**

The course blends an academic curriculum on Spanish for healthcare and medical interpreting with a semester-long service-learning project where students will work with a community partner and apply course materials to real-life situations pertaining the health of Latinos. Upon successful completion of this course, students will have satisfied the medical interpreting training required to take the medical interpreting examinations offered by the two certification organizations in the area (CCHI and NBCMI). Conducted in Spanish.

**SPA 485. Spanish for Leadership at the Workplace. 3 Hours.**

This is a culminating course in the Applied Professional Spanish major concentration. The course provides an opportunity to practice professional Spanish through service-learning by requiring a practical experience locally or abroad. Students work side by side with well-established community partners to explore and transform the community's linguistic landscape in order to make public spaces more accessible, inclusive and welcoming to the Spanish-speaking community. Course conducted in Spanish.

**SPA 490. Study Abroad: Spanish. 1-9 Hour.**

Approved program in a Spanish-speaking country.

**SPA 499. Directed Studies. 1-3 Hour.**

Directed readings in Spanish. Conducted in Spanish.

# Honors College

**Dean:** Shannon L. Blanton, Ph.D

**Associate Dean:** Kristine Hurst-Wajszczuk, D.M.A

**Assistant Dean:** Mark Bevensee, Ph.D.

**Director of Honors Advising and Retention:** Amy Atkisson, MAE

**Director of University Honors Program:** Michael E. Sloane, Ph.D.

## Curriculum

The UAB Honors College brings together intellectually curious students from all majors to form a close-knit community of emerging scholars. Our honors courses are designed to prepare students to communicate effectively in written and oral form, demonstrate critical thinking skills, integrate knowledge across domains, participate effectively in team endeavors, and function as ethical citizens of communities.

UAB Honors College students can either pursue our **Personalized Pathway** or choose one of our **Specialized Programs** in global and community leadership (GCL), science and technology (STH), or interdisciplinary arts and sciences (UHP). We encourage students to visit <http://www.uab.edu/honors> for additional information on the Personalized Pathway and Specialized Programs. In addition, many of our honors students participate in departmental (major-specific) honors programs, Accelerated Bachelors/Masters Programs, Fast-Track/5th-Year Masters Programs, or Early Acceptance Programs. These enhanced curricular and co-curricular opportunities are designed to stimulate high-ability students, build community, and prepare students to accomplish their long-term goals.

All UAB Honors College students benefit from the following:

- Smaller class sizes
- Innovative honors seminars
- Honors sections of core and elective courses
- Unique experiential learning opportunities in service learning, undergraduate research, and study abroad
- Special speaker series, discussion groups, and student activities
- Additional academic advising
- Honors Living Learning Communities (First Year Residence Halls)
- Honors New Student Experience and Retreat (*Required*)
- Opportunities for Honors Student Leadership
- Engagement with Honors Faculty Fellows

## Honors Student Leadership

Leadership development is an integral part of the honors student experience. UAB Honors College offers opportunities for students through workshops, coursework, and events throughout the year. In addition, we offer four formal student leadership groups:

- **Honors Ambassadors:** A highly selective group of outstanding honors students, Honors Ambassadors are our official representatives and participate in a number of activities and events that connect visitors and other constituents of the UAB community – prospective students and their families; current students and alumni; administrators, faculty, and staff – to the UAB Honors College.
- **Honors College Leadership Council (HCLC):** Elected representatives of the Honors College student body, the HCLC leads efforts to advocate for the needs of the honors community, promotes the visibility of the Honors College both on and off campus, and seeks to

foster a sense of community within the Honors College. The HCLC plans service, social, and educational events for all honors students.

- **Honors Resident Assistants:** Honors RAs live with our first-year students in Honors Living Learning Community and help honors students adjust to college life and create community among new students.
- **Honors SMART Leaders:** Student Mentor And Retreat Team (SMART) Leaders serve as a first point of connection for first year students, helping to ensure that they have the resources to find their place at UAB and in the Honors College. The select group of upperclassman work directly with incoming honors students to welcome them to the Honors community and assist new students in becoming acclimated to university life.

## Honors Faculty Fellows

UAB Honors College established our Honors Faculty Fellows program in 2016 to create stimulating academic enrichment experiences and enhance community. Faculty members are nominated and selected each summer. Recent Honors Faculty Fellows activities include a science fiction book club, an honors running club, resiliency training, and monthly seminars on timely topics (e.g., deception in relationships, the minimum wage, gun violence).

## Contacting the Honors College:

**Mailing Address:**

UABHH

1720 2nd Avenue South

Birmingham, AL 35294-1242

**Physical Address:**

Honors Hall

1321 10th Avenue South

Birmingham, AL 35205

**Phone:** 205-996-7190

**Email:** [honorscollege@uab.edu](mailto:honorscollege@uab.edu)

## UAB Honors College Commitment to Excellence

Honors College admission is a noteworthy achievement, recognizing not only demonstrated academic excellence but also potential for future success. The UAB Honors College is a scholarly community comprised of students, faculty, and staff who commit themselves to high standards of intellectual and personal integrity. As such, honors students should be among the most respectful, hard-working participants in any classroom. They should challenge themselves to think in new ways and to remain open to insight from others. In addition, they should be ethical community members continually looking for ways to serve their peers, the campus, and the local community.

## Admission Requirements

### Incoming Freshmen:

In order to be admitted to the UAB Honors College, students must first be admitted to the University of Alabama at Birmingham. Following general university admission, there are two paths for incoming freshmen to join the UAB Honors College:

- **Invitation** – Admitted students with a minimum ACT score of 28 or redesigned SAT score of 1310 (ERW+M) and a 3.5 GPA will receive an invitation mail to join the UAB Honors College. Students who join the UAB Honors College prior to the published deadline

will have the option of applying to specialized programs in science and technology, interdisciplinary arts and sciences, and global and community leadership. All students offered admission into the UAB Honors College or its programs must confirm their enrollment no later than May 1 of their senior year.

- **Application** – Students who do not meet the standardized test score or GPA requirements must submit an application in order to be considered for admission. A committee of faculty and staff will review these materials and notify students of their admission status.

To learn more about enrolling in the UAB Honors College, please visit <http://www.uab.edu/honors>

## Current and Transfer Students:

Current UAB students and transfer students may be eligible for admission into the UAB Honors College, provided that they have earned at least 12 hours of credit with a minimum 3.5 collegiate GPA. All current and transfer students must earn at least 18 credits of honors-level coursework during their time at UAB. Prospective current and transfer students should apply at <http://www.uab.edu/honors> and meet with an honors advisor to discuss possible admission into the UAB Honors College based on their existing academic profiles and future trajectories.

## Continuation in the Honors College

UAB Honors College students are required to maintain a **3.0 cumulative UAB GPA** to remain in good standing. Each student's academic record is evaluated at the end of fall and spring semesters and any student who falls below the minimum requirement will be placed on immediate probation. A student on probation will be required to meet with an Honors College advisor or the director of their program to discuss the student's action plan to raise the cumulative UAB GPA to at least 3.0.

Students on probation have up to one year to raise their UAB GPA at least 3.0. The probation period ends when a student's GPA rises to at least 3.0 or after 1 year has elapsed.

Continued failure to meet minimums after the one year probationary period will result in suspension from the Honors College. Suspension includes the loss of all privileges associated with being an honors student, including priority registration and honors graduation designation. In rare circumstances, a student may appeal to the Dean of the Honors College for an extension of the probation period or for reinstatement. Additional requirements may be required by individual honors programs for students to remain in good standing.

## Honors-Level Courses

All UAB Honors College students must complete a minimum of 18 credit hours of honors-level coursework to graduate with *Distinguished Honors*. Students who earn 30 or more honors credits will graduate with *High Distinguished Honors*. Specific requirements for our Personalized Pathway and our Specialized Programs are detailed in these sections.

## Satisfactory Progress

UAB Honors College students are required to make satisfactory progress towards graduation. Students should meet with honors advisors to determine appropriate courses. In order to ensure completion of requirements, students must earn a minimum of six honors credit hours by the end of the first year in the Honors College and a minimum of 12 honors credit hours by the end of the second year.

Honors students are expected to be engaged citizens of the Honors College, UAB, and surrounding community. In fulfilling this expectation each student will participate in their own unique combination of enrichment opportunities.

## Honor Code

Honors students are expected to uphold the highest standards. In order to remain in good standing, UAB Honors College students must follow the UAB Academic Integrity Code, the Honors College Academic Integrity Code, and the UAB Student Code of Conduct.

## Personalized Pathway

The UAB Honors College is dedicated to innovative courses, hands-on experiential learning, service learning, and – most importantly – the individuality and diversity of our brilliant students.

Those learning experiences – and those unique students – just don't fit into the standard college curriculum. Some of our students pick up second majors or interesting minors, or they incorporate electives from multiple programs to give them a more well-rounded education. Others create individualized majors that reflect their unique mosaic of interests. To make sure their curiosity is fed, their passion is pursued, and their fire stays stoked, we guide our students in charting their own course with their own personalized curriculum.

## Benefits

Working with an honors advisor each semester, students pursuing a Personalized Path develop their interests and talents into goals. Then they work together to create a personalized curriculum that will take them places no standard, one-size-fits-all curriculum ever could. One of the greatest benefits to the Personalized Path is its flexible and customizable curriculum. Rather than being told which honors courses to take each semester, students constructing a Personalized Path choose from an array of more than 30 honors courses each term. And when students discover new interests, their honors advisors help them identify honors coursework and experiential learning opportunities that align with those new passions.

## Community

Students pursuing a Personalized Path are immersed in the UAB Honors College community through activities each semester organized by our student leaders, advisors, and Honors Faculty Fellows. Even before classes begin, the Honors College hosts a welcome and advising session during Blazer Beginnings New Student Orientation. Our New Student Experience begins with our Honors New Student Retreat which connects students and prepares them for success at UAB. Once on campus, our Honors RAs facilitate programming in the residence halls, and students receive a weekly newsblast with college-wide service opportunities, social events, and professional development workshops. Students also have access to our new Honors Hall for studying and socializing.

## Honors-Level Courses

UAB Honors College students on our Personalized Pathway must complete a minimum of 18 credit hours of honors-level coursework in order to graduate with *Distinguished Honors*. Students who choose to earn 30 or more honors credits will graduate with *High Distinguished Honors*. In a Personalized Path, students earn honors credit in various ways. Honors classes are smaller in size (generally 25 or fewer students)

and provide students with uniquely engaging curricular experiences. Options for honors credit include:

**Honors Seminars:** These multidisciplinary seminars cover topics not typically offered at UAB and are taught by some of our most outstanding faculty. Prior examples include: Justice for All? Education and Opportunity in America; Persuasion: How to Get More of What You Want and Make Others Feel Good About Giving It to You; and 100 Things About the Brain.

**Honors Courses:** These include enhanced sections of courses offered through regular academic departments that provide students with a high level of engagement and critical thinking as well as courses required for departmental honors programs.

**Honors Experiential Learning Courses:** The UAB Honors College offers specific experiential courses, including recent study abroad courses in Cuba and Iceland as well as service learning with local community partners. Students may also participate in individual projects in service learning, research, internships, or education abroad.

**Honors by Contract:** Students may augment their experiences in upper-level standard courses. An interested student should meet with a faculty member to devise an honors contract. Contract details vary, but they share a commitment to academic excellence above and beyond the minimum requirements for the course. Students interested in Honors by Contract should download the appropriate forms in the Honors College Canvas site. Except in rare circumstances, honors by contract is restricted to courses at the 300/400 level.

**Graduate Courses:** All graduate-level coursework counts towards the Honors College requirements. Honors students are encouraged to explore graduate courses and consider Accelerated Bachelors/Masters Programs or Fast-Track/Fifth-Year Masters Programs.

## Honors Seminar

Students are required to complete at least one honors seminar during their first year in the Honors College. Available seminars will be communicated each semester through the honors advisors.

## Experiential Learning

Students are required to complete a *minimum* of one experiential learning course at UAB. These courses may include service learning, study abroad, research, or internships.

## Courses

### HC 100. Honors College First Year Experience. 0-3 Hours.

This course is designed to introduce first year students to the tools and techniques that will enhance their transition to college and improve their academic success. Goal setting, time management, faculty/peer interaction, and other academic skills applicable to success in all majors will be addressed. Students will be encouraged to establish supportive relationships with peers, staff, and faculty to become more integrated into the academic community.

### HC 101. Honors College Leadership. 1-3 Hour.

This course is the first course in the three-course Honors College leadership series. Specifically, this course is an introduction to the study of leadership; including the study of traits and characteristics of leaders, values & ethics used in leadership, the situational nature of leadership, the importance of Emotional Intelligence in leadership, and the study of leadership as a team activity.

### HC 110. Honors Seminar: Special Topics. 1-3 Hour.

Honors College seminar. Course content varies and is based on topics of interest to honors students. Honors students may take in lieu of a First Year Experience course.

### HC 111. Honors Seminar in Engineering. 1-3 Hour.

Honors College seminar in Engineering. Course content varies and is based on topics of interest to honors students. Honors students may take in lieu of a First Year Experience (FYE) course.

### HC 112. Honors Seminar in Public Health. 0-3 Hours.

Honors College seminar in Public Health. Course content varies and is based on topics in Public Health of interest to honors students. Freshmen honors students may take in lieu of a First Year Experience course.

### HC 113. Honors Seminar in Education. 1-3 Hour.

Honors College seminar in Education. Course content varies and is based on topics of interest to honors students. Honors students may take in lieu of a First Year Experience (FYE) course.

### HC 114. Honors Seminar in Business. 1-3 Hour.

Honors College seminar in Business. Course content varies and is based on topics of interest to honors students. Honors students may take in lieu of a First Year Experience (FYE) course.

### HC 115. Honors Seminar in Health Professions. 1-3 Hour.

Honors College seminar in Health Professions. Course content varies and is based on health-related topics of interest to honors students. Honors students may take in lieu of a First Year Experience (FYE) course.

### HC 116. Honors Seminar in Social and Behavioral Sciences. 1-3 Hour.

Honors College seminar in Social and Behavioral Sciences. Course content varies and is based on topics of interest to honors students. Honors students may take in lieu of a First Year Experience (FYE) course.

### HC 117. Honors Seminar in Natural Sciences and Mathematics. 1-3 Hour.

Honors College seminar in Natural Sciences and Mathematics. Course content varies and is based on topics of interest to honors students. Honors students may take in lieu of a First Year Experience (FYE) course.

### HC 118. Honors Seminar in Arts and Humanities. 1-3 Hour.

Honors College seminar in Arts and Humanities. Course content varies and is based on topics of interest to honors students. Honors students may take in lieu of a First Year Experience (FYE) course.

### HC 119. Honors Seminar. 1-3 Hour.

Honors College seminar. Course content varies and is based on topics of interest to honors students. Honors students may take in lieu of a First Year Experience (FYE) course.

### HC 120. Honors Seminar. 1-3 Hour.

Honors College seminar. Course content varies and is based on topics of interest to honors students. Honors students may take in lieu of a First Year Experience (FYE) course.

### HC 200. Participation in Honors. 1 Hour.

Student must participate in and reflect on at least eight enrichment events sponsored by the UAB Honors College including lectures, workshops and service projects.

**HC 201. Leadership Skills. 1-3 Hour.**

This course is the second course in the three-course Honors College leadership series. HC 101 focused on leadership principles and individual characteristics that contribute to a leader's style. HC 201 will focus on planning the project to be carried out in HC 301 and on related leadership skills such as communication methods, professionalism and the identification of measurable outcomes.

**Prerequisites:** HC 101 [Min Grade: C]

**HC 211. Honors Seminar in Engineering. 1-3 Hour.**

Honors College seminar in Engineering. Course content varies and is based on topics of interest to honors students.

**HC 212. Honors Seminar in Public Health. 1-3 Hour.**

Honors College seminar in Public Health. Course content varies and is based on topics in Public Health of interest to honors students.

**HC 213. Honors Seminar in Education. 1-3 Hour.**

Honors College seminar in Education. Course content varies and is based on topics of interest to honors students.

**HC 214. Honors Seminar in Business. 1-3 Hour.**

Honors College seminar in Education. Course content varies and is based on topics of interest to honors students.

**HC 216. Honors Seminar in Social and Behavioral Sciences. 1-3 Hour.**

Honors College seminar in Social and Behavioral Sciences. Course content varies and is based on topics of interest to honors students.

**HC 217. Honors Seminar in Math and Science. 1-3 Hour.**

Honors College seminar in Natural Sciences and Mathematics. Course content varies and is based on topics of interest to honors students.

**HC 218. Honor Seminar in Arts and Humanities. 1-3 Hour.**

Honors College seminar. Course content varies and is based on topics of interest to honors students.

**HC 219. Honors Seminar. 1-3 Hour.**

Honors College seminar. Course content varies and is based on topics of interest to honors students.

**HC 300. Contemporary Social Issues, Leadership and Scholarship. 0-3 Hours.**

Analysis of classical and modern foundations and principles of leadership and a survey of contemporary social issues. Practice in scholarship essay writing, interviewing, and critical thinking. Intended for national and international scholarship and fellowship applicants. Enrollment limited to sophomores and juniors.

**HC 301. Advanced Leadership Skills and Practice. 1-3 Hour.**

Provides students with an opportunity to lead an independent project using leadership principles and skills.

**Prerequisites:** HC 201 [Min Grade: C]

**HC 311. Honors Seminar in Engineering. 1-3 Hour.**

Advanced Honors College seminar in Engineering. Course content varies and is based on topics of interest to honors students.

**HC 312. Honors Seminar in Public Health. 1-3 Hour.**

Advanced Honors College seminar in Public Health. Course content varies and is based on topics in Public Health of interest to honors students.

**HC 313. Honors Seminar in Education. 1-3 Hour.**

Advanced Honors College seminar in Education. Course content varies and is based on topics of interest to honors students.

**HC 314. Honors Seminar in Business. 1-3 Hour.**

Advanced Honors College seminar in Business. Course content varies and is based on topics of interest to honors students.

**HC 316. Honors Seminar in Social and Behavioral Sciences. 1-3 Hour.**

Advanced Honors College seminar in Social and Behavioral Sciences. Course content varies and is based on topics of interest to honors students.

**HC 317. Honors Seminar in Natural Sciences and Mathematics. 1-3 Hour.**

Advanced Honors College seminar in Natural Sciences and Mathematics. Course content varies and is based on topics of interest to honors students.

**HC 318. Honors Seminar in Arts and Humanities. 1-3 Hour.**

Advanced Honors College seminar in Arts and Humanities. Course content varies and is based on topics of interest to honors students.

**HC 319. Honors Seminar: Special Topics. 1-3 Hour.**

Advanced Honors College seminar. Course content varies and is based on topics of interest to honors students.

**HC 395. Honors Study Abroad. 0-3 Hours.**

Students will participate in an honors study abroad experience. Instructor and Director of Education Abroad approval required. Must be an Honors College student in good standing. May be repeated for credit.

**HC 396. Honors Service Learning. 0-3 Hours.**

Students will propose and complete a service learning project under the supervision of a faculty member. Instructor approval required. Must be an Honors College student in good standing. May be repeated for credit.

**HC 397. Honors Independent Study. 0-3 Hours.**

Students will propose and complete an honors-level academic project under the supervision of a faculty mentor. Instructor approval required. Must be an Honors College student in good standing. May be repeated for credit.

**HC 398. Honors Undergraduate Research Studies. 0-3 Hours.**

Students will propose and conduct an undergraduate research project under the supervision of a faculty mentor. Instructor approval required. Must be an Honors College student in good standing. May be repeated for credit.

**HC 399. Internships or Co-op Studies. 0-3 Hours.**

Students will propose and complete an internship or co-op experience under the supervision of a faculty mentor. Must be an Honors College student in good standing. Instructor approval required. May be repeated for credit.

**HC 401. Honors Independent Leadership Project. 1-3 Hour.**

Students will propose and complete a leadership experience under the supervision of a faculty mentor. Must be an Honors College student in good standing. Instructor approval required. May be repeated for credit.

**Prerequisites:** HC 301 [Min Grade: C]

## Specialized Programs

Not all Honors College students choose a personalized pathway — some find a perfect academic fit in one of our three specialized honors programs. [The Global and Community Leadership Honors Program](#) (p. 447), [Science and Technology Honors Program](#) (p. 448), and [University Honors Program](#) (p. 452) lay out a curriculum of courses and experiences to thoroughly explore global leadership, science and technology, or interdisciplinary arts and sciences.

Once students have been admitted to the UAB Honors College, they may apply to one or more of the specialized programs. Admission to these programs is competitive, and students must submit an additional program application by the published deadline.

## Global & Community Leadership

**Director of Honors Advising and Retention:** Amy Atkisson, MAE

Students in the Global and Community Leadership (GCL) Honors Program know that they're members of a community — not just a local one, but a global one. Social justice issues like educational disparities, poverty, food insecurity, environmental degradation, and health care access touch lives in every country, in every big city and small village, at every socioeconomic level. GCL prepares honors students to explore, understand, and take a leadership role in addressing those issues and making lives better.

### Vision

Through the GCL Honors Program, students combine their academic interests and personal passion to be transformational leaders for the 21<sup>st</sup> century.

### Mission

The GCL Honors Program challenges students to think critically about how they can be good citizens of communities. GCL students gain appreciation of diverse perspectives and practice applying knowledge to community development.

### Values

- Participatory citizenship
- Ethical leadership
- Creative problem-solving
- Effective communication

### Community

GCL students are a tight knit community of students wanting to make the world a better place. Our elected student Leadership Council for GCL plans monthly global and community education and outreach events, service projects, and social activities that are open to all UAB Honors College students.

### Application

For more information on applying to the Honors College or its programs, visit <http://www.uab.edu/honors>. GCL is intentionally flexible and is available for students to enter as late as the third year.

### Coursework

GCL students must complete a minimum of 18 hours of designated honors coursework to graduate with *Distinguished Honors in Global and Community Leadership*; students may complete 30 hours of honors coursework to graduate with *High Distinguished Honors in Global and Community Leadership*.

## Required GCL coursework

### 12 hours of designated GCL honors coursework:

**Honors Seminar HC 110-120** (3 credit hours) – Seminar on a topic related to GCL's mission; topics vary annually

**Burning Issues: GCLH 150** (3 credit hours) – Overview of various issues facing society (e.g., human rights, sustainability, healthcare access, educational reform). Course includes guest speakers, topical readings, and significant reflective writing. Ultimately, students will identify an issue that ignites their passion – their “burning issue.”

**Fanning the Flame: Variable courses** (3 credit hours) – Student will select a course that provides further exploration of the student's “burning issue.”

**Stoking the Fire - Leadership in Action: GCLH 350** (3 credit hours) – Students will learn, develop, and put into practice a pragmatic skill set for management and operations in social change leadership.

### Six additional hours of honors coursework:

Students should take the remaining hours from approved honors courses relevant to GCL's mission. GCL administration will designate appropriate honors courses for GCL students each semester, and students will choose the courses that are most applicable to their own passions and goals.

For students who choose to earn 30 hours of honors credit, the additional 12 hours of honors coursework can be earned through non-GCL specific honors seminars, honors sections of core courses, honors by contract, and/or school/departmental honors programs.

## Experiential Learning

GCL students are required to complete a minimum of one experiential learning course at UAB. These courses may include service learning, study abroad, research, or internships. If taken for honors credit, the experiential learning course may help fulfill the honors requirement. If not taken for honors credit, the course will not be applied to the total number of honors credit hours but can still satisfy the experiential learning requirement.

## Courses

### GCLH 150. Burning Issues. 3 Hours.

Introductory course for students in the Global and Community Leadership Honors Program. Students will learn about various issues impacting the world today. Course will include guest speakers, topical readings, and significant reflective writing. Ultimately, students will select the issue that ignites their passion – their “burning issue”.

### GCLH 210. Thinking Locally and Globally. 1-3 Hour.

This course engages students in moderator development techniques needed to conduct community forums and exposes them to cross-cultural participatory decision-making through an immersion experience.

**Prerequisites:** GCLH 105 [Min Grade: C] and GCLH 205 [Min Grade: C]

**GCLH 301. Leadership and Community Engagement. 1-3 Hour.**

This course provides students with field experiences in partnership with community or local government agencies. Through readings, discussions and written reflections, students will explore the meaning of leadership and community engagement. Student placements are based on an issue of interest, thus allowing them to apply knowledge gained in both their major field and leadership courses. The goal of the course is to bring students to a deeper understanding of their role as leaders in service to the community and in applying knowledge for the benefit of Birmingham and beyond.

**Prerequisites:** GCLH 105 [Min Grade: C] and GCLH 205 [Min Grade: C] and GCLH 210 [Min Grade: C] and HAC 301 [Min Grade: C]

**GCLH 350. Stoking the Fire: Leadership in Action. 3 Hours.**

Practical application of leadership skills for students in the Global and Community Leadership Honors Program. Students will learn, develop, and put into practice a pragmatic skill set for management and operations in social change leadership.

## Science and Technology Honors Program

**Assistant Dean, Honors College & Science and Technology Honors Program:** Mark O. Bevensee, Ph.D.

**Associate Directors:** Joe L. March, Ph.D., and Joel L. Berry, Ph.D.

The Science and Technology Honors Program at UAB revolutionizes the undergraduate experience. Acceptance to the program places students in the company of fellow scholars and world-renowned researchers. Science and Technology Honors (STH) students synthesize ideas from multiple disciplines to tackle real, meaningful scientific problems. The unique, four-year STH curriculum of coursework, seminars, mentored research, and leadership challenges builds community and sharpens scientific thinking.

This unique program is the only one of its kind in Alabama. It is designed for the best and brightest students whose academic and extracurricular achievements demonstrate intellectual curiosity, energy, creativity, and leadership abilities. Graduates of the STH Program are well prepared for graduate study at the Master's or Doctoral level as well as for professional school.

## Mission

To prepare scientific leaders of the next generation by engaging students in interdisciplinary classroom, leadership, research, and innovation experiences which culminate in the dissemination of new scientific knowledge.

## Vision

- UAB's Science and Technology Honors Program will recruit a diverse group of talented undergraduate students, involve faculty from across the university as teachers and mentors, and provide a unique educational experience for students.
- Through interdisciplinary courses and laboratory research experiences, STH students will be exposed to the power of integrating multidisciplinary approaches and will apply this perspective to research and innovation problems.
- STH students will be trained in scientific thinking and communication and will conduct and disseminate original research or scholarship under the supervision of a faculty mentor.

- STH graduates will be well prepared for graduate and professional study and will show evidence of leadership in academic, economic, and policy areas related to science and technology during their careers.

## Benefits

Students in the STH Program work closely with research faculty and participate in original scientific research. During the first two years, the program prepares students with the knowledge and skills they need to get started in research. Beginning as early as the freshman or sophomore year, students work closely with a faculty mentor on an individualized project, learning about research and innovation through apprenticeship. STH students are encouraged to attend national conferences and to publish their research in scientific journals.

The program is a closely knit community with approximately 50 undergraduate students admitted each year. The small number encourages collaboration among students, interaction with faculty, and sharing of ideas. Students receive priority registration and take science and technology focused sections of core courses such as English Composition II (EH 102). In addition, STH students can earn graduate credit, providing an advantage when pursuing an advanced degree.

## Coursework

The academic portion of the Science and Technology Honors Program builds upon UAB's research strengths in science and technology. Special interdisciplinary courses such as Introduction to the Scientific Process (STH 199), the Interdisciplinary Seminar (STH 299), Big Ideas in Science and Innovation (STH 240), and Current Challenges in Translating Science into Benefit (STH 340) examine topics from many scientific and technical perspectives, illustrating how scientists integrate multiple fields of study when approaching research and development questions.

Students discover the methodologies and techniques used in a variety of research areas, including biology, cell biology, chemistry, molecular genetics, computer and information systems, engineering, neuroscience, psychology, physics, and more. In their Research Approaches (STH 201) course, students get hands-on experience in laboratory techniques and generate original data for presentation at the UAB Expo.

Exclusive seminars such as the Interdisciplinary Seminar (STH 299) put students face to face with UAB's best known researchers who share their insights and experiences from the lab and the field. The entire curriculum is designed to encourage independent thinking, questioning of ideas, innovative problem-solving, and skill in scientific communication. STH coursework also integrates seamlessly with honors programs in science and technology majors.

The program culminates in a two-year intensive research experience under the direction of a UAB faculty member. Students build upon the methods they have learned in their courses and seminars to propose and conduct an independent research or innovation project in collaboration with their faculty mentor. This project becomes the student's Honors Thesis. The Honors Thesis is prepared for publication in a scientific journal and for presentation at a national conference. Thus, many STH students will both publish a scientific paper and present at a national conference before graduating from UAB. Students in the program must complete thirty (30) credit hours of honors coursework, which includes at least 6 credit hours of independent research under the direction of a faculty mentor to complete their Honors Thesis research requirement.

The Honors Thesis may also take the form of a capstone or clinical innovation project developed in consultation with and approval of the program director.

- A capstone project draws together students' experience and is useful for students planning career paths other than bench research. Students will delineate the scope of the project, resources needed, and the anticipated product. The project could be proposed by a team of students with the scope adjusted and the expectation that several students will contribute.
- The clinical innovation pathway allows students to develop expertise in applied innovation within medical settings through a series of courses that provide exposure to clinical settings and guide them through a client-centered design process. The final product may include a working prototype, patent application, or business plan, depending on the scope of the proposed project. Students will have the option to develop an idea into a project either as an individual or as part of a team.

## Who Should Apply

This program is best suited for students who are intensely curious about science and excited about the prospect of becoming a generator of new knowledge in their field. In addition to curiosity about science, successful applicants generally have a strong academic record and plan to pursue a career in science or technology. STH students typically have a GPA of 3.5 or higher in their high school academic courses and ACT or SAT scores at or above the 90<sup>th</sup> percentile in math and science. Because the program values diversity and strives to accommodate talented students, applications are reviewed individually and applicants are personally interviewed.

Students interested in applying to STH must first be admitted to the UAB Honors College. Following admission to the College, interested students may then submit an application to the STH Program. This application and accompanying recommendation must be received by the published deadline. For more information on applying to the Honors College or its Specialized Programs, visit <http://www.uab.edu/honors>.

## STH Signature Courses

Each student in the program takes the following STH Program coursework during their first two years in the program to prepare for their independent research experience:

- Introduction to the Scientific Process (STH 199). Fall semester of freshman year. Students work in teams to analyze current scientific problems under investigation by UAB faculty, learning about how scientists approach problems and conduct their research, including ethics and institutional review of human and animal research.
- Research Approaches (STH 201). Spring semester of freshman year. Systematic training in foundational research methodologies and opportunity to application of the methods in research laboratories. Students choose among biotechnology training, advanced chemical analysis, or engineering design and materials analysis.
- Interdisciplinary Seminar (STH 299). Fall semester of sophomore year. This course illustrates the synergy achieved by interdisciplinary analysis of problems. Example topics include High Voltage Innovation, Neurobiology of Learning and Memory, Energy Generation and Conservation, Disorders of the Central Nervous System, and Creating a Culture of Sustainability.
- Problem Analysis and Project Planning (STH 151) and Prime Time Leadership (STH 250). Spring semester of freshman year and

fall or spring semester of sophomore year, respectively. This two-course leadership preparation sequence teaches students to apply leadership and teamwork skills to analyze a problem or need and develop a plan to address the need then carry through the resulting project. Students develop measurable outcomes, communicate with stakeholders, document the project's outcome, and prepare for a public presentation of the project.

- Big Ideas in Science and Innovation (STH 240). Sophomore or junior year. This course will integrate skills developed in STH 199, STH 201, STH 299, and EH 102/202 to examine current controversies and challenges in science and technology. Students will analyze scientific research and explore the "conversation" between scientists and other constituencies regarding the interpretation and application of the findings.
- Current Challenges in Translating Science into Benefit (STH 340). Junior or senior year. This course will build upon students' research experiences by exploring the spectrum of basic to applied research in which each investigation is embedded. Through reading original scientific papers and using technical databases, students will explore "wicked problems" and develop innovative solutions.

## Curriculum

To graduate with *High Distinguished Honors in Science and Technology*, students must complete thirty (30) semester hours of honors coursework including the following courses:

Requirements		Hours
<b>First-Year Honors Seminar</b>		
STH 199	Introduction to the Scientific Process	3
<b>Scientific and Technical Communication <sup>a</sup></b>		
EH 102	English Composition II (honors section focused on Scientific and Technical Communication)	3
or EH 202	English Composition II: Scientific and Technical Communication	
<b>Research Methods and Applications</b>		
STH 201	Research Approaches	3
<b>Advanced Honors Seminars</b>		
STH 240	Big Ideas in Science and Innovation	1
STH 299	Interdisciplinary Seminar	3
STH 340	Current Challenges in Translating Science into Benefit	1
<b>Leadership Preparation</b>		
STH 151	Problem Analysis and Project Planning	1
STH 250	Prime Time Leadership	1
<b>Statistics <sup>b</sup></b>		
Students must complete an approved statistics course. PUH 250 (Biostatistics) is highly recommended, especially the honors section.		
<b>Honors Proposal and Thesis Seminars</b>		
STH 395	Honors Proposal Preparation	1
STH 400	Honors Thesis Preparation	1
<b>Honors Research</b>		
Minimum number of research credit hours required <sup>c, d</sup>		6
STH 398	Honors Research	
or STH 399	Honors Thesis Research	
Total Hours		24

- a Students should take an honors section of EH 102 focused on scientific and technical communication (usually designated by "STH" following the course title) either in the fall or spring semester of the first year, depending on whether they come to UAB already having earned credit for EH 101. Students who come to UAB with credit for both EH 101 and EH 102 should instead take the cross-listed course EH 202, usually in their first semester. **In any case, a student should take either EH 102 or EH 202 at UAB but not both.**
- b Students may satisfy the statistics requirement by earning credit for any statistics course approved by the program director, e.g., PY 216 Elementary Statistical Methods or BME 423 Living Systems Analysis and Biostatistics. Alternative credit through AP or IB may also be accepted if approved by the program director.
- c Students must have a minimum of six (6) research credit hours comprised of any combination of STH 398 and/or STH 399. Research credit may be earned in fall, spring, and/or summer semesters in any increments as chosen by students at their convenience. In some cases, students may be allowed to substitute **up to three (3) of the six (6)** required research credit hours with equivalent research credit course(s) in the department of their major with approval of the program director. All honors research credit applies to the thirty (30) hours of honors credit needed to complete the program.
- d Students completing a capstone or innovation thesis instead of a traditional research thesis may substitute STH 394 and/or STH 397 in place of research credit hours. The number and type of hours needed to fulfill this requirement will depend on the thesis plan developed with and approved by the program director. In all cases, a cumulative total of 30 credit hours of honors coursework must still be earned.

## Optional STH Electives

Requirements		Hours
STH 220	Special Topics in Science and Technology	1-3
STH 310	Communicating Science	1-3
STH 320	Advanced Topics in Science and Technology	1-3
STH 350	Next Level Leadership	1-3
STH 390	Preparation for STEM Teaching	0-3
STH 394	Clinical Innovation Seminar	0-3
STH 396	Internships/Community Projects/SL	1-3
STH 397	Independent Study	1-3
STH 410	Innovation Internship	0-3
STH 490	Practicum in STEM Teaching	0-3

## Proposed Program of Study for Science and Technology Honors Students \*

Freshman			
First Term	Hours	Second Term	Hours
STH 199		3 STH 201	3
EH 102 or 202 <sup>†</sup>		3 STH 151	1
	6		4
Sophomore			
First Term	Hours	Second Term	Hours
STH 299		3 Approved Statistics Course <sup>‡</sup>	
STH 250	1		
	4		0

Junior			
First Term	Hours	Second Term	Hours
STH 240		1 STH 395	1
STH 398 <sup>§</sup>		2 STH 398 <sup>§</sup>	1
	3		2
Senior			
First Term	Hours	Second Term	Hours
STH 340		1 STH 400	1
STH 399 <sup>§</sup>		2 STH 399 <sup>§</sup>	1
	3		2
Total credit hours: 24			

## Explanation of Footnotes

- \* Students choose **6** hours of honors elective coursework to reach the overall total of 30 hours of honors coursework required for completion of the program.
- † Students should take an honors section of EH 102 focused on scientific and technical communication (usually designated by "STH" following the course title) either in the fall or spring semester of the first year, depending on whether they come to UAB already having earned credit for EH 101. Students who come to UAB with credit for both EH 101 and EH 102 should instead take the cross-listed course EH 202, usually in their first semester. **In any case, a student should take either EH 102 or EH 202 at UAB but not both.**
- ‡ Biostatistics (PUH 250) is highly recommended to fulfill the statistics requirement, particularly the honors section. Students may also satisfy this requirement by taking any statistics course approved by the program director, e.g., Elementary Statistical Methods (PY 216) or Living Systems Analysis and Biostatistics (BME 423). Alternative credit through AP or IB may also be accepted if approved by the program director.
- § Students must have a minimum of six (6) research credit hours comprised of any combination of STH 398 and/or STH 399. Research credit may be earned in fall, spring, and/or summer semesters in any increments as chosen by students at their convenience. In some cases, students may be allowed to substitute **up to three (3) of the six (6)** required research credit hours with equivalent research credit course(s) in the department of their major with approval of the program director. All honors research credit applies to the thirty (30) hours of honors credit needed to complete the program.

## Courses

### STH 151. Problem Analysis and Project Planning. 1 Hour.

Students will apply leadership and teamwork skills to analyze a problem or need and develop a plan to address the need. Skills such as developing measurable outcomes and communicating with stakeholders are emphasized.

### STH 199. Introduction to the Scientific Process. 3 Hours.

Fall semester of freshman year. First-year Honors Seminar for students accepted in the Science and Technology Honors Program. Discussion of basic concepts of scientific methodology will be integrated with analysis of scientific journal articles and use of visual representations to communicate ideas. Students learn about research ongoing at UAB through working with a small team to analyze a scientific publication. The course will culminate in presentation of a poster representing their analysis of the article.

**STH 201. Research Approaches. 3 Hours.**

Spring semester of freshman year. Hands-on experience with research methods. Students participate in a lab experience such as biotechnology, engineering, molecular genetics, or chemical analysis in which they learn state-of-the-art techniques used in research laboratories.

**STH 220. Special Topics in Science and Technology. 1-3 Hour.**

Explore topics that span multiple scientific or technical disciplines addressing pertinent theoretical, practical, and ethical issues.

**STH 240. Big Ideas in Science and Innovation. 1-3 Hour.**

Seminar that builds on scientific thinking skills developed in previous STH courses. In this course, students will examine science as a way of knowing. We will explore the relationship between scientific research and the public conversation around a topic. Both primary scientific and popular press sources will be considered.

**STH 250. Prime Time Leadership. 1-3 Hour.**

Carry through leadership or innovation project. Document outcome of the project, report to stakeholder, and prepare public presentation of project.

**Prerequisites:** STH 151 [Min Grade: C]

**STH 299. Interdisciplinary Seminar. 3 Hours.**

Fall (or sometimes spring) semester of sophomore year. Team-taught course with faculty from several disciplines addressing how a complex problem is addressed by multiple disciplines. This course will illustrate the synergy achieved by interdisciplinary analysis of problems.

**STH 310. Communicating Science. 0-3 Hours.**

Students will collaborate with university faculty and staff to produce media products which communicate scientific concepts to the public. Permission of instructor is required.

**STH 320. Advanced Topics in Science and Technology. 1-3 Hour.**

Analyze advanced issues that span multiple scientific or technical disciplines addressing pertinent theoretical, practical, and ethical issues.

**STH 340. Current Challenges in Translating Science into Benefit. 1-3 Hour.**

Seminar to address current challenges and controversies in science and its translation into application. Students will examine the spectrum from basic science foundations through translational research to applications, for example, in medicine or energy policy. Students hone skills in analyzing original scientific papers and using technical databases. Teams of students will develop a proposal for next steps in a translational challenge.

**STH 350. Next Level Leadership. 1-3 Hour.**

Oversight of team organized to sustain leadership or innovation project.

**Prerequisites:** STH 250 [Min Grade: C]

**STH 390. Preparation for STEM Teaching. 0-3 Hours.**

Student will assist in course instruction through working with student teams on assigned projects. Student is required to attend scheduled preparatory sessions each week, assist in teaching the assigned course section, help develop student assignments, and assist the course instructor in other capacities as assigned. Students work under the direction of the course instructor. Student must have completed the course in which the student is assisting with a grade of B or higher or have equivalent experience. Permission of the instructor is required. May be repeated for credit up to a maximum of three (3) credit hours.

**STH 394. Clinical Innovation Seminar. 0-3 Hours.**

Students will rotate through clinical settings to identify problems in instrumentation or procedure that impede quality or efficiency. Students will analyze these problems and develop proposals for solutions. Prototypes may be produced.

**STH 395. Honors Proposal Preparation. 1-2 Hour.**

Seminar for students who are preparing to propose their honors thesis research project and have worked in a lab for a minimum of one semester. Students will present and discuss their research plans and provide input into the proposals of classmates. Honors thesis research proposals will be completed by the end of the semester and defended before a faculty committee. Students must have permission of the program director if they have not completed at least one semester of mentored research prior to taking this course.

**STH 396. Internships/Community Projects/SL. 0-6 Hours.**

Experiential learning through individually designed community based or clinically related experiences. Each project will have both experiential and academic components. Permission of program director is required.

**STH 397. Independent Study. 0-6 Hours.**

Individually designed academic course of study under the direction of a selected faculty member. Permission of the program director is required.

**STH 398. Honors Research. 0-6 Hours.**

Laboratory research under the supervision of a faculty mentor. Permission of program director is required.

**STH 399. Honors Thesis Research. 0-6 Hours.**

Undergraduate research for student's honors thesis project under the supervision of a faculty mentor. Students may register for this course after approval of their honors thesis proposal in STH 395.

**Prerequisites:** STH 395 [Min Grade: C]

**STH 400. Honors Thesis Preparation. 1-2 Hour.**

Students will prepare their honors thesis in the format of a journal article during this course and present it to their faculty committee for approval.

**Prerequisites:** STH 395 [Min Grade: C]

**STH 410. Innovation Internship. 0-3 Hours.**

The first semester of this internship will be unpaid during which the student commits 12-20 hours/week to work with the company to which they are matched. The student and company representatives will develop an internship agreement which specifies the expectations for time commitment, frequency of review or supervisory meetings, and any other parameters which are felt to be important by the company representatives. A midterm review will be completed by a representative of the company and the student, and an end of term evaluation will be completed jointly by the student and the company supervisor. The internship does not obligate the student to continue to work with the company after the designated internship semester; however, after the initial internship semester, it is possible for the student to continue their work with the company on either a volunteer or a paid basis. Whether students continue to work with the company as volunteers or as paid employees, they may repeat STH 410 and earn additional credit hours toward their STHP designation.

**Prerequisites:** (STH 199 [Min Grade: C] or BY 213 [Min Grade: C]) and (STH 201 [Min Grade: C] or CH 201 [Min Grade: C] or BY 214 [Min Grade: C]) and EH 102 [Min Grade: C]

**STH 490. Practicum in STEM Teaching. 0-3 Hours.**

Student will assist in course instruction through working with student teams on assigned projects and will serve in the "lead assistant" role. Student is required to attend scheduled preparatory sessions each week, assist in teaching the assigned course section, help develop student assignments, and assist the course instructor in other capacities as assigned. Students work under the direction of the course instructor. Student must have completed the course in which the student is assisting with a grade of B or higher or have equivalent experience and have completed at least 1 credit hour of STH 390. Permission of the instructor is required. May be repeated for credit up to a maximum of three (3) credit hours.

**Prerequisites:** STH 390 [Min Grade: P] or STH 390 [Min Grade: B]

## University Honors Program

**Program Director:** Michael E. Sloane, Ph.D.

**Associate Director:** William J. Rushton, IV, Ph.D.

**Program Manager:** Donna Andrews, M.P.A.

**Student Counselor:** Rebecca Freeman, M.A.

The University Honors Program draws on the wide range of resources available at a comprehensive research university and concentrates those resources within a small, personal, liberal arts setting. Designed for students who want to satisfy their intellectual curiosity both inside and outside the classroom, the program accepts about 50 students a year representing a wide variety of disciplines, backgrounds, and interests. The program offers an innovative, interdisciplinary arts and sciences curriculum taught by faculty who are known for their excellence in teaching and scholarship. Without delaying progress toward a degree, the University Honors Program provides students an opportunity to participate in a community of committed scholars, to form close relationships with faculty, to explore new ideas, and to share their ideas and interests in the friendly confines of the Spencer Honors House.

## Benefits

Students in the University Honors Program (UHP) receive a more intensive and innovative education that consists of a 33 credit hour interdisciplinary arts and sciences curriculum that replaces a student's regular core curriculum without adding any additional time to degree completion. Students take two, nine-credit hour interdisciplinary courses and five UHP honors seminars on topics not offered in the regular academic departments. Since the five UHP honors seminars are capped at 16 UHP students, they get to know their instructors and other students very well, providing a sense of community and identity within the larger university context. UHP students have the opportunity to develop their leadership skills by involvement with several student-lead UHP committees and university-wide organizations and initiatives. UHP students receive priority registration and are typically involved in undergraduate research mentored by renowned faculty.

The Spencer Honors House, with all of its facilities, belongs exclusively to students in the UHP and is accessible to them at all times. UHP students have the opportunity to participate in a wide variety of cultural, social, and scholarly events and are funded to present their research at state, regional, and national honors conferences. After completing the program, students graduate with a special designation on their transcripts. In addition, UHP students are recognized annually at the UHP Honors Day ceremony. Graduation from the UHP, with its broad interdisciplinary arts and sciences curriculum gives students a distinct

advantage when applying for national awards and scholarships as well as graduate or professional schools.

## Spencer Honors House

The center of identity and community for the University Honors Program is the Spencer Honors House, located on campus in the spacious and attractive environment of the Old Church at 1190 10th Avenue South. All instructional and social activities of the University Honors Program take place there. The Spencer Honors House is also available for day-to-day use by UHP students for recreation, studying, meeting, and relaxing. The facilities include a kitchen, lounge areas, library, computer clusters, and pool and Ping-Pong tables. The offices of the director, associate director, program manager, and student counselor are also located in the Spencer Honors House.

## Scholarships

The Hess-Abroms Honors Scholarships, awarded annually, are valued at \$24,000 each and provide \$6,000 per year. Application is open to incoming freshmen. The award is based on superior academic achievement, creativity or talent, strong motivation, character, and intellectual promise. Application materials are made available at the time of interview. The University Honors Program also has a number of smaller (\$1,000-\$2,000) annual scholarships that are awarded in May each year. Students who have committed to entering the program can apply for these scholarships that are distributed based on merit and need.

## Application

For more information on applying to the Honors College or its programs, visit <http://www.uab.edu/honorscollege/>.

## Honors Coursework

Instead of the 41 semester hours of Core Curriculum requirements, students in the University Honors Program take 33 semester hours of honors coursework and three semester hours in mathematics. In addition, they participate in a variety of special events, most of which are centered in the Spencer Honors House. While in no way delaying progress toward a degree or interfering with commitment to a major, the University Honors Program provides a stimulating range and depth of scholarly pursuits within an interdisciplinary arts and sciences context. Students have frequent individual contact with the teaching faculty and have unusual opportunities for independent projects and research.

Honors students have two options for completing their 33 semester hours in honors:

- Two 9-semester-hour fall-semester interdisciplinary honors courses plus five 3-semester-hour honors seminars (only two of which can be related to the student's major or minor); or
- Two 9-semester-hour fall-semester interdisciplinary honors courses, a minimum of three 3-semester-hour honors seminars (not related to the student's major or minor), and up to six semester hours of departmental honors coursework within the student's major (with the total number of semester hours adding up to 33).

The interdisciplinary honors courses are offered during the fall semester and are open only to University Honors students. These courses are team-taught by faculty members (usually six) from different schools in the university and by guest lecturers from the medical center, the business, and other areas. Each interdisciplinary course is organized thematically and designed to cover a broad range of material so the

student is introduced to all areas covered by the Core Curriculum and to a wide variety of other areas as well. Topics of past interdisciplinary courses have included "Minds and Realities," "In Search of Human nature," "It's About Time," and "The Anatomy of Desire." As part of the course, each student works on an independent project related to the central theme. Since instructors are committed to full-time teaching of this course, students receive ample advice and guidance on their projects.

The University Honors program offers about 18-20 different honors seminars each year. Some are cross-listed in other departments and so are open to all students at UAB. These seminars are offered during the fall semester, spring semester, and summer term and are limited to 16 students. Honors seminars are available in a variety of different fields and focus on issues that are of major interest within the field and also have implications and applications beyond it. Examples of honors seminars which have been taught are "Ethnographic Filmmaking," "China's Next phase," "Cognitive Brain Imaging," Philosophy, Psychology, and the Economics of Happiness," Existentialism and Modern Literature."

## Additional Information about the Curriculum Core Requirement in Mathematics

In addition to the honors coursework, University Honors Program students must fulfill the mathematics requirement of Area III of the Core Curriculum.

## Credit for Participation in Honors

Students may receive up to three semester hours of credit, graded on a pass/fail basis, for participating in the range of special events sponsored by the University Honors Program. Those events include:

- The monthly lecture
- First Thursday Lecture series
- Afternoon receptions for visiting speakers
- The fall film series
- Workshops
- Field trips

## Credit for Community Service

Students may receive up to three semester hours of credit, graded on a pass/fail basis, for completing long-term service projects. Available projects are announced before each semester and typically include:

- Work at a recycling center
- Homeless shelter
- Public school

As well as regular meetings to reflect on these service projects.

## Independent Study

Students may propose an internship or independent study project in place of one seminar. An example of such a project is an internship at city hall, leading to a policy proposal on some area of city government. Proposals for these projects must be approved by the Honors Council.

## Honors Research

Students can register for one, two, or three credit hours of Honors Research, and receive a letter grade for their research. Students arrange

for a research mentor and conduct a project under the guidance of a faculty mentor.

## Continuation in the Program

A student who leaves the University Honors Program for any reason will receive full credit toward graduation for all coursework completed in the program. The director of the University Honors Program will designate which of the Core Curriculum requirements have been fulfilled by the individual student's honors coursework. In addition to the UAB Honors College's requirement to maintain a 3.0 cumulative UAB GPA, UHP students are expected to maintain a 3.0 average in University Honors Program coursework.

### Freshman

First Term	Hours	Second Term	Hours
Select three 100 level Honors courses - selection is dependent on Fall offering <sup>1</sup>		9 One Honors Seminar	3
Select two (non-honors) courses in major/pre-professional courses		6 Select four (non-honors) courses in major/pre-professional courses	12
	15		15

### Sophomore

First Term	Hours	Second Term	Hours
Select three 200 level Honors courses - selection is dependent on Fall offering <sup>2</sup>		9 One Honors Seminar	3
Select two (non-honors) courses in major/professional courses		6 Select four (non-honors) courses in major/pre-professional courses	12
	15		15

### Junior

First Term	Hours	Second Term	Hours
One Honors Seminar		3 One Honors Seminar	3
Select four (non-honors) courses in major/pre-professional courses		12 Select four (non-honors) courses in major/pre-professional courses	12
	15		15

### Senior

First Term	Hours	Second Term	Hours
One Honors Seminar		3 Select five courses in major/minor/pre-professional courses	15
Select four (non-honors) courses in major/minor/professional courses	12		
	15		15

Total credit hours: 120

<sup>1</sup> Select 3 of the following: UHP 101, UHP 103, UHP 104, UHP 105, UHP 105, UHP 111, UHP 151, UHP 153, UHP 154, UHP 162.

<sup>2</sup> Select 3 of the following:  
UHP 201, UHP 203, UHP 204, UHP 205, UHP 211,  
UHP 251, UHP 258, UHP 262.

## Courses

### **UHP 101. Interdisciplinary: English. 3 Hours.**

Process and final product of expository, argumentative, and analytical essays in a variety of disciplines. Research and documentation required on most essays. This course is an option for freshman students admitted to the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

### **UHP 103. Interdisciplinary: Psychology. 3 Hours.**

Application of scientific method to behavior. Takes an interdisciplinary approach in exploring areas of psychology including learning, motivation, perception, physiological, comparative, personality, abnormal, social, clinical, child development, and individual differences. This course is an option for freshman students admitted to the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

### **UHP 104. Interdisciplinary: Theology. 3 Hours.**

Introduction to foundations of the major religions. An exploration of religion, its nature, warrant, and significance. God, evil, religious experience, faith, and reason. Takes an interdisciplinary approach to religion and religious practices. This course is an option for freshman students admitted to the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

### **UHP 105. Interdisciplinary: Science. 3 Hours.**

Survey of scientific methodologies in biology, chemistry and physics. Recent advances and topics in modern biology, chemistry examined from an interdisciplinary approach. This course is an option for freshman students admitted to the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

### **UHP 110. Participation in Honors. 1 Hour.**

Student must participate in at least eight special events sponsored by the University Honors Program including special lectures, visiting speakers, workshops and field trips. Permission of instructor. Pass/Fail.

### **UHP 111. Interdisciplinary: Philosophy. 3 Hours.**

Introductory survey of philosophy, its nature, methods, and problems explored in an interdisciplinary context. This course is an option for freshman students admitted to the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

### **UHP 151. Interdisciplinary: Art and Art History. 3 Hours.**

Introduction to the study of visual culture, prehistoric to present. Emphasis on form and context, and acquiring understanding of art materials and techniques. Not for Art majors. This course is an option for freshman students admitted to the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

### **UHP 153. Interdisciplinary: Biology. 3 Hours.**

Selected topics in contemporary biology for non-majors. Animal form and function, behavior, ecology, and evolution. This course is an option for freshman students admitted to the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

### **UHP 154. Interdisciplinary: Literature. 3 Hours.**

Short stories, novellas, poems, and plays with an emphasis on the techniques of each genre. American, British and Irish, and world literature from a variety of historical periods. Emphasis on writing and literary analysis while taking an interdisciplinary approach. This course is an option for freshman students admitted to the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

### **UHP 158. Interdisciplinary: Economics. 3 Hours.**

Economic principles, economic analysis, trading blocks, examined in an interdisciplinary context. Not intended for Business majors. This course is an option for freshman students admitted to the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

### **UHP 160. Interdisciplinary: Government. 3 Hours.**

An introduction to the institutions and processes of American government in an interdisciplinary context. Exposure to political cultures and systems around the world. This course is an option for freshman students admitted to the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

### **UHP 162. Interdisciplinary: Mathematics. 3 Hours.**

Mathematics is studied in an interdisciplinary context focusing on the development of quantitative reasoning skills, quantitative literacy, and deductive inference. Topics incorporate pre-calculus algebra, pre-calculus trigonometry, probability, descriptive and inferential statistics in the exploration of key mathematical ideas and concepts within the framework of applied math and physics. This course is an option for freshman students admitted to the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

### **UHP 163. Interdisciplinary: Justice Sciences. 3 Hours.**

Introduction to the criminal justice system. Examination of crime and delinquency in an interdisciplinary context. This course is an option for freshman students admitted to the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

### **UHP 164. Interdisciplinary: Sociology. 3 Hours.**

An interdisciplinary approach to human social life, its forms and consequences for everyday life. An exploration of social inequalities and differentiation by race, ethnicity, class, and gender. This course is an option for freshmen students admitted to the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

### **UHP 165. Interdisciplinary: Communications. 3 Hours.**

Perspectives on the history of newspapers, books, magazines, radio, television, cinema, recording industry, and the Internet examined in an interdisciplinary context. This course is an option for freshman students admitted to the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

### **UHP 179. Interdisciplinary: Public Health. 3 Hours.**

Introduction to the scope of modern public health. Epidemiology. Epidemics and pandemics. Health behavior and occupational health and safety. This course is an option for freshman students admitted to the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 194. Interdisciplinary: Social and Behavioral Science. 3 Hours.**

An in-depth interdisciplinary study of major topics and movements within the fields of anthropology, history, political science, psychology, sociology, and social work. This course is an option for freshmen students admitted to the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 198. Interdisciplinary: Special Topics?. 3 Hours.**

Special Topics in Interdisciplinary Study.

**UHP 200. Seminar: Independent Project. 3 Hours.**

The University Honors Program student writes a two-page proposal describing the scope and outcomes of the proposed project to be conducted under the mentorship of an internal and external advisor. The project replaces a regular honors seminar. HON 200 is taken for a grade (A-F). Prerequisite: The proposal must be pre-approved by a majority of the Honors Council. Permission of instructor.

**UHP 201. Interdisciplinary: English. 3 Hours.**

Process and final product of expository, argumentative, and analytical essays in a variety of disciplines. Research and documentation required on essays. Introduction to fundamentals of creative writing. This course is an option for sophomore students in the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 203. Interdisciplinary: Psychology. 3 Hours.**

Advanced application of scientific method to behavior. Areas of psychology including learning, motivation, perception, physiological, comparative, personality, abnormal, social, clinical, child development, and individual differences are studied in an interdisciplinary context. This course is an option for sophomore students in the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 204. Interdisciplinary: Theology. 3 Hours.**

An exploration of religion, its nature, warrant, and significance in an interdisciplinary context. God, evil, religious experience, faith, and reason. This course is an option for sophomore students in the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 205. Interdisciplinary: Science. 3 Hours.**

Exploration of recent developments in modern biology, chemistry, and physics in an interdisciplinary context. Basic physical laws and structures, cosmic history and evolution. This course is an option for sophomore students in the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 210. Participation in Honors. 1 Hour.**

Student must participate in at least eight special events sponsored by the University Honors Program including special lectures, visiting speakers, workshops and field trips. Must have completed UHP 110 or HON 110. Permission of instructor. Pass/Fail.

**Prerequisites:** UHP 110 [Min Grade: P]

**UHP 211. Interdisciplinary: Philosophy. 3 Hours.**

Introductory survey of philosophy, its nature, methods, and problems explored in an interdisciplinary context. Classic and contemporary readings. This course is an option for sophomore students in the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 251. Interdisciplinary: Art and Art History. 3 Hours.**

Introduction to the study of visual culture, prehistoric to present. Emphasis on form and context, and acquiring understanding of the aesthetic experience. Various media, methods, subject matter, and vocabulary discussed in an interdisciplinary context. Not for Art majors. This course is an option for sophomore students in the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 253. Interdisciplinary: Biology. 3 Hours.**

Selected topics in contemporary biology discussed in an interdisciplinary context. Animal form and function, behavior, ecology, and evolution. This course is an option for sophomore students in the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 254. Interdisciplinary: Literature. 3 Hours.**

American, British and Irish, and world literature from a variety of historical periods studied in an interdisciplinary context. Emphasis on writing and literary analysis. This course is an option for sophomore students in the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 258. Interdisciplinary: Economics. 3 Hours.**

Economic principles, economic analysis, stock exchange, trading blocks and world trade examined in an interdisciplinary context. Not intended for Business majors. This course is an option for sophomore students in the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 260. Interdisciplinary: Government. 3 Hours.**

An introduction to the institutions and processes of American government in an interdisciplinary context. Exposure to political cultures and systems around the world. Transitions to democracy. This course is an option for sophomore students in the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 262. Interdisciplinary: Mathematics. 3 Hours.**

Mathematics is studied in an interdisciplinary context focusing on the development of quantitative reasoning skills, quantitative literacy, and deductive inference. Topics incorporate pre-calculus algebra, pre-calculus trigonometry, probability, descriptive and inferential statistics in the exploration of key mathematical ideas and concepts within the framework of applied math and physics. This course is an option for sophomore students in the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 263. Interdisciplinary: Justice Sciences. 3 Hours.**

Introduction to the criminal justice system (police, courts, and corrections). Examination of crime and delinquency in an interdisciplinary context. This course is an option for sophomore students in the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 264. Interdisciplinary: Sociology. 3 Hours.**

An interdisciplinary approach to human social life, its forms and consequences for everyday life. An exploration of selective topics related to social inequalities and differentiation by race, ethnicity, class, and gender. This course is an option for sophomore students in the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 265. Interdisciplinary: Communications. 3 Hours.**

An interdisciplinary approach to issues in the history of newspapers, books, magazines, radio, television, cinema, recording industry, and the Internet. This course is an option for sophomore students in the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 267. Seminar: Tropical Ecology. 3 Hours.**

Major tropical ecotypes; ecology of terrestrial, aquatic, and marine tropical organisms. Major portion conducted at tropical field station in Caribbean. Lecture and field trips (May session). Permission of instructors, University Honors Program Director, UAB Education Abroad Director and payment of all study abroad fees required to enroll. This course is equivalent to BY 267 Tropical Ecology, which will take place in the Bahamas.

**UHP 279. Interdisciplinary: Public Health. 3 Hours.**

Introduction to the scope of modern public health. Interdisciplinary perspectives on epidemiology, Disease transmission, epidemics and pandemics. Health behavior and occupational health and safety. This course is an option for sophomore students in the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 294. Interdisciplinary: Social and Behavioral Science. 3 Hours.**

An in-depth interdisciplinary study of major topics and movements within the fields of anthropology, history, political science, psychology, sociology, and social work. This course is an option for sophomore students in the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 298. Interdisciplinary: Special Topics?. 3 Hours.**

Special Topics in Interdisciplinary Study.

**UHP 301. Interdisciplinary: English. 3 Hours.**

Process and final product of expository, argumentative, and analytical essays in a variety of disciplines. Research and documentation required on most essays. Emphasis on developing theses and arguments with textual support. This course is an option in the curriculum of the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 303. Interdisciplinary: Psychology. 3 Hours.**

Advanced application of scientific method to behavior. In-depth analysis of areas of psychology including learning, motivation, perception, physiological, comparative, personality, abnormal, social, clinical, child development, and individual differences. This course is an option in the curriculum of the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 304. Interdisciplinary: Theology. 3 Hours.**

An in-depth exploration of the nature of religion and its role in society in an interdisciplinary context. Comparative religion. This course is an option in the curriculum of the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 305. Interdisciplinary: Science. 3 Hours.**

Selected topics in contemporary biology, chemistry, and physics. Takes an interdisciplinary approach with a strong emphasis on understanding at the systems level. This course is an option in the curriculum of the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 310. Participation in Honors. 1 Hour.**

Student must participate in at least eight special events sponsored by the University Honors Program including special lectures, visiting speakers, workshops and field trips. Must have completed UHP 210 or HON 210. Permission of instructor. Pass/Fail.

**Prerequisites:** UHP 210 [Min Grade: P]

**UHP 313. Seminar: Theology. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in the nature of religion and its role in culture and society; God, evil, religious experience, faith, and reason; comparative religion; and religious practices. See Class Schedule for specific topic.

**UHP 314. Seminar: Medicine. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in the history of medicine, the practice of modern medicine, narrative medicine, medical instrumentation and surgical techniques. See Class Schedule for specific topic.

**UHP 316. Seminar: Filmmaking. 6 Hours.**

Students will document and analyze aspects of human social life using film and video. They will develop an understanding of the visual syntax and narrative structure of successful ethnographic and documentary films through discussion and criticism in the classroom as well as through short film projects of their own. Permission of instructor.

**UHP 317. Seminar: English. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in creative writing; poetry; expository, argumentative, and analytical essays in a variety of disciplines. See Class Schedule for specific topic.

**UHP 320. Seminar: English. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in creative writing; poetry; expository, argumentative, and analytical essays in a variety of disciplines. See Class Schedule for specific topic.

**UHP 321. Seminar: History. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in the evolution of religious, political, social, military and economic structures and relationships in Western and non-Western societies. See Class Schedule for specific topic.

**UHP 322. Seminar: Law. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in the nature and function of law and legal institutions, the US Constitution, decisions of the US Supreme Court, International law, or Ethics and morality in modern society. See Class Schedule for specific topic.

**UHP 323. Seminar: Sociology. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in human social life, social inequalities and differentiation by race, ethnicity, class, and gender. See Class Schedule for specific topic.

**UHP 324. Seminar: Foreign Languages and Literature. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics related to the customs, traditions, languages, ancestry, religions, values, and institutions of varied western and non-western nations through the use of humanities disciplines. See Class Schedule for specific topic.

**UHP 325. Seminar: Psychology. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in brain-behavior relationships, mental illness, cognitive science and cognitive neuroscience, learning and memory, human sexuality, personality, cross cultural issues, and human development. See Class Schedule for specific topic.

**UHP 335. Seminar: Library Science. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: the historical role of the library in culture and society; how libraries play a role in society as disseminators, defenders and preservers of knowledge; issues affecting intellectual freedom; the effects of digital publishing on scholarship; and the evolving structure and function of libraries. See Class Schedule for specific topic.

**UHP 336. Seminar: Political Science. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in the institutions and process of American government, comparative politics, political theory, and contemporary political issues. See Class Schedule for specific topic.

**UHP 342. Seminar: Medicine. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in the history of medicine, the practice of modern medicine, narrative medicine, medical instrumentation and surgical techniques, and issues in bioethics. See Class Schedule for specific topic.

**UHP 343. Seminar: Medicine. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in information technology, fundamentals of hardware and software, and human-computer interfaces. See Class Schedule for specific topic.

**UHP 346. Seminar: Health Related Sciences. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in clinical and diagnostic sciences, nutrition, nuclear medicine technology, occupational and physical therapy, and rehabilitation sciences. See Class Schedule for specific topic.

**UHP 347. Seminar: Accounting. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in accounting and taxation, management, information systems, business ethics, marketing, and industrial distribution. See Class Schedule for specific topic.

**UHP 348. Seminar: Business. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in accounting and taxation, management, information systems, business ethics, marketing, and industrial distribution. See Class Schedule for specific topic.

**UHP 351. Interdisciplinary: Art and Art History. 3 Hours.**

Exploration of visual culture in an interdisciplinary context. The aesthetic experience. Various media, methods, subject matter, and vocabulary. Not for Art majors. This course is an option in the curriculum of the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 353. Interdisciplinary: Biology. 3 Hours.**

In-depth study of selected topics in contemporary biology discussed in an interdisciplinary context. From microscopic to macroscopic. This course is an option in the curriculum of the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 354. Interdisciplinary: Literature. 3 Hours.**

Close analysis of a selection of books from American, British and Irish, and world literature in an interdisciplinary context. Emphasis on developing themes for writing literary analyses. This course is an option in the curriculum of the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 360. Interdisciplinary: Government. 3 Hours.**

In-depth analysis on selective issues regarding the institutions and processes of American government in an interdisciplinary context. Exposure to political cultures and systems around the world. Transitions to democracy. This course is an option in the curriculum of the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 362. Interdisciplinary: Mathematics. 3 Hours.**

Mathematics is studied in an interdisciplinary context focusing on the development of quantitative reasoning skills, quantitative literacy, and deductive inference. Topics incorporate pre-calculus algebra, pre-calculus trigonometry, probability, descriptive and inferential statistics in the exploration of key mathematical ideas and concepts within the framework of applied math and physics. This course is an option in the curriculum of the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 363. Interdisciplinary: Justice Sciences. 3 Hours.**

Introduction to the criminal justice system (police, courts, and corrections). Examination of crime and delinquency in an interdisciplinary context. Analyses of trends in crime statistics. This course is an option in the curriculum of the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 379. Interdisciplinary: Public Health. 3 Hours.**

Introduction to the scope of modern public health. Interdisciplinary perspectives on epidemiology, Disease transmission, epidemics and pandemics. Health behavior, occupational health and safety, and health policy. This course is an option in the curriculum of the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 383. Seminar: Theatre. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in the theatre experience; the history of theatre; and theatre and society. See Class Schedule for specific topic.

**UHP 384. Seminar: Theatre. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in the theatre experience; the history of theatre; and theatre and society. See Class Schedule for specific topic.

**UHP 386. Seminar: Theatre. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in the theatre experience; the history of theatre; and theatre and society. See Class Schedule for specific topic.

**UHP 387. Seminar: Theology. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in the nature of religion and its role in culture and society; God, evil, religious experience, faith, and reason; comparative religion; and religious practices. See Class Schedule for specific topic.

**UHP 390. Seminar: Theology. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in the nature of religion and its role in culture and society; God, evil, religious experience, faith, and reason; comparative religion; and religious practices. See Class Schedule for specific topic.

**UHP 394. Interdisciplinary: Social and Behavioral Sciences. 3 Hours.**

An in-depth interdisciplinary study of major topics and movements within the fields of anthropology, history, political science, psychology, sociology, and social work. This course is an option for third and fourth year Teaching Assistants in the University Honors Program, an interdisciplinary arts and sciences curriculum that replaces the core curriculum.

**UHP 398. Interdisciplinary: Special Topics?. 3 Hours.**

Special Topics in Interdisciplinary Study.

**UHP 399. Honors Research. 1-3 Hour.**

This research practicum provides students in the University Honors Program an opportunity to receive academic credit for conducting supervised research with a faculty mentor. Students are required to work 3 hours a week. The practicum does not replace any component of the University Honors curriculum. HON 399 is taken for a grade (A-F). Permission of instructor. (1-3 hrs.).

**UHP 400. Seminar: English. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in creative writing; poetry; expository, argumentative, and analytical essays in a variety of disciplines. See Class Schedule for specific topic.

**UHP 410. Seminar: Social Work. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in empirically based social work practice, history of social welfare, family care in cross-cultural perspectives, and social welfare policy analysis. See Class Schedule for specific topic.

**UHP 412. Seminar: Literature. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in books, short stories, novellas, poems, and plays from variety of historical periods and cultures. See Class Schedule for specific topic.

**UHP 416. Seminar: Literature. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in books, short stories, novellas, poems, and plays from variety of historical periods and cultures. See Class Schedule for specific topic.

**UHP 417. Seminar: Creative Writing. 3 Hours.**

In this creative writing course, groups of writers who are joined together by aesthetic approach or political beliefs are studied. Students examine the different sub-genres, styles, and forms, and analyze how authors do what they do and learn how to apply what they learn to their own creative work. Weekly writing assignments and student workshops are designed to produce better writers and also better critical readers of others work. Literary journals are reviewed with an eye toward publication and engagement with the broader world of contemporary poetry, fiction and creative nonfiction. See Class Schedule for specific topic.

**UHP 418. Seminar: Anthropology. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include core topics in cultural anthropology and physical anthropology, archaeology, and linguistics. See Class Schedule for specific topic.

**UHP 419. Seminar: Mathematics. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in history of mathematics, quantitative reasoning, deductive inference, probability, and descriptive and inferential statistics in the exploration of key mathematical ideas and concepts within the framework of applied math and physics.

**UHP 420. Seminar: Sociology. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in human social life, social inequalities and differentiation by race, ethnicity, class, and gender. See Class Schedule for specific topic.

**UHP 421. Seminar: Art & Art History. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in ancient and medieval art, Renaissance art, African and Asian art, modern art, two- and three-dimensional design, graphics, and photography. See Class Schedule for specific topic.

**UHP 422. Seminar: Art & Art History. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in ancient and medieval art, Renaissance art, African and Asian art, modern art, two- and three-dimensional design, graphics, and photography. See Class Schedule for specific topic.

**UHP 423. Seminar: Art & Art History. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in ancient and medieval art, Renaissance art, African and Asian art, modern art, two- and three-dimensional design, graphics, and photography. See Class Schedule for specific topic.

**UHP 424. Seminar: Art & Art History. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in ancient and medieval art, Renaissance art, African and Asian art, modern art, two- and three-dimensional design, graphics, and photography. See Class Schedule for specific topic.

**UHP 426. Seminar: Literature. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in books, short stories, novellas, poems, and plays from variety of historical periods and cultures. See Class Schedule for specific topic.

**UHP 427. Seminar: History. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in the evolution of religious, political, social, military and economic structures and relationships in Western and non-Western societies. See Class Schedule for specific topic.

**UHP 430. Seminar: Music. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in music appreciation, history of music, music and mathematics, music perception, and musical genres. See Class Schedule for specific topic.

**UHP 439. Seminar: Publishing English. 3 Hours.**

This course is a recurring seminar that is designed to facilitate in the development and production of the University Honors Programs publication(s) and newsletter(s). The course will provide students with up-to-date information about the printing and publishing industry. It will also give students hands-on experience by developing publication(s) and/or newsletter(s) in class throughout the semester. At least one newsletter is issued semi-annually to students, alumni, and friends of the University Honors Program. Concepts discussed will include writing, proofreading, copy editing, photography, layout and design, printing, publishing, packaging, and distribution. Students may be expected to gather articles and artwork related to the University Honors Program, as well as write, edit, and proofread those articles.

**UHP 440. Seminar: Political Science. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in American government, political cultures and institutions of political systems around the world, political theory, political economy, and contemporary political issues. See Class Schedule for specific topic.

**UHP 446. Seminar: Political Science. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in the institutions and process of American government, comparative politics, political theory, and contemporary political issues. See Class Schedule for specific topic.

**UHP 447. Seminar: History. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in the evolution of religious, political, social, military and economic structures and relationships in Western and non-Western societies. See Class Schedule for specific topic.

**UHP 449. Seminar: English. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in creative writing; poetry; expository, argumentative, and analytical essays in a variety of disciplines. See Class Schedule for specific topic.

**UHP 458. Seminar: Justice Sciences. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in the criminal justice system, crime and delinquency, trends in crime statistics, forensics, privacy, cybercrime, and corrections. See Class Schedule for specific topic.

**UHP 459. Seminar: Justice Sciences. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in the criminal justice system, crime and delinquency, trends in crime statistics, forensics, privacy, cybercrime, and corrections. See Class Schedule for specific topic.

**UHP 462. Seminar: Law. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in the nature and function of law and legal institutions, the US Constitution, decisions of the US Supreme Court, international law, ethics and morality in modern society. See Class Schedule for specific topic.

**UHP 463. Seminar: Law. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in the nature and function of law and legal institutions. The US Constitution. Decisions of the US Supreme Court. International law. Ethics and morality in modern society. See Class Schedule for specific topic.

**UHP 464. Seminar: Literature. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in books, short stories, novellas, poems, and plays from variety of historical periods and cultures. See Class Schedule for specific topic.

**UHP 465. Seminar: Literature. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in books, short stories, novellas, poems, and plays from variety of historical periods and cultures. See Class Schedule for specific topic.

**UHP 469. Seminar: History. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in the evolution of religious, political, social, military and economic structures and relationships in Western and non-Western societies. See Class Schedule for specific topic.

**UHP 488. Seminar: Business. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in accounting and taxation, management, information systems, business ethics, marketing, and industrial distribution. See Class Schedule for specific topic.

**UHP 489. Seminar: English. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in creative writing; poetry; expository, argumentative, and analytical essays in a variety of disciplines. See Class Schedule for specific topic.

**UHP 496. Seminar: Public Health. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in epidemiology; disease transmission; epidemics and pandemics; health behavior, occupational health and safety; health care administration, and health care policy. See Class Schedule for specific topic.

**UHP 497. Seminar: Public Health. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in epidemiology; disease transmission; epidemics and pandemics; health behavior, occupational health and safety; health care administration, and health care policy. See Class Schedule for specific topic.

**UHP 498. Seminar: Public Health. 3 Hours.**

This course is a seminar whose content may be different each time it is taught. It provides instructors with the opportunity to deal with topics that may not be covered in a regular departmental course or which may be treated in another course but only at an introductory level. Topics may include: special topics in epidemiology; disease transmission; epidemics and pandemics; health behavior, occupational health and safety; health care administration, and health care policy. See Class Schedule for specific topic.

## Joint Programs

The Bioinformatics, Cancer Biology, Genetics and Genomic Sciences, Immunology, and Neuroscience BS degrees are joint between the College of Arts and Sciences and the School of Medicine. These interdisciplinary programs emphasize a strong foundation in the basic sciences with applications to specific areas of medicine.

The Department of Biomedical Engineering is joint between the School of Engineering and the School of Medicine. It offers a Bachelor of Science in Biomedical Engineering degree that applies engineering principles to the solution of problems in the life sciences and medicine.

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[Biomedical Engineering](#) (p. 464)

[Cancer Biology](#) (p. 190)

[Genetics and Genomic Sciences](#) (p. 196)

[Immunology](#) (p. 202)

[Neuroscience](#) (p. 212)

## Bioinformatics

The UAB Undergraduate Program in Bioinformatics (BIOI) is an interdisciplinary major between the Institute of Informatics and Department of Genetics in the Heersink School of Medicine and the Department of Computer Science in the College of Arts and Sciences. Our society's accelerated scientific growth is generating an unprecedented quantity of information, while computer science is learning how to handle this information through developments in data science. In particular, data from the sequencing of the human genome is helping us better understand living systems and is guiding treatment of human disease through precision medicine. That information must be stored, managed, and analyzed to reveal its biological meaning to help shape the future of research and healthcare.

Bioinformatics is the discipline that connects the biological sciences, genetics, chemistry, computer science, data science, IT, engineering, applied mathematics, biostatistics, computing, and biomedical engineering. This new major is designed to build on these disciplines and provide students with a marketable degree — with an extensive background in an array of subjects — that will provide cutting-edge employment opportunities, as well as a platform for success in graduate school, medical school, and other clinical-professional schools.

As the first B.S. in Bioinformatics in the state of Alabama, this program will train students in basic concepts and skills to perform computational analysis of biological data — including the human genome. This will also create a well-trained workforce who can take on future healthcare challenges in the state of Alabama.

As members of an interdisciplinary program at UAB, Bioinformatics students will be able to participate in research with faculty from departments across the university, including:

- Heersink School of Medicine Basic Science Departments
- Heersink School of Medicine Clinical Science Departments
- Computer Science

- Biology
- Biostatistics

## Admissions

High school students with an ACT score of 28 or higher and a GPA of 3.5 or higher (the UAB Honors College admissions criteria) are eligible for immediate acceptance into the Bioinformatics major. Current UAB students, or transfer students, with a 3.0 GPA are eligible for Bioinformatics. Incoming freshman or transfer and current UAB students may be admitted into Pre-Bioinformatics with a 2.8 GPA. Remaining in Pre-Bioinformatics requires the maintenance of a 2.8 overall UAB GPA.

## Advising and Information

### John Johnstone

Bioinformatics Co-Director  
Associate Professor, [Department of Computer Science](#)  
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### Elliot Lefkowitz

Bioinformatics Co-Director  
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### Evan Reddick

CAS Academic Advisor  
[email \(ereddick@uab.edu\)](mailto:ereddick@uab.edu)  
(205) 975-9214

## Major in Bioinformatics

Requirements		Hours
<b>Core Curriculum Requirements <sup>1</sup></b>		<b>41</b>
CAS 112	Success in College	1
PSDO 200	Introduction to Research	1
<b>Mathematics Courses <sup>2</sup></b>		
MA 125	Calculus I	4
or MA 225	Calculus I - Honors	
MA 126	Calculus II	4
or MA 226	Calculus II - Honors	
<b>Biology Courses <sup>2</sup></b>		
BY 123	Introductory Biology I	4
BY 124	Introductory Biology II	4
BY 210	Genetics	3
<b>Chemistry Courses <sup>2</sup></b>		
CH 115	General Chemistry I	4
& CH 116	and General Chemistry I Laboratory	
CH 117	General Chemistry II	4
& CH 118	and General Chemistry II Laboratory	
CH 235	Organic Chemistry I	4
& CH 236	and Organic Chemistry I Laboratory	
<b>Computer Science Courses</b>		
CS 103	Introduction to Computer Science in Python	4
CS 203	Object-Oriented Programming	4
CS 250	Discrete Structures	3
CS 303	Algorithms and Data Structures	3

**Informatics Courses**

INFO 101	Introductory Bioinformatics Seminar <sup>3</sup>	1
PUH 250	Biostatistics	3
GGSC 310	Genome Structure and Organization	3
INFO 302	Bioinformatics-I	3
INFO 403	Bioinformatics-II	3
INFO 404	Biological Data Management	3
INFO 499	Bioinformatics Capstone	3

**Major Electives 15**

CH 237	Organic Chemistry II	
CH 460	Fundamentals of Biochemistry	
BY 245	Biological Data Interpretation and Analysis	
BY 311	Molecular Genetics	
BY 330	Cell Biology	
BY 433	Advanced Molecular Genetics	
BY 434	Functional Genomics and Systems Biology	
GGSC 410	Genetic Basis of Human Disease	
INFO 497	Research in Bioinformatics	
or INFO 498	Honors Bioinformatics Research	
CS 332	Systems Programming	
CS 350	Automata and Formal Languages	
CS 355	Probability and Statistics in Computer Science	
CS 416	Big Data Programming	
CS 436	Computer Security	
CS 473	Computer Vision and Convolutional Neural Networks	
CS 475	Data Visualization	
CS 467	Machine Learning	
MA 260	Introduction to Linear Algebra	
MA 434	Algebra I: Linear	
PH 221	General Physics I	
PH 222	General Physics II	
PH 475	Introduction to Biophysics I	
BME 210	Engineering in Biology	
BME 313	Bioinstrumentation	
BME 443	Medical Image Processing	
PH 231	General Physics I Laboratory	
PH 232	General Physics II Laboratory	

Total Hours 122

Please note the hours to degree may vary due to prerequisite requirements. For undergraduate programs, at minimum of 120 hours of undergraduate credit is required for degree. General electives may be taken to meet the hour requirement if necessary.

<sup>1</sup> [Core Curriculum](#) requirements

<sup>2</sup> Courses listed may also fulfill Core Curriculum Area III: Natural Science & Mathematics

<sup>3</sup> INFO 101 should be taken twice.

## Honors in Bioinformatics

### Purpose

The Bioinformatics Honors Program offers outstanding, highly motivated students the opportunity to develop research skills in preparation for graduate work or a professional career.

### Eligibility

In order to be accepted into the Bioinformatics Honors program, you must:

- Have completed at least 45 credit hours.
- Have a 3.5 GPA in Bioinformatics (INFO) and Biology courses.
- Have a 3.2 GPA overall.
- Have already completed [CS 203](#) Object-Oriented Programming and [GGSC 310](#) Genome Structure and Organization.
- Have arranged with a faculty sponsor to do a research project, approved by a Bioinformatics program director.
- Honors Research in Bioinformatics may also be taken as part of the University Honors Programs. BIOI majors generally enter their research labs in the fall semester of their junior year; however, they may begin research in the spring semester of their sophomore year, or earlier, with permission of the Program Directors.

### Requirements

To successfully complete the Bioinformatics Honors Program you will need to:

- Complete 6 semester hours of [INFO 498](#) Honors Bioinformatics Research. Students may substitute 3 of the 6 required [INFO 498](#) credit hours with an equivalent research course (with prior approval of a program director).
- Submit a formal research report by the end of each semester of Honors Research. The proposal should include a summary of the student's research findings incorporating an introduction, methods, and relevant literature review.
- Complete a formal written report in the form of a scientific paper.
- Submit an oral or poster presentation at UAB Expo during their junior or senior year. Under special circumstances, the poster may be presented at other times of the year pending approval of the Program Directors.

**First Year**

First Term	Hours	Second Term	Hours
BY 123 & 123L	4	BY 124 & 124L	4
CAS 112	1	CH 115 & CH 116	4
CS 103	4	INFO 101	1
EH 101	3	MA 125 or 225	4
PHL 116	3	EH 102	3
	15		16

**Second Year**

First Term	Hours	Second Term	Hours
BY 210	3	CS 250	3
CH 117 & CH 118	4	GGSC 310	3
CS 203	4	INFO 101	1
MA 126 or 226	4	PUH 250	3
		Core Area II or IV	3
		PSDO 200	1
	15		14

**Third Year**

First Term	Hours	Second Term	Hours
CH 235 & CH 236	4	INFO 403	3

CS 303	3 Major Elective Course	3
INFO 302	3 Major Elective Course	3
Core Area II or IV	3 Major Elective Course	3
Core Area II or IV	3 Core Area II or IV	3
	16	15

**Fourth Year**

First Term	Hours	Second Term	Hours
INFO 404		3 INFO 499	3
Major Elective Course		3 Major Elective Course	3
Major Elective Course		3 Major Elective Course	3
Core Area II or IV		3 Major Elective Course	3
Core Area II or IV		3 Core Area II or IV	3
	15		15

Total credit hours: 121

## Courses

**INFO 101. Introductory Bioinformatics Seminar. 1 Hour.**

Faculty-led seminar course that exposes students to cutting edge research topics and career opportunities in the field of bioinformatics. Students will read assigned articles and be prepared for discussion. Subject matter varies by term and students will take this course during multiple semesters for a maximum of two credits.

**INFO 302. Bioinformatics-I. 3 Hours.**

Introduction to bioinformatics and methodologies, with emphasis on concepts and application of informatics tools to molecular biology. Focus on experimental models to collect data from genomics, transcriptomics and proteomics, applied statistics when it relates to experimental design, construction of bioinformatics tools into pipelines, representing biological data, biological sequence analysis, gene annotation, basic programming, basic web/data analysis programming, sharing of biological information, social/legal aspects of open science.

**Prerequisites:** BY 210 [Min Grade: C] and CS 103 [Min Grade: C] and PUH 250 [Min Grade: C] and INFO 101 [Min Grade: C]

**INFO 403. Bioinformatics-II. 3 Hours.**

Development of computational algorithms to solve biological questions with a significant problem-solving component. This includes computational techniques such as dynamic programming, optimization, hidden Markov models, graph algorithms, and other mathematical and statistical approaches. In addition, data mining and machine learning methods in computational biology will be covered.

**Prerequisites:** INFO 302 [Min Grade: C] and CS 303 [Min Grade: C]

**INFO 404. Biological Data Management. 3 Hours.**

Introduction of biological data management concepts, theories, and applications. Basic concepts such as data representation, database modeling, ontology representation, and relational database queries will be introduced. Various database systems, particularly relational databases and emerging big data techniques, will be introduced. Application of biological data management in biology will be covered using case studies of high-impact widely used biological databases.

**Prerequisites:** INFO 302 [Min Grade: C]

**INFO 412. Visual Analytics for Bioinformatics. 3 Hours.**

In this course, we will explore the use of visualization techniques as a concise and effective way to help analyze, understand, interpret and communicate complex biological data. Principles of design, visual rhetoric/communication, and appropriate usage will be introduced. We will cover representation of different data types, concentrating on those generated by data-rich platforms such as next-generation sequencing applications, flow/mass cytometry, and proteomics, and will discuss the use of visualization techniques applied to assessing data quality and troubleshooting. Various topics including dimension reduction, hierarchical visualizations, unsupervised learning, graph theory, networks/layouts and interactivity will be discussed. We will review the algorithmic underpinnings of various methods that lead to their appropriate and effective use. Finally, we will review a variety of genomics/bioinformatics-related visualization tools that are available. We will use Matlab throughout the course to create beautiful and effective visualizations.

**INFO 497. Research in Bioinformatics. 0-4 Hours.**

Research in Bioinformatics for non-honors students under the supervision of a faculty sponsor.

**Prerequisites:** PSDO 200 [Min Grade: C]

**INFO 498. Honors Bioinformatics Research. 0-4 Hours.**

Honors Research is an innovative course that will provide undergraduate students with an opportunity to engage in rigorous scholarly practice of the core bioinformatics skills necessary for performing independent research. Program faculty will closely work with students to identify a project that explores an area of interest for the student based on the integration of prior learning. Students will be performing bioinformatics analyses on laboratory data or publicly available large-scale data, incorporate quality control and develop software pipelines.

**Prerequisites:** PSDO 200 [Min Grade: C] and CS 103 [Min Grade: C]

**INFO 499. Bioinformatics Capstone. 3 Hours.**

Students will be allowed to rotate to different program faculty or continue with their mentor from BY/CS 498 Bioinformatics Capstone Research I. With close mentoring and guidance from program faculty, the student will identify a capstone project or continue their existing bioinformatics project. The capstone project is expected to culminate in a formal scholarly work reflecting integration of the scientific knowledge gained through the project. The scholarly work may take the form of a written manuscript or semester report.

**Prerequisites:** INFO 403 [Min Grade: C] and INFO 404 [Min Grade: C] and PSDO 200 [Min Grade: C]

## Department of Biomedical Engineering

**Chair:** Jianyi Zhang, MD, PhD

**Associate Chair of Education:** Alan Eberhardt, PhD

Degree Offered	Bachelor of Science in Biomedical Engineering
Accreditation	The Bachelor of Science in Biomedical Engineering degree program is accredited by the Engineering Accreditation Commission of ABET, <a href="http://www.abet.org">http://www.abet.org</a> .
Website	<a href="https://www.uab.edu/engineering/bme/undergraduate">https://www.uab.edu/engineering/bme/undergraduate</a>

Program Director	Alan Eberhardt, PhD
Email	<a href="mailto:aeberhar@uab.edu">aeberhar@uab.edu</a>
Phone	205-934-8420

Biomedical engineering (BME) is the application of engineering principles and technology to the solution of problems in the life sciences and medicine. Biomedical engineers create knowledge and develop technologies that improve healthcare delivery and patient outcomes with an emphasis on reducing healthcare costs. Graduates create and apply knowledge at the interface of life sciences and engineering for the benefit of society. The BME undergraduate program prepares graduates to be immediately productive and able to adapt to a rapidly changing environment. The curriculum includes engineering core courses, mathematics, calculus-based physics, biology, chemistry, humanities, social and behavioral sciences, biomedical engineering core courses and electives. The curriculum culminates in a capstone design experience where interdisciplinary teams apply knowledge to solve real-world engineering problems. A bachelor's degree in BME from UAB provides a foundation in medical devices, biomedical implants, biomaterials, and biomedical instrumentation to compete in an increasingly technical medical field, and also prepares students for graduate school, medical school, or professional school.

## Admission

Freshmen with an ACT score of 28 or higher (or SAT equivalent) and a high school GPA of 3.00 or higher may be admitted directly to the Biomedical Engineering program. Please refer to the School of Engineering overview for policies regarding admission; change of major; transfer credit; transient status; dual degree programs; reasonable progress; academic warning, probation, and suspension; reinstatement appeals; and graduation requirements.

## Academic Warning, Probation, and Readmission

BME students must maintain an institutional (UAB) GPA of at least 2.50. First-term BME freshmen students who have an institutional GPA below 2.50 will be placed on academic warning in BME. If their institutional GPA is not at least 2.50 after the next term enrolled, they will be placed on academic probation in BME. BME undergraduates (other than first-term freshmen) who do not have an institutional GPA of at least 2.50 will be placed on BME academic probation. If at the end of the next term in which they enroll, their institutional GPA is not at least 2.50, they will be reclassified as Pre-Engineering. To be re-admitted to the BME program, a student must have an institutional GPA of at least 3.00 and make a formal application for readmission.

## Program and Graduation Requirements

BME students must have an institutional GPA of at least 2.50 and have completed at least 64 hours of coursework applicable to their degree before they may register for 300-level and 400-level BME courses. BME students must also have an institutional GPA of 2.50 or higher and have earned a grade of C or better in all BME courses to graduate.

Please note the Residency Requirement on the Majors tab.

## Non-Majors Enrolled in BME Coursework

In addition to fulfilling course prerequisites, non-BME students (including pre-BME students and students seeking a BME minor) who wish to enroll in 300-level and 400-level BME courses must have an institutional (UAB)

GPA of at least 3.00 or permission of the BME Undergraduate Advisor. Non-BME majors may not enroll in BME 423, BME 498, or BME 499.

## BME Minors

Please refer to the Minors tab on the School of Engineering's Overview page in this catalog for information specific to BME minors.

## Vision

To be an internationally recognized, research-oriented Department of Biomedical Engineering: a top choice for undergraduate and graduate education.

## Mission

The Department of Biomedical Engineering provides leadership in teaching the principles of engineering and biology and in conducting research that will translate new discoveries in biological engineering science to the fields of public health and clinical medicine. These efforts will enable us to identify new solutions to critical challenges in health care and the life sciences.

## Program Educational Objectives

Graduates of the Biomedical Engineering undergraduate program will have:

1. Gained admission to graduate or professional school, or gained employment in engineering and/or health related professions and
2. Pursued opportunities for professional growth, development, and service

## Student Outcomes

Upon completion of the BSBME degree program, our graduates will have:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

# Bachelor of Science in Biomedical Engineering

## Major in Biomedical Engineering

Requirements		Hours
<b>Core Curriculum as Specified for Engineering Majors</b>		<b>36</b>
Area I: Written Composition (6 hrs)		
Area II: Humanities and Fine Arts (9 hrs)		
Area III: Natural Sciences and Mathematics (12 hrs)		
MA 125	Calculus I	
PH 221 & 221L & 221R	General Physics I and General Physics Laboratory I and General Physics I Recitation	
PH 222 & 222L & 222R	General Physics II and General Physics Laboratory II and General Physics II - Recitation	
Area IV: History, Social, and Behavioral Sciences (9 hrs)		
<b>Other Required Courses</b>		<b>77</b>
BME 310	Biomaterials	
BME 210	Engineering in Biology	
BME 312	Biocomputing	
BME 313	Bioinstrumentation	
BME 333	Biomechanics of Solids	
BME 350	Biological Transport Phenomena	
BME 401	Undergraduate Biomedical Engineering Seminar	
BME 423	Living Systems Analysis and Biostatistics	
BME 498	Capstone Design I Product Development	
BME 499	Capstone Design II	
BY 123 & 123L	Introductory Biology I and Introductory Biology I Laboratory	
BY 409 & 409L	Principles of Human Physiology and Principles of Human Physiology Laboratory	
BY 212	Genetics for Biomedical Engineers	
BY 212L	Genetics for Biomedical Engineers - Laboratory	
or BY 115 Human Anatomy		
CH 115 & 115R & CH 116	General Chemistry I and General Chemistry I Recitation and General Chemistry I Laboratory	
CH 117 & 117R & CH 118	General Chemistry II and General Chemistry II Recitation and General Chemistry II Laboratory	
EE 312	Electrical Systems	
EGR 110 & EGR 111	Introduction to Engineering I and Introduction to Engineering II	
or EGR 200 Introduction to Engineering		
EGR 150	Computer Methods in Engineering	
EGR 265	Math Tools for Engineering Problem Solving <sup>5</sup>	
MA 126	Calculus II	
MA 260	Introduction to Linear Algebra	
ME 102	Engineering Graphics	
ME 215 & 215R	Dynamics and Dynamics Recitation	
MSE 280	Engineering Materials	
<b>Biomedical Engineering Electives</b>		<b>9</b>
BME 221	Clinical Innovation I	
BME 289	Undergraduate Research in Biomedical Engineering I <sup>1</sup>	
BME 389	Undergraduate Research in Biomedical Engineering II <sup>1</sup>	
BME 420	Implant-Tissue Interactions	

BME 435	Tissue Engineering
BME 443	Medical Image Processing
BME 450	Computational Neuroscience
BME 461	Bioelectric Phenomena
BME 462	Cardiac Electrophysiology
BME 471	Continuum Mechanics of Solids
BME 472	Industrial Bioprocessing and Biomanufacturing
BME 489	Undergraduate Research in Biomedical Engineering III <sup>1</sup>
BME 490	Special Topics in Biomedical Engineering
BME 491	Individual Study in Biomedical Engineering <sup>2</sup>
BME 494	Honors Research I <sup>2, 3</sup>
<b>Engineering/Math/Science Electives <sup>4</sup></b>	
<b>6</b>	
Select six credit hours from the following or from the list of Biomedical Engineering electives above	
BY 271 & 271L	Biology of Microorganisms and Biology of Microorganisms Laboratory
BY 311	Molecular Genetics
BY 330	Cell Biology
BY 362	Neurobiology
CE 337	Hydraulics
CE 345	Transportation Engineering
CE 360	Structural Analysis
CE 395	Engineering Economics
CE 420	Advanced Mechanics
CE 433	Solid and Hazardous Wastes Management
CH 235 & 235R	Organic Chemistry I and Organic Chemistry I Recitation
CH 237 & 237R	Organic Chemistry II and Organic Chemistry II Recitation
CH 355	Quantitative Analysis
CH 460	Fundamentals of Biochemistry
MA 313	Patterns, Functions and Algebraic Reasoning
MA 360	Scientific Programming
MA 361	Mathematical Modeling
MA 453	Fourier Analysis
MA 485	Probability
ME 360	Introduction to Mechatronic Systems Engineering
ME 370	Kinematics and Dynamics of Machinery
ME 371	Machine Design
ME 464	Introduction to Finite Element Method
MSE 281 & 281L	Physical Materials I and Physical Materials I Laboratory
MSE 380	Thermodynamics of Materials
MSE 401	Materials Processing
MSE 430 & 430L	Polymeric Materials and Polymeric Materials Laboratory
PH 475	Introduction to Biophysics I
PH 487	Nanoscale Science and Applications
RHB 400	Introduction to Rehabilitation Science

Total Hours 128

<sup>1</sup> A maximum of 3 hours of combined credit from BME 289, BME 389, and/or BME 489 may be applied to the degree

<sup>2</sup> With approval of the BME Undergraduate Program Director; a maximum of 3 hours of BME 491 or BME 494 may be used for elective credit

<sup>3</sup> Student must be enrolled in BME Honors Program

- <sup>4</sup> Other elective courses may be selected with the approval of the BME Undergraduate Program Director
- <sup>5</sup> Students may also replace [EGR 265](#) and a math/science elective with [MA 227](#) and [MA 252](#).

## Residency Requirement

In addition to UAB's residency requirement, to earn a bachelor of science in biomedical engineering from UAB, the BME department requires that students complete the following courses at UAB:

Requirements	Hours
BME 423 Living Systems Analysis and Biostatistics	3
Additional 400-level BME Elective	3
BME 498 Capstone Design I Product Development	3
BME 499 Capstone Design II	3
Total Hours	12

## Concentration in Biomechanics

Students seeking the degree of BSBME may add a concentration in Biomechanics by appropriate selection of their Mathematics/Science/Engineering Electives (3 credit hours), Engineering Elective (3 credit hours), and BME Electives (6 credit hours).

Requirements	Hours
BME 471 Continuum Mechanics of Solids	3
BME 617 Engineering Analysis	3
ME 464 Introduction to Finite Element Method	3
RHB 490 Quantitative Biomechanics of Injury and Rehabilitation	3
Total Hours	12

## Concentration in Biomaterials/Tissue Engineering

Students seeking the degree of BSBME may add a concentration in Biomaterials/Tissue Engineering by appropriate selections of their Mathematics/Science/Engineering Elective (3 credit hours), Engineering Elective (3 credit hours), and BME Electives (6 credit hours).

Requirements	Hours
<b>Required Courses</b>	
<a href="#">BME 420</a> Implant-Tissue Interactions	3
<a href="#">BME 435</a> Tissue Engineering	3
<a href="#">MSE 281</a> Physical Materials I	4
<b>Elective Courses</b>	3
Select one of the following:	
<a href="#">BY 311</a> Molecular Genetics	
<a href="#">BY 330</a> Cell Biology	
<a href="#">BY 431</a> Principles of DNA Technology	
<a href="#">MSE 381</a> Physical Materials II	
<a href="#">MSE 382</a> Mechanical Behavior of Materials	
<a href="#">MSE 401</a> Materials Processing	
<a href="#">MSE 408</a> Nanobiomaterials	
<a href="#">MSE 413</a> Composite Materials	
<a href="#">MSE 430</a> Polymeric Materials	
<a href="#">MSE 464</a> Metals and Alloys	
<a href="#">MSE 470</a> Ceramic Materials	
<a href="#">MSE 484</a> Electronic, Magnetic, and Thermal Prop of Materials	

### [PH 487](#) Nanoscale Science and Applications

Total Hours	13
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**Please refer to the School of Engineering Overview for School policies related to admission, academic progress, reasonable progress toward degree, and graduation.**

## Curriculum for the Bachelor of Science in Biomedical Engineering (BSBME)

### Freshman

First Term	Hours	Second Term	Hours
<a href="#">CH 115</a> & <a href="#">115R</a> & <a href="#">CH 116</a> <a href="#">EGR 110</a> <sup>1</sup>		4 <a href="#">BY 123</a> & <a href="#">123L</a>  1 <a href="#">CH 117</a> & <a href="#">117R</a> & <a href="#">CH 118</a> 3 <a href="#">EGR 111</a> <sup>1</sup>	4   4  1
<a href="#">EH 101</a> <a href="#">MA 125</a> <a href="#">ME 102</a>		4 <a href="#">EH 102</a> 2 <a href="#">MA 126</a>	3 4
	14		16

### Sophomore

First Term	Hours	Second Term	Hours
<a href="#">BY 212</a> & <a href="#">212L</a> <a href="#">EGR 265</a> <sup>2</sup> <a href="#">PH 221</a> & <a href="#">221L</a> & <a href="#">221R</a> <a href="#">MA 260</a> <a href="#">MSE 280</a>		4 <a href="#">EGR 150</a>  4 <a href="#">BME 210</a> 4 <a href="#">CE 210</a>  3 <a href="#">EE 312</a> 3 <a href="#">PH 222</a> & <a href="#">222L</a> & <a href="#">222R</a>	3  3 3  3 4
	18		16

### Junior

First Term	Hours	Second Term	Hours
<a href="#">BME 310</a> <a href="#">BME 312</a> <a href="#">BME 313</a> <a href="#">ME 215</a>  BME 3XX Integrated Physiology <sup>6</sup>		3 <a href="#">BME 333</a> 3 <a href="#">BME 350</a> 3 <a href="#">BME 423</a> 3 Biomedical Engineering Elective 3 Core Curriculum Area II: Humanities and Fine Art <sup>4</sup> Core Curriculum Area IV: History, Social, and Behavioral Science <sup>4</sup>	3 3 3 3 3 3
	15		18

### Senior

First Term	Hours	Second Term	Hours
<a href="#">BME 498</a> <a href="#">BME 401</a> <sup>5</sup>  BME/Engineering/Math/Science Elective <sup>2,3</sup> BME/Engineering/Math/Science Elective <sup>2,3</sup>		3 <a href="#">BME 499</a> 1 Biomedical Engineering Elective 3 Core Curriculum Area II: Humanities and Fine Art <sup>4</sup> 3 Core Curriculum Area IV: History, Social, and Behavioral Science <sup>4</sup>	3 3 3 3

Core Curriculum Area II: Humanities and Fine Art <sup>4</sup>	3 Core Curriculum Area IV: History, Social, and Behavioral Science <sup>4</sup>	3
BME Elective	3	
	16	15
Total credit hours: 128		

- <sup>1</sup> Transfer students may substitute EGR 200 for EGR 110 and EGR 111.
- <sup>2</sup> May substitute MA 227 and MA 252 for EGR 265 and one BME/Engineering/Math/Science Elective.
- <sup>3</sup> Students using this curriculum as a pre-health professional program (pre-med, pre-dental, or pre-optometry) may use CH 235 or CH 237 or CH 460 for this elective.
- <sup>4</sup> Please refer to the Core Curriculum as specified for engineering majors.
- <sup>5</sup> Seminar may be taken during any semester.
- <sup>6</sup> Pending final approval

## Courses

### **BME 011. Undergraduate Coop/Internship in BME. 0 Hours.**

Engineering workplace experience in preparation for the student's intended career.

### **BME 210. Engineering in Biology. 3 Hours.**

Application of engineering to the study of biology on the cellular and molecular level. Engineering solutions in genomics, proteomics, and nanotechnology to investigate cellular and molecular process.

**Prerequisites:** BY 123 [Min Grade: C] and PH 222 [Min Grade: C](Can be taken Concurrently)

### **BME 221. Clinical Innovation I. 3 Hours.**

The goals of this class are to develop an understanding of the concept of clinical innovation and develop skills in written and oral communication of innovation in the context of a business proposal/presentation.

### **BME 289. Undergraduate Research in Biomedical Engineering I. 1 Hour.**

Undergraduate research experiences in biomedical engineering. Must have sophomore standing.

**Prerequisites:** EGR 200 [Min Grade: C] or EGR 111 [Min Grade: C] or HC 111 [Min Grade: C] or HC 120 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and PH 221 [Min Grade: C](Can be taken Concurrently)

### **BME 310. Biomaterials. 3 Hours.**

Introduction to wide range of materials used for biomedical applications. Physical, chemical and mechanical properties of biomaterials.

**Prerequisites:** MSE 280 [Min Grade: C] and BME 210 [Min Grade: C]

### **BME 311. Biomaterials for Non-Majors. 3 Hours.**

Wide range of materials used for biomedical applications. Physical, chemical and mechanical properties of biomaterials.

**Prerequisites:** MSE 280 [Min Grade: C]

### **BME 312. Biocomputing. 3 Hours.**

Introduction to computational techniques used in biomedical engineering.

**Prerequisites:** EGR 150 [Min Grade: C] and EGR 265 [Min Grade: C] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C]) and MA 260 [Min Grade: C](Can be taken Concurrently)

### **BME 313. Bioinstrumentation. 3 Hours.**

An introduction to instrumentation used to make biological and physiological measurements. Techniques include acquisition and analysis of bioelectric signals and instrument control.

**Prerequisites:** EE 312 [Min Grade: C] and (MA 227 [Min Grade: C] and MA 252 [Min Grade: C] or EGR 265 [Min Grade: C])

### **BME 333. Biomechanics of Solids. 3 Hours.**

Application of mechanics of solids principles to biomedical engineering problems; stress-strain of bone, viscoelasticity and constitutive equations of tissues, mechanics of the cell, introduction to molecular mechanics.

**Prerequisites:** EGR 265 [Min Grade: C] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C]) and ME 215 [Min Grade: C](Can be taken Concurrently)

### **BME 350. Biological Transport Phenomena. 3 Hours.**

Basic mechanisms and mathematical analysis of transport processes with biological and biomedical applications. Analysis of flow, transport and reaction processes for biological fluids and biological molecules with applications towards development of artificial organs, drug delivery systems and tissue engineering products.

**Prerequisites:** EGR 265 [Min Grade: C] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C]) and BME 210 [Min Grade: C] and BY 409 [Min Grade: C](Can be taken Concurrently) and ME 215 [Min Grade: C](Can be taken Concurrently)

### **BME 370. Integrated Physiology. 3 Hours.**

Integrated Physiology will introduce undergraduate students to mathematical models of major physiological systems. Basic anatomy will be reviewed in pre-recorded videos to be watched prior to coming to synchronous lectures. Lectures will include discussions, derivations of relevant equations, and development of models to demonstrate understanding of biological systems. In-class activities will be used as means to provide interactive content that will be assessed via Assignments and Exams. The course will culminate in a final project where teams of students select a pathological condition and model it in Matlab, including comparing to normal conditions and with currently-available clinical interventions. Open to junior and senior level Biomedical Engineering students.

**Prerequisites:** EGR 150 [Min Grade: C] and BME 210 [Min Grade: C]

### **BME 389. Undergraduate Research in Biomedical Engineering II. 1 Hour.**

Undergraduate research experiences in biomedical engineering. Must have junior standing.

**Prerequisites:** BME 210 [Min Grade: C]

### **BME 401. Undergraduate Biomedical Engineering Seminar. 1 Hour.**

Undergraduate seminar.

### **BME 420. Implant-Tissue Interactions. 3 Hours.**

An overview of implant biocompatibility including tissue histology, histopathology of implant response and the regulatory process for medical devices. Emphasis placed on ethical issues related to design, development, and implementation of biomedical implants. Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** BME 310 [Min Grade: C] or BME 311 [Min Grade: C]

### **BME 423. Living Systems Analysis and Biostatistics. 3 Hours.**

Basic concepts and techniques of measurement processing and analysis of data from living systems. Statistics, analysis of variance and regression analysis. Emphasis is placed on data analysis and presentation of group projects.

**Prerequisites:** BME 312 [Min Grade: C]

**BME 424. Current Topics in Stem Cell Engineering. 3 Hours.**

This course is designed for students interested in the field of stem cells, regenerative medicine, and tissue engineering using stem cells and stem cell derived cells. The course will introduce the role of stem cells in tissue growth and development, the theory behind the design and in vitro construction of tissue and organ replacements, and the applications of biomedical engineering principles to the treatment of tissue-specific diseases. Students will have hands on experience on culturing and analyzing stem cells, stem cell differentiation, analysis of functional and physiological properties of differentiated cells, and fabricating basic engineered-tissues.

**Prerequisites:** BY 123 [Min Grade: C] and (BY 210 [Min Grade: C] or BY 212 [Min Grade: C] or BY 115 [Min Grade: C])

**BME 435. Tissue Engineering. 3 Hours.**

Principles underlying strategies for regenerative medicine such as stem-cell based therapy, scaffold design, proteins or genes delivery, roles of extracellular matrix, cell-materials interactions, angiogenesis, tissue transplantation, mechanical stimulus and nanotechnology.

**Prerequisites:** BME 310 [Min Grade: C] or BME 311 [Min Grade: C]

**BME 443. Medical Image Processing. 3 Hours.**

Fundamental topics of medical image processing to practical applications using conventional computer software.

**Prerequisites:** BME 312 [Min Grade: C](Can be taken Concurrently) and PH 222 [Min Grade: C]

**BME 444. Machine Learning for Biomedical Engineering Applications. 3 Hours.**

This course provides the introduction to the practical aspects of machine learning such that the students can apply some basic machine learning techniques in simple biomedical engineering problems. The course also provides the principle of machine learning 'thinking process' for the next machine learning – AI courses and more in-depth machine learning studies. By 'thinking process', at the beginning, it is better to view machine learning like human learning. Students who have experience with Data Mining may further understand the fundamental differences between Machine Learning and Data Mining, although these two fields share many concepts and techniques. Also, the student will learn fundamental theories in machine learning to be able to develop new machine learning techniques and research machine learning in biomedical engineering.

**Prerequisites:** EGR 150 [Min Grade: C]

**BME 450. Computational Neuroscience. 3 Hours.**

This course examines the computational principles used by the nervous system. Topics include: biophysics of axon and synapse, sensory coding (with an emphasis on vision and audition), planning and decision-making, and synthesis of motor responses. There will be an emphasis on systems approach throughout. Homework includes simulations.

**Prerequisites:** BME 312 [Min Grade: C]

**BME 461. Bioelectric Phenomena. 3 Hours.**

Quantitative methods in electrophysiology with focus on using simulations to examine responses in electrically excitable cell types.

**Prerequisites:** BME 312 [Min Grade: C]

**BME 462. Cardiac Electrophysiology. 3 Hours.**

Experimental and computational method on cardiac electrophysiology, ionic current, action potentials, electrical propagation, the electrocardiogram, electromechanical coupling, cardiac arrhythmias, effects of electric fields in cardiac tissue, defibrillation and ablation.

**Prerequisites:** BME 312 [Min Grade: C]

**BME 471. Continuum Mechanics of Solids. 3 Hours.**

Matrix and tensor mathematics, fundamentals of stress, momentum principles, Cauchy and Piola-Kirchoff stress tensors, static equilibrium, invariance, measures of strain, Lagrangian and Eulerian formulations, Green and Almansi strain, deformation gradient tensor, infinitesimal strain, constitutive equations, finite strain elasticity, strain energy methods, 2-D Elasticity, Airy Method, viscoelasticity, mechanical behavior of polymers.

**Prerequisites:** EGR 265 [Min Grade: C] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C]) and (BME 333 [Min Grade: C] or CE 220 [Min Grade: C])

**BME 472. Industrial Bioprocessing and Biomanufacturing. 3 Hours.**

This course will introduce students to the growing industries related to biomedical, biopharmaceutical and biotechnology. It is targeted to offer the students marketable skills to work in a vital area of economic growth and also convey some of the challenges and opportunities awaiting.

**Prerequisites:** BME 310 [Min Grade: C](Can be taken Concurrently) or BY 330 [Min Grade: C](Can be taken Concurrently) or CH 460 [Min Grade: C](Can be taken Concurrently)

**BME 489. Undergraduate Research in Biomedical Engineering III. 1-2 Hour.**

Undergraduate research experiences in biomedical engineering. Must have senior standing.

**Prerequisites:** BME 210 [Min Grade: C]

**BME 490. Special Topics in Biomedical Engineering. 1-3 Hour.**

Special Topic in Biomedical Engineering.

**BME 491. Individual Study in Biomedical Engineering. 1-6 Hour.**

Individual Study in Biomedical Engineering.

**BME 494. Honors Research I. 1-3 Hour.**

Research experiences for undergraduates enrolled in the departmental honors program. The student should write a proposal and make a presentation based on the proposal.

**Prerequisites:** EGR 301 [Min Grade: C] or STH 201 [Min Grade: C]

**BME 495. Honors Research II. 1-3 Hour.**

Research opportunities for undergraduate students in the Biomedical Engineering Honors Program. Research areas include cardiac electrophysiology, brain imaging, biomedical implants, and tissue engineering.

**Prerequisites:** BME 494 [Min Grade: C]

**BME 496. Biomedical Engineering Honors Seminar. 1 Hour.**

Must be enrolled in an Honors Program.

**BME 498. Capstone Design I Product Development. 3 Hours.**

Design and development of medical-products. Through experiential learning, students go through the early phases of engineering design innovation for medical products, starting with clinical immersion to determine a critical health-care need. Engineering students work in multi-disciplinary teams that include students from the School of Business to develop design concepts for both a client-based prototype and a commercializable version. Designs take into account client needs as well as legal, regulatory, and marketing requirements. Business ethics are also covered. Emphasis is placed on communication in both oral and written format to targeted audiences.

**Prerequisites:** (BME 310 [Min Grade: C] and BME 312 [Min Grade: C]) or (BME 310 [Min Grade: C] and BME 313 [Min Grade: C]) or (BME 310 [Min Grade: C] and BME 333 [Min Grade: C]) or (BME 310 [Min Grade: C] and BME 350 [Min Grade: C]) or (BME 312 [Min Grade: C] and BME 313 [Min Grade: C]) or (BME 312 [Min Grade: C] and BME 333 [Min Grade: C]) or (BME 312 [Min Grade: C] and BME 350 [Min Grade: C]) or (BME 313 [Min Grade: C] and BME 333 [Min Grade: C]) or (BME 313 [Min Grade: C] and BME 350 [Min Grade: C]) or (BME 333 [Min Grade: C] and BME 350 [Min Grade: C])

**BME 499. Capstone Design II. 3 Hours.**

Capstone design project; a continuation of BME 498. Through experiential learning, student teams complete the engineering design process for their client-based prototype incorporating engineering standards and realistic constraints. Student teams develop a business plan to present to potential business partners and product development teams from established companies. Additional skills learned in this part of the design process include: development of business proposals, project planning and scheduling, project execution and resource scheduling, communication of design, and interim and final design reviews. Emphasis is placed on communication of design and design justification in both an oral and written format to targeted audiences.

**Prerequisites:** BME 498 [Min Grade: C] and BME 310 [Min Grade: C] and BME 312 [Min Grade: C] and BME 313 [Min Grade: C] and BME 333 [Min Grade: C](Can be taken Concurrently) and BME 350 [Min Grade: C] (Can be taken Concurrently) and BME 423 [Min Grade: C](Can be taken Concurrently)

## Cancer Biology

The Undergraduate Program in Cancer Biology was established in 2020 as a joint program between the Department of Chemistry in the College of Arts and Sciences and the Department of Cell, Developmental and Integrative Biology (CDIB) in the Heersink School of Medicine. This program is the only one of its kind in the US to specifically train students in cancer biology.

The central mission of the new Cancer Biology undergraduate major is to provide students with a strong educational and research background that maximizes their chances to achieve career goals in cancer biology in particular and life sciences in general. This program is unique in that students will gain a broad background in the biomedical sciences by exposure to courses that support the current requirements of the biomedical enterprise and are applicable to academic, private and government settings. Furthermore, by requiring a research component, all students within this major will have early exposure to a cutting-edge research environment through participation in current investigator-led programs in multiple research-intensive departments at UAB and in collaboration with the O'Neal Comprehensive Cancer Center.

UAB's mission includes the promotion of discovery, knowledge dissemination and education. The Cancer Biology major helps to fulfill

these goals by training students to take up positions in research and clinical laboratories, by providing a solid foundation for future graduate study, and by providing informed individuals appropriate for employment in multiple health-related settings. Disciplines covered will include not only cell biology and chemistry, but also microbiology, immunology, genetics, pathology, pharmacology and medicine. This interdisciplinary curriculum reflects the diverse nature of the disease itself.

Because of these features, students will be exposed to a robust and flexible educational experience. Undergraduates will have the opportunity to undertake high quality research in laboratory settings across campus. They will receive research training from world-class investigators at an earlier stage than their peers and have exposure to state-of-the-art technologies, which will increase the desirability of these students for both professional careers or post-graduate programs with an exceptional background in cancer biology and laboratory research.

## Admissions

The Undergraduate Cancer Biology Program is designed for graduating high school seniors and college freshmen and sophomores with an outstanding academic record and the desire to pursue a career in biomedical research, medicine or the health professions. Successful applicants to the program should meet the admissions criteria below.

First-time freshmen applicants must have a high school cumulative GPA of 3.5 or higher (on a 4.0 scale) and an ACT composite score of 28 or higher (or the SAT combined V+Q score at 1300 or higher). High school students who do not meet these requirements may be accepted into the program as pre-Cancer Biology majors. Any student who is admitted as a pre-Cancer Biology major must have an overall GPA #3.0 after 24 credits of work at UAB, a GPA #3.25 in their Biology, Chemistry, Physics and Mathematics (MA 105 and higher) coursework, and have taken a freshman year curriculum that is compatible with the Program. Current UAB students and transfer students from other institutions who are freshmen or sophomores (non-direct admits) may select Cancer Biology for their major, but must have an overall GPA #3.0 and must have demonstrated excellent academic performance in science/mathematics courses and have a GPA #3.25 in those courses.

Students must maintain an overall GPA #3.0 in order to remain in good academic standing in the Cancer Biology Program. If a student's overall GPA falls below 3.0, they will have one semester to bring their overall grade to 3.0 or better.

Those who wish to apply to the Program should contact the Program Directors for additional information. The Co-Directors of the Program, Dr. Braden McFarland and Dr. Sadanandan Velu, are available to meet with high school students and their parents, or with current UAB students to discuss the program.

## Advising and Information

### Program Leadership:

Dr. Braden McFarland  
Co-Director, Undergraduate Cancer Biology Program  
Assistant Professor of Cell, Developmental and Integrative Biology (CDIB)  
(205) 934-3599  
[bdcox@uab.edu](mailto:bdcox@uab.edu)

Dr. Sadanandan Velu  
Co-Director, Undergraduate Cancer Biology Program

Professor of Chemistry  
(205) 975-2478  
svelu@uab.edu

## Academic Advising:

Jamie Grimes  
Chemistry Building 212  
cnbyadvise@uab.edu (chemadvise@uab.edu)

## Bachelor of Science in Cancer Biology

Requirements	Hours
<b>Core Curriculum Requirements</b>	
Area I: Written Composition	6
Area II: Humanities and Fine Arts	9
Area III: Natural Science and Mathematics <sup>1</sup>	0
Area IV: History, Social and Behavioral Sciences	12
<b>Biology Courses</b>	<b>14</b>
BY 123 Introductory Biology I & 123L and Introductory Biology I Laboratory	
BY 124 Introductory Biology II & 124L and Introductory Biology II Laboratory	
BY 210 Genetics	
BY 330 Cell Biology	
<b>Chemistry Courses</b>	<b>19</b>
CH 115 General Chemistry I & CH 116 and General Chemistry I Laboratory	
CH 117 General Chemistry II & CH 118 and General Chemistry II Laboratory	
CH 235 Organic Chemistry I & CH 236 and Organic Chemistry I Laboratory	
CH 237 Organic Chemistry II & CH 238 and Organic Chemistry II Laboratory	
CH 460 Fundamentals of Biochemistry	
<b>Cancer Biology Courses</b>	<b>22</b>
CNBY 210 Colloquium in Cancer Biology <sup>2</sup>	
CNBY 320 Introduction to Cancer Biology	
CNBY 410 Proliferation and Carcinogenesis	
CNBY 420 Genetic Basis of Cancer	
CNBY 480 Journal Club in Cancer Biology <sup>2</sup>	
CNBY 495 Undergraduate Research in Cancer Biology <sup>3</sup>	
CNBY 499 Senior Undergraduate Research Capstone Course <sup>3</sup>	
<b>Other Required Courses</b>	<b>20</b>
PHL 116 Bioethics	
CAS 112 Success in College	
PSDO 200 Introduction to Research	
MA 125 Calculus I	
MA 180 Introduction to Statistics or PUH 25 Biostatistics	
PH 201 College Physics I or PH 221 General Physics I	
PH 202 College Physics II <sup>4</sup> or PH 222 General Physics II	
<b>Major Electives (must take 2)</b>	<b>6</b>
CH 461 Advanced Biochemistry	
CH 463 Biochemistry Laboratory or CH 464 Physical Biochemistry Laboratory	
CH 471 Medicinal Chemistry and Drug Discovery	

CH 472	Chemistry of Natural Products
CNBY 430	Tumor Survival and the Microenvironment
CNBY 440	Cell Signaling and Cancer
CNBY 460	Tumor Pathobiology and Immunology
CNBY 470	Cancer Treatment
<b>General Electives <sup>5</sup></b>	<b>12</b>
Total Hours	120

- <sup>1</sup> Area III credit requirements are included with major courses.
- <sup>2</sup> 1 credit hour per term, must be taken twice.
- <sup>3</sup> Undergraduate Research: Cancer Biology Majors are required to complete a minimum of 9 semester credit hours [CNBY 495 (6h) + CNBY 499 (3h)] of research under the direction of a faculty member beginning no later than their junior year. However, qualified students may identify a mentor and begin conducting research as early as their sophomore year if prerequisites are met (PSDO 200; pass) and approval by the faculty mentor and the program co-directors.
- <sup>4</sup> PH 222 requires Calculus II (MA 126). MA 126 is not required for CNBY majors; only Calculus I (MA 125) is required for CNBY majors.
- <sup>5</sup> Recommended but not required courses include:  
BY 115/BY 115L, BY 116/BY 116L, BY 245, BY 311, BY 327/BY 327L, BY 409/BY 409L and MIC 275.

Freshman			
First Term	Hours	Second Term	Hours
CAS 112		1 CH 117 & CH 118	4
CH 115 & CH 116	4	BY 123 & 123L	4
EH 101	3	EH 102	3
MA 125	4	PHL 116	3
Core II or IV	3	PSDO 200	1
	15		15

Sophomore			
First Term	Hours	Second Term	Hours
BY 124 & 124L	4	CH 237 & CH 238	4
CH 235 & CH 236	4	BY 330	3
BY 210	3	CNBY 320	3
CNBY 210 <sup>1</sup>	1	CNBY 210 <sup>1</sup>	1
Core II or IV	3	Core II or IV	3
	15		14

Junior			
First Term	Hours	Second Term	Hours
PH 201 or 221	4	PH 202 or 222 <sup>2</sup>	4
CH 460	3	CNBY 410	3
MA 180 or PUH 250	3	CNBY 495	3
CNBY 420	3	Core II or IV	3
Core II or IV	3	General Elective <sup>3</sup>	3
	16		16

Senior			
First Term	Hours	Second Term	Hours
CNBY 480 <sup>4</sup>	1	CNBY 480 <sup>4</sup>	1
CNBY 495	3	CNBY 499	3
Elective CH or CNBY 400 level course <sup>5</sup>	3	Elective CH or CNBY 400 level class <sup>5</sup>	3
General Elective <sup>3</sup>	3	General Elective <sup>3</sup>	3

General Elective <sup>3</sup>	3 Core II or IV	3
Core II or IV	3	
	16	13
Total credit hours: 120		

<sup>1</sup> CUBY 210 must be taken twice.

<sup>2</sup> PH 222 requires Calculus II (MA 126). MA 126 is not required for CUBY majors; only Calculus I (MA 125) is required for CUBY majors.

<sup>3</sup> Recommended (but not required) courses for the general electives include BY 115/BY 115L, BY 116/BY 116L, BY 245, BY 327/BY 327L, BY 311, BY 409/BY 409L, BY 416, BY 433, BY 437, BY 440, GGSC 310, GGSC 410, GGSC 420, GGSC 491, and MIC 275.

<sup>4</sup> CUBY 480 must be taken twice.

<sup>5</sup> List of elective CH or CUBY 400 courses (students must pick two - all 3 credit hours): CH 461, CH 463 (or CH 464), CH 471, CH 472, CUBY 430, CUBY 440, CUBY 460, CUBY 470.

## Courses

### CUBY 210. Colloquium in Cancer Biology. 1 Hour.

This course will introduce students to current topics in cancer biology. The goal is to cover a wide range of subjects, with speakers from UAB and if appropriate from outside institutions. Topics covered will be very broad and will range from basic science to clinical and translational medicine, and if appropriate will also address some of the ethical issues surrounding cancer treatment and the sociological impact of chronic disease. The goal will be to build interest in the topic and for students to gain a broad appreciation of the many facets of the disease.

### CUBY 320. Introduction to Cancer Biology. 3 Hours.

This course will introduce students to cancer biology. Topics will include the history of cancer, hallmarks of cancer biology on a cellular level, common cancers in the body, cancer treatment, and prevention and risk factors. This course will serve as a foundation and prerequisite to the more advanced upper level CUBY courses.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C]

### CUBY 410. Proliferation and Carcinogenesis. 3 Hours.

This course will cover the basic tenets of cell biology as they apply to cancer. Topics to be covered will include the cell cycle, how cells normally grow and divide, how they stop growing and how that process is disrupted in cancer; the normal processes associated with cell death such as autophagy, apoptosis and necrosis; the concepts of "stemness" and immortalization in relation to cancer cells and the role of telomerase, mutagens, environmental toxins and DNA repair.

**Prerequisites:** CUBY 320 [Min Grade: C]

### CUBY 420. Genetic Basis of Cancer. 3 Hours.

This course will provide an overview of genomic organization transcription and translation, prior to commencing an in-depth study of cancer genetics and the roles of oncogenes, tumor suppressors, RNA, DNA methylation, gene amplification and the control of gene expression and the viral causes of cancer. Students will also be introduced to basic concepts in bioinformatics and database mining using The Cancer Genome Atlas (TCGA) as a model.

**Prerequisites:** CUBY 320 [Min Grade: C]

### CUBY 430. Tumor Survival and the Microenvironment. 3 Hours.

This course will examine cancer cell physiology in terms of the tumor microenvironment, nutrients and angiogenesis and will explore how these influence cancer cell survival, invasion and metastasis.

**Prerequisites:** CUBY 320 [Min Grade: C]

### CUBY 440. Cell Signaling and Cancer. 3 Hours.

In this course the major cell signaling pathways involved in cancer cell development will be examined. An initial overview of signaling (cytosolic, nuclear, dual-address), receptors and basic second messenger pathways (PKA/PKC) will be followed by an in-depth study of pathways of particular relevance to cancer such as receptor tyrosine kinases, RAS, PI3 kinase/PTEN, growth factors (e.g. EGF, TGF- $\beta$ ), integrins, Wnt/ $\beta$ -catenin and JAK/STAT pathways. The role of post-translational modifications of proteins, such as glycosylation will also be discussed.

**Prerequisites:** CUBY 320 [Min Grade: C]

### CUBY 460. Tumor Pathobiology and Immunology. 3 Hours.

This course will examine the pathological changes that occur in cancer cells and tissues. The course will start with a brief overview of normal histology and will then focus on pathological changes that occur in some select cancers, e.g., colon, lung and breast. This will be followed by exploration of the roles of infection and immunity in cancer that will involve the role of innate and adaptive immunity and cancer cell defenses. The course will conclude by discussing cancer staging and classification of different cancers.

**Prerequisites:** CUBY 320 [Min Grade: C]

### CUBY 470. Cancer Treatment. 3 Hours.

Major advances have been made in the diagnosis and treatment of multiple cancers. This course will review current therapeutic approaches to cancer treatment including radiotherapy, chemotherapy, surgery and gene therapy. This course will also include an introduction to the role of personalized medicine in cancer treatment. The course will conclude by considering other facets of caring for the patient with cancer including maintenance of nutrition, mental health and palliative care.

**Prerequisites:** CUBY 320 [Min Grade: C]

### CUBY 480. Journal Club in Cancer Biology. 1 Hour.

This journal club will be appropriate for senior students. Students, either individually or in small groups will select, read and present articles from the current cancer literature as guided by their instructor.

### CUBY 495. Undergraduate Research in Cancer Biology. 0-6 Hours.

In this major, students will be required to undertake a research project and register for 6 credit hours of CUBY 495 Undergraduate Research, as well as this CUBY 499 Senior Research Capstone course during their final semester of research.

**Prerequisites:** PSDO 200 [Min Grade: P]

### CUBY 499. Senior Undergraduate Research Capstone Course. 3 Hours.

In this major, students will be required to undertake a research project and register for 6 credit hours of CUBY 495 Undergraduate Research, as well as this CUBY 499 Senior Research Capstone course during their final semester of research. This latter course will serve as the opportunity for students to write their research into a manuscript for publication, present a poster or give an oral presentation describing their research for presentation at the UAB EXPO or another scientific meeting. Students will work closely with faculty mentors to ensure quality of research and writing.

**Prerequisites:** CUBY 495 [Min Grade: P]

## Genetics & Genomic Sciences

The UAB Undergraduate Program in Genetics and Genomic Sciences (GGS) is an interdisciplinary major between the Department of Genetics in the Heersink School of Medicine and the Department of Biology in the College of Arts and Sciences. Genetics refers to study of genes and their roles in inheritance, while genomics describes investigations of large sets of genes or gene products, up to and including the entire genome.

Genetics is one of the most important fields in biological sciences, and affects all aspects of our lives. There have been major breakthroughs in the fields of genetics and genomics during the last decade, and this has created a significant need for individuals with training in these cutting-edge disciplines.

The central goals of the GGS undergraduate major is to provide students with a strong educational and research background and prepare them to become accomplished research scientists, clinicians, and health-care professionals who will be equipped with the knowledge to contribute to future discoveries in genetics and genomics. Our faculty, through their strong academic and research experience and expertise in the fields of genetics and genomic sciences, will help students accomplish these goals through the following mechanisms:

- *Academic coursework* - students are provided with a strong academic and intellectual foundation through coursework in biology, chemistry, mathematics, physics, genetics, and genomics.
- *Authentic research experience* – Qualified students are offered opportunities to perform laboratory research under the direction of faculty mentors to learn cutting-edge experimental approaches and innovative methods in genetics and genomics research.
- *Mentoring and career guidance* - students are provided with academic and career counseling to identify graduate and professional programs, or jobs most suited to their interests.

## Admissions

The GGS program is designed for graduating high school seniors and college freshmen or sophomores with a strong academic record and the motivation to pursue a career in the biomedical sciences.

### Advising and Information

Dr. Micky Edmonds  
Co-Director, Genetics and Genomic Sciences  
Assistant Professor, Department of Genetics  
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Dr. Shahid K Mukhtar  
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## Bachelor of Science in Genetics and Genomic Sciences

For a BS degree in Genetics and Genomic Sciences, you must satisfactorily complete a minimum of 120 semester hours including the following:

Requirements	Hours
BY 123 & 123L Introductory Biology I and Introductory Biology I Laboratory	4
BY 124 & 124L Introductory Biology II and Introductory Biology II Laboratory	4
CH 115 & CH 116 General Chemistry I and General Chemistry I Laboratory	4
CH 117 & CH 118 General Chemistry II and General Chemistry II Laboratory	4
PHL 116 Bioethics	3

BY 210	Genetics	3
BY 330	Cell Biology	3
CH 235 & CH 236	Organic Chemistry I and Organic Chemistry I Laboratory	4
MA 125	Calculus I	4
or MA 225	Calculus I - Honors	
CH 237 & CH 238	Organic Chemistry II and Organic Chemistry II Laboratory	4
MA 180	Introduction to Statistics	3
or PUH 250	Biostatistics	
CH 460	Fundamentals of Biochemistry	3
PSDO 200	Introduction to Research	1
PH 201 & 201L	College Physics I and College Physics Laboratory I	4
PH 202 & 202L	College Physics II and College Physics Laboratory II	4
GRD 300	Introduction to the Health Professions	1
<b>Genetics and Genomic Sciences courses <sup>1</sup></b>		<b>13</b>

GGSC 310	Genome Structure and Organization
GGSC 320	Colloquium in Genetics and Genomics Science <sup>2</sup>
GGSC 410	Genetic Basis of Human Disease
GGSC 420	Applications of Bioinformatics
GGSC 499	GGSC Program Final (Taken last term)

### GGSC/BY Electives (select at least 2 from the list below) 6

GGSC 415	Aquatic Animal Models of Human Disease
GGSC 435	Zebrafish as a Model for Biomedical Research
GGSC 465	Research Techniques for Aquatic Animals of Human Diseases
GGSC 470	Principles of Pharmacogenetics
GGSC 490	Model Systems for Genetics Disorders
GGSC 491	Personalized Genomic Medicine
BY 431	Principles of DNA Technology

### Capstone Requirement (Choose one of the following) 3

GGSC 490	Model Systems for Genetics Disorders
GGSC 491	Personalized Genomic Medicine
GGSC 492	Undergraduate Research Seminar in Genetics and Genomic Sciences <sup>3</sup>
GGSC 493	Honors Research Seminar in Genetics and Genomic Sciences <sup>3</sup>

Total Hours 75

- <sup>1</sup> A minimum GPA of 2.0 is required
- <sup>2</sup> GGS majors must take the Colloquium in Genetics and Genomics course (GGSC 320; 1 credit hour per semester) at least 2 times.
- <sup>3</sup> Please contact the program director to discuss the Capstone requirements.

## Required for Genetics and Genomic Sciences Honors Students

To successfully complete the GGS Honors Program you will need to:

- Take 6 semester hours of GGSC 390 Honors Research in Genetics and Genomic Sciences. Each semester hour per term requires a minimum of 3 hours of laboratory work per week. Students may substitute 3 of the 6 required GGSC 390 credit hours with an equivalent research course (with prior approval of the program director).

- Complete the required Environmental Health and Safety (EH&S) training courses. Save the certificates.
- Take the Honors Research Seminar in Genetics and Genomic Sciences (GGSC 493) course during the junior or senior year. This course should be taken during the first semester after completion of the research project, or alternatively can be taken concurrently with GGS Honors Research in Genetics and Genomic Sciences (GGSC 390) during the student's final semester of supervised research. Can also be taken to fulfill the Capstone requirement.
- Form your Honors Thesis Committee consisting of your faculty mentor and another faculty member at least one semester in advance of your final defense.
- Submit your research report to your thesis committee in the form of a thesis in the final semester. The thesis should include a summary of the student's research findings incorporating an introduction, methods, and relevant literature review. Append the EH&S certificates at the end of your thesis. Discuss with the Program Directors about the detailed guidelines, if necessary.
- Defend the thesis in the final semester in front of your thesis committee.
- Submit an oral or poster presentation at Biology Research Day or the UAB Expo during their junior or senior year. Under special circumstances, the poster may be presented at other times of the year pending approval of the Program Directors.

## Honors Eligibility

To be accepted into the Genetics and Genomic Sciences Honors Program, you must:

- Have completed at least 45 credit hours
- Have a 3.5 GPA in GGSC and Biology courses
- Have a 3.2 GPA overall
- Have already completed BY 123 and 123L, BY 124 and 124L, BY 210, CH 115/116, and CH 117/118
- Honors Research in Genetics and Genomic Sciences can also be taken as part of the University Honors Programs. GGS majors generally enter their research labs in the fall semester of their junior year; however, they may begin their research work in the spring semester of their sophomore year or earlier with permission of the Program Directors.
- Qualified non-Honors students will be encouraged, but not required to participate in research as part of their GGS BS degree. Non-Honors students must receive permission from the Program Directors before entering a research lab. In addition, they must complete the course requirements listed above. However, these students will register for the GGSC 380 Undergraduate Research in Genetics and Genomic Sciences and GGSC 492 Undergraduate Research Seminar in Genetics and Genomic Sciences courses.

Freshman			
First Term	Hours	Second Term	Hours
CAS 112		1 BY 124 & 124L	4
BY 123 & 123L		4 CH 117 & CH 118	4
CH 115 & CH 116		4 EH 102	3
EH 101		3 PHL 116	3
Core Curriculum Area II or IV		3 GRD 300	1
	15		15

Sophomore			
First Term	Hours	Second Term	Hours
BY 210		3 GGSC 310	3
GGSC 320 <sup>1</sup>		1 GGSC 320 <sup>1</sup>	1
CH 235 & CH 236		4 BY 330	3
MA 125		4 CH 237 & CH 238	4
Core Curriculum Area II or IV		3 Core Curriculum Area II or IV	3
		PSDO 200	1
	15		15
Junior			
First Term	Hours	Second Term	Hours
GGSC 420		3 GGSC 410	3
GGSC 380 or 390 (or a General Elective Course)		3 GGSC 380 or 390 (or General Elective Course)	3
MA 180 or PUH 250		3 CH 460	3
General Elective Course		3 General Elective Course	3
Core Curriculum Area II or IV		3 Core Curriculum Area II or IV	3
	15		15
Senior			
First Term	Hours	Second Term	Hours
Approved GGSC/BY 400 Level Course <sup>2</sup>		3 Approved GGSC/BY 400 Level Course <sup>2</sup>	3
GGSC 492 or 493 (or a General Elective Course)		3 PH 202 or 222	4
PH 201 or 221		4 Core Curriculum Area II or IV	3
Core Curriculum Area II or IV		3 General Elective Course	4
General Elective Course		3	
	16		14
Total credit hours: 120			

- 1 GGSC majors must take GGSC 320 the Colloquium in Genetics & Genomics at least 2 times.
- 2 Approved GGSC/BY 400-level courses: BY 431, GGSC 415, GGSC 435, GGSC 465, GGSC 470, GGSC 490, and GGSC 491. One of the following courses must be taken to fulfill the Capstone Requirement: GGSC 490, GGSC 491, GGSC 492, or GGSC 493. These courses may also be used to fulfill the Approved GGSC/BY 400 Level Course or General Elective Course requirements.

## Courses

### GGSC 101. Your Genome. 3 Hours.

Advances in genetics and genomics, and especially the sequencing of the human genome, are making it possible to customize medical care to the specific needs of an individual. This course will introduce students to basic concepts in genetics and genomic sciences, as well as familiarize them with the various tools available that enable personalization of healthcare. Students from a wide range of disciplines with minimum scientific background can participate, and there is no required textbook. This course is intended for non-Genetics and Genomic Sciences majors.

### GGSC 201. Research Experience in Molecular Genetics. 3 Hours.

A course-based authentic research experience with genomic technologies such as CRISPR-Cas9 (programmable nucleases) to make genetic modifications in a model organism.

**GGSC 250. Special Topics in Genetics and Genomics Sciences. 1-3 Hour.**

Covers different topics including fundamentals and applications in the fields of genetics and genomics.

**GGSC 310. Genome Structure and Organization. 3 Hours.**

This course will cover the general concepts of genomics including gene structure and function, genomic technologies and their applications, and comparative genomics.

**Prerequisites:** BY 210 [Min Grade: C] and CH 117 [Min Grade: C] and CH 118 [Min Grade: C]

**GGSC 320. Colloquium in Genetics and Genomics Science. 1 Hour.**

Faculty-led seminar course that exposes students to cutting edge research topics and career opportunities in the fields of genetics and genomics. Students will read assigned articles and be prepared for discussion.

**GGSC 330. Principles and Practice of Precision Medicine. 3 Hours.**

Students in this CURE course (Course-Based Undergraduate Research Experiences), will participate in the work-up of real (but de-identified), active PMI cases. Starting from a genetics report, students will research possible molecular mechanisms underlying an individual's disease, write summary reports of the scientific and medical literature, and present their findings to the PMI team and potentially to the physicians responsible for making treatment decisions. Cases incorporated into the class are current active cases, and therefore will be new for every class.

**Prerequisites:** BY 210 [Min Grade: C]

**GGSC 350. Special Topics in Genetics and Genomics Sciences. 1-3 Hour.**

Covers different topics including fundamentals and applications in the fields of genetics and genomics.

**GGSC 355. Independent Study in Genetics and Genomics Sciences. 1-3 Hour.**

In-depth study of fundamentals and applications in the fields of genetics and genomics under the direct supervision of a faculty member.

Permission of Instructor Only.

**GGSC 380. Undergraduate Research in Genetics and Genomics Sciences. 1-3 Hour.**

Research project for non-GGS Honors students under the supervision of a faculty sponsor. May be repeated for a total of 9 semester credit hours in a 2 or 3 semester period.

**GGSC 390. Honors Research in Genetics and Genomics Sciences. 1-3 Hour.**

Research project for GGS Honors students under the supervision of a faculty sponsor. May be repeated for a total of 9 semester credit hours in a 2 or 3 semester period.

**GGSC 410. Genetic Basis of Human Disease. 3 Hours.**

This course will focus on the medical applications of genetics and genomic technologies. Topics covered include, but are not limited to major forms of chromosomal abnormalities, mutations and genetic disorders, genetic risk assessment and population genetics, and genomic approaches to diagnosis.

**Prerequisites:** BY 210 [Min Grade: C] and CH 117 [Min Grade: C] and CH 118 [Min Grade: C] and (GGSC 310 [Min Grade: C] or BY 311 [Min Grade: C])

**GGSC 415. Aquatic Animal Models of Human Disease. 3 Hours.**

This course will cover the basic anatomy, biology, life history, husbandry, and research applications for a variety of aquatic organisms used as animal models of human disease in biomedical research. Species discussed will include zebrafish, Medaka, Xiphorous, Onchorynchus, Xenopus, and Axolotls.

**Prerequisites:** CH 117 [Min Grade: C] and CH 118 [Min Grade: C] and BY 210 [Min Grade: C] and GGSC 310 [Min Grade: C]

**GGSC 420. Applications of Bioinformatics. 3 Hours.**

Introduction to computational tools and bioinformatics databases used in the fields of genetics and genomic sciences. This course will cover a wide variety of different bioinformatics applications, which will be taught through use of available on-line bioinformatics resources. Topics covered include large-scale genomic databases, sequence analysis systems, protein sequence analysis, structural bioinformatics, protein folding, and homology modeling.

**Prerequisites:** BY 210 [Min Grade: C] and CH 117 [Min Grade: C] and CH 118 [Min Grade: C] and (GGSC 310 [Min Grade: C] or BY 311 [Min Grade: C])

**GGSC 435. Zebrafish as a Model for Biomedical Research. 3 Hours.**

This course will focus on the biology, husbandry, and management of zebrafish used as an animal model of human disease in biomedical research. Topics will include anatomy, physiology, systems design, water quality management, behavior and enrichment, spawning and larviculture, nutrition and live feeds, diseases, quarantine, biosecurity, and regulatory compliance.

**Prerequisites:** CH 117 [Min Grade: C] and CH 118 [Min Grade: C] and BY 210 [Min Grade: C] and GGSC 310 [Min Grade: C]

**GGSC 465. Research Techniques for Aquatic Animals of Human Diseases. 4 Hours.**

This course will focus on the techniques and procedures used for research with aquatic animal models of human disease. Lecture and lab approaches are used.

**Prerequisites:** GGSC 415 [Min Grade: C] or GGSC 435 [Min Grade: C]

**GGSC 470. Principles of Pharmacogenetics. 3 Hours.**

Most of the drugs that we use today were developed with the assumption that the same drug will work equally well in all the patients that have the same disease. However, there is considerable variability between individual patients - both in the therapeutic response and the adverse effects of the same drug - that is largely determined by the differences in their genotypes. Pharmacogenetics and pharmacogenomics study the genetic determinants of drug response, with the goal to identify genetic variants that can be used to predict the efficacy of a particular drug in a particular patient and to avoid adverse drug reactions. This will ultimately enable implementation of personalized treatment options, by selecting the drugs that will have the best efficacy and the least toxicity for each individual patient. This course will introduce students to the basic principles of pharmacogenetics, demonstrate examples of drug/genotype interactions, highlight the available pharmacogenetic resources, and discuss the potential benefits, as well as limitations and challenges of pharmacogenetics and personalized medicine.

**Prerequisites:** CH 117 [Min Grade: C] and CH 118 [Min Grade: C] and BY 210 [Min Grade: C] and GGSC 310 [Min Grade: C]

**GGSC 490. Model Systems for Genetics Disorders. 3 Hours.**

Invertebrate and non-human vertebrate species are commonly used in scientific research work to provide significant insights into human genetic processes and disease. This course focuses on the different methods and strategies by which researchers use these systems for genetic and genomic analyses of human biology and relevant disorders. Model organisms covered include, but are not limited to nematodes (*C. elegans*), fruit flies (*Drosophila* sp.), zebrafish (*Danio rerio*), and mice (*Mus musculus*). Capstone course (GGSC majors). Students that enroll in this class as their capstone experience are expected to do writing or presentation assignments to fulfill their capstone requirement.

**Prerequisites:** BY 210 [Min Grade: C] and CH 117 [Min Grade: C] and CH 118 [Min Grade: C] and (GGSC 310 [Min Grade: C] or BY 311 [Min Grade: C])

**GGSC 491. Personalized Genomic Medicine. 3 Hours.**

Significant developments in the fields of genetics and genomics are making it possible to tailor medical care to the specific needs of patients. New diagnostic tests, up to and including whole genome sequencing, provide increasingly powerful tools for the identification of the genetic basis of both rare and common disorders. Better understanding of the causes of disease are permitting drugs to be developed that precisely target disease mechanisms, increasing the efficacy and avoiding side effects. These and other new advanced are leading to major changes in healthcare delivery and provide the consumer with new opportunities and complex choices. This course will focus on exploring state-of-the-art genetic, genomic, and informatic tools now available to enable personalization of healthcare. Capstone course (GGSC majors). Students that enroll in this class as their capstone experience are expected to do writing or presentation assignments to fulfill their capstone requirement.

**Prerequisites:** BY 210 [Min Grade: C] and CH 117 [Min Grade: C] and CH 118 [Min Grade: C] and (GGSC 310 [Min Grade: C] or BY 311 [Min Grade: C])

**GGSC 492. Undergraduate Research Seminar in Genetics and Genomic Sciences. 3 Hours.**

Elective course for non-GGS Honors students who perform at least two semesters of GGSC 380. Over the course of the semester, students will learn how to develop and complete a paper or thesis on their research work while working closely with a supervising faculty member. In addition, the course will prepare them to present their research findings in a seminar format. Through these activities, students will develop effective skills in both written and oral scientific communication. Students will present a formal seminar on their research at the end of the course. This course can be taken the first semester following the completion of the research project, or alternatively can be taken concurrently with Undergraduate Research in Genetics and Genomic Sciences (GGSC 380) during the student's final semester of supervised research. Designated a Capstone course (GGSC majors).

**GGSC 493. Honors Research Seminar in Genetics and Genomic Sciences. 3 Hours.**

All GGS Honors students are required to take this weekly course. Over the course of the semester, students will learn how to develop and complete a paper or thesis on their research work while working closely with a supervising faculty member. In addition, the course will prepare them to present their research findings in a seminar format. Through these activities, students will develop effective skills in both written and oral scientific communication. Students will present a formal seminar on their research at the end of the course. This course can be taken the first semester following the completion of the research project, or alternatively can be taken concurrently with Honors Research in Genetics and Genomic Sciences (GGSC 390) during the student's final semester of supervised research. Can be taken as a Capstone course (GGSC majors).

**GGSC 499. GGSC Program Final. 0 Hours.**

This 0-credit hour course includes two self-paced components: One career counseling recorded video and data collection from students via CV submission and an automated exit interview for documenting learning essentials of GGSC students towards GGSC program evaluation. Students will register for GGSC 499 during their last semester as a requirement for graduation with GGSC major. The GGSC program director(s) will be the faculty instructor(s) with assistance from the GGSC program manager and student advisor.

## Immunology

### Overview

EH 101

The UAB Undergraduate Immunology Program was established in 2016 as a joint program between the Department of Microbiology in the Heersink School of Medicine and the Department of Biology in the College of Arts and Sciences. The goal of the Immunology Major is to insure that undergraduates acquire knowledge in the fundamental aspects of Immunology, including the cells, organs, and tissues that comprise the immune system and how the system functions as a whole to protect humans against infectious diseases. The science of Immunology is multidisciplinary and encompasses the study of both normal processes that confer protection and pathophysiological processes that cause disease. Normal processes include the response to microbial pathogens, vaccines, and cancer, which confer "immunity". Abnormal functions of the immune system contribute to significant disease processes and include asthma/allergy, autoimmunity, inflammatory syndromes (cancer, diabetes, heart disease, chronic neurological diseases), immunodeficiencies (both congenital and acquired), and transplant rejection.

The Undergraduate Immunology Program will provide students with a solid foundation in the core sciences, including chemistry, physics, and biology. Students will be required to take inorganic, organic, and biochemistry, as well as introductory biology, genetics, and the biology of microorganisms. Because the Undergraduate Immunology Program has a strong focus on these core sciences, majors will have the necessary foundation upon which to learn the principles of the immune system with respect to its normal and pathophysiological function. Moreover, because the Undergraduate Immunology Program requires students to take the core sciences as part of their curriculum, they will meet the prerequisites for entry into graduate and professional schools.

The Undergraduate Immunology Program and its faculty will accomplish the goals of the program through four interrelated mechanisms. First, students will be provided an outstanding academic and intellectual foundation through their coursework in biology, chemistry, physics, mathematics, and immunology. Second, students will be immersed in a laboratory research setting where they will learn state-of-the-art research techniques and methodologies that will enable them to address important questions in Immunology through one-on-one interactions with faculty mentors and research laboratory personnel. Third, students will be able to gain skills and knowledge related to the scientific method, critical thinking, problem solving, data analysis and scientific communication (both oral and written) that will allow them to become an integral member of a research team and to present their work at poster sessions at local, regional and national meetings. Fourth, students will be able to access academic and career counseling and determine the career path that is ideally suited to their interests, as well as to identify professional or graduate programs and how best to prepare to be highly competitive for entrance into such programs.

The Undergraduate Immunology Program is designed to prepare graduates to pursue careers in research or health-related professions. Successful graduates will be competitive for acceptance into highly competitive graduate or professional degree programs that will enable them to become accomplished scientists, clinicians and health-care professionals who will contribute to efforts to elucidate the function of the immune system as it relates to health and disease. Graduates will be at the forefront of efforts to fight emerging infectious diseases, to address global health problems, to develop new vaccines, or to find treatments for chronic diseases, including cancer, autoimmunity or asthma.

### Admissions

The Undergraduate Immunology Program is designed for graduating high school seniors and college freshmen and sophomores with an outstanding academic record and the desire to pursue a career in biomedical research, medicine or the health professions. Successful applicants to the Program should meet the admissions criteria below.

High school students with a GPA of 3.5 or better and an ACT score of 28 or better will be considered for immediate acceptance into the Immunology Program. High school students who do not meet these requirements may be accepted into the program as pre-immunology majors. Any student who is admitted as a pre-immunology major must have an overall GPA #3.0 after 24 credits of work at UAB, a GPA #3.25 in their Biology, Chemistry, Physics and Mathematics (MA 105 and higher) coursework, and have taken a freshman year curriculum that is compatible with the Program.

Current UAB students and transfer students from other institutions who are freshmen or sophomores (non-direct admits) may select Immunology for their major, but must have an overall GPA #3.0 and must have demonstrated excellent academic performance in science/mathematics courses and have a GPA #3.25 in those courses.

Students must maintain an overall GPA #3.0 in order to remain in good academic standing in the Program. If a student's overall GPA falls below 3.0, they will have one semester to bring their overall grade to 3.0 or better.

Those who wish to apply to the Program should contact the Program Directors ([uip@uab.edu](mailto:uip@uab.edu)) for additional information. The Director, Dr. Justement and the Co-Directors of the Program, Dr. Heather Bruns and

Dr. Vithal Ghanta, are available to meet with high school students and their parents, or with current UAB students to discuss the program.

### Advising and Information

#### Dr. Louis B. Justement

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Professor of Microbiology

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#### Dr. Heather A. Bruns

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#### Dr. Vithal K. Ghanta

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#### Mr. Evan Reddick

Academic Advisor, Undergraduate Immunology

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## Major in Immunology

Requirements		Hours
Required courses: <sup>1, 4, 5</sup>		
<b>Biology</b>		
BY 123	Introductory Biology I	4
BY 124	Introductory Biology II	4
BY 210	Genetics	3
BY 271	Biology of Microorganisms	4
<b>Chemistry</b>		
CH 115 & CH 116	General Chemistry I and General Chemistry I Laboratory	4
CH 117 & CH 118	General Chemistry II and General Chemistry II Laboratory	4
CH 235 & CH 236	Organic Chemistry I and Organic Chemistry I Laboratory	4
CH 237 & CH 238	Organic Chemistry II and Organic Chemistry II Laboratory	4
CH 460	Fundamentals of Biochemistry	3
<b>Physics <sup>2</sup></b>		<b>8</b>
PH 201 & PH 202	College Physics I and College Physics II	
PH 221 & PH 222	General Physics I and General Physics II	
<b>Mathematics</b>		

MA 125	Calculus I	4
or MA 225	Calculus I - Honors	
MA 180	Introduction to Statistics	3
or PUH 250	Biostatistics	
<b>Immunology</b>		
MIC 150	Current Topics In Immunology	1
MIC 250	Seminars in Immunology	1
MIC 275	Introduction to the Immune System	3
or BY 440	Immunology	
MIC 401	Foundations in Immunology: The Innate Immune System	3
MIC 402	Foundations in Immunology: The Adaptive Immune System	3
MIC 403	Foundations in Immunology: Microbial Pathogen-Immune System Interaction	3
MIC 404	Foundations in Immunology: Immunologically-Mediated Diseases	3
MIC 490	Immunology Thesis	0
<b>Undergraduate Research <sup>3</sup></b>		<b>6</b>
MIC 398	Undergraduate Research in Immunology & Host Defense	
or MIC 498	Honors Research in Immunology and Host Defense	
MIC 492	Undergraduate Research Seminar in Immunology and Host Defense	
or MIC 49	Honors Research Seminar in Immunology and Host Defense	
Total Hours		72

<sup>1</sup> Students must also satisfactorily complete Area I (6 hrs), Area II (12 hrs), and Area IV (12 hrs) of the UAB Core Curriculum as well as a Freshman Year Experience (1 hr, normally CAS 112) with no grades lower than a C.

<sup>2</sup> Complete either trig-based or calculus-based physics series.

<sup>3</sup> Undergraduate Research: Immunology Majors are required to complete a minimum of 6 semester credit hours of research under the direction of a faculty member beginning no later than the first semester of their junior year. However, qualified students may identify a mentor and begin conducting research as early as their freshman year. Course credit will be provided via MIC 398, MIC 492, MIC 498, or MIC 499. Students in the major are required to take 3 credit hours of either MIC 492 or MIC 499 to fulfill their undergraduate research requirement. As part of MIC 492 or MIC 499 students must complete a thesis and give one scientific presentation at UAB EXPO or equivalent. The completion of a thesis for other programs will fulfill this requirement.

<sup>4</sup> Students must complete 17 hours of General Electives. The following are recommended but not required: BY 245, BY 330, BY 409, BY 433, BY 434, BY 437, BY 490, BY 491, MIC 400, GGSC 310, and GGSC 410

<sup>5</sup> Seniors must take MIC 490 the semester in which they plan to graduate and complete all course assignments.

**Academic Performance:** Immunology majors must maintain an overall GPA of 3.0 or better to remain in the program. Majors will be allowed one semester to raise their GPA.

**Capstone Requirement:** Students may fulfill their Capstone requirement by taking either MIC 492 or MIC 499.

## Honors Program in Immunology

### Purpose

The Immunology Honors Program offers motivated students the opportunity to develop research, communication and responsible conduct of research skills in preparation for a professional career in research or the health professions.

### Eligibility

To be accepted into the Immunology Honors Program, you must:

- Have completed at least 45 credit hours.
- Have a GPA 3.5 in BY, CH and MIC courses.
- Have a GPA 3.25 overall.
- Have already completed BY 123 and BY 123L, BY 124 and BY 124L, BY 210, CH 115/CH 116, and CH 117/CH 118.
- Have arranged with a faculty sponsor to do a research project and received approval from the Program Director.
- Honors Research in Immunology and Host Defense can also be taken as part of the University Honors Programs. Immunology majors generally enter their research labs in the fall semester of their junior year; however, they may begin their research work in the spring semester of their sophomore year or earlier with permission of the Program Directors.

### Requirements.

To successfully complete the Immunology Honors Program, students will need to:

- Complete the required Occupational Health and Safety training courses.
- Take a minimum of 6 semester credit hours of MIC 498 Honors Research in Immunology and Host Defense. Each semester credit hour per term requires a minimum of 3 hours of laboratory work per week.
- Submit a formal research proposal by the end of the first semester of Honors Research. The proposal should include a synopsis of the proposed research incorporating an introduction, proposed methods, and relevant literature review.
- Take the Honors Research Seminar in Immunology and Host Defense (MIC 499) course during the junior or senior year. This course can be taken to fulfill the Capstone requirement.
- Complete a formal written report in the form of a scientific paper.
- Submit an oral or poster presentation at Biology Research Day or the UAB Expo during their junior or senior year. Under special circumstances, the poster may be presented at other times of the year pending approval of the Program Directors.

## Immunology 4-Year Plan

*This schedule does not account for University or Science and Technology Honors Programs.*

### Freshman

First Term	Hours	Second Term	Hours
EH 101 <sup>1</sup>		3 BY 123	4
CH 115		4 CH 117	4
& CH 116		& CH 118	
CAS 112		1 EH 102 <sup>1</sup>	3

MA 125 or 225	4	MIC 150	1
Core Curriculum Area II or IV	3	Core Curriculum Area II or IV	3
	15		15
<b>Sophomore</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
BY 124 <sup>2</sup>		4 BY 210	3
CH 235 & CH 236		4 CH 237 & CH 238	4
MIC 250		1 MIC 275 or BY 440 <sup>3</sup>	3
Core Curriculum Area II or IV		3 Core Curriculum Area II or IV	3
Core Curriculum Area II or IV		3 General Elective Course	3
	15		16
<b>Junior</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
BY 271		4 MIC 398 or 498	3
MIC 401		3 MIC 402	3
PH 201 or 221		4 PH 202 or 222	4
Core Curriculum Area II or IV		3 Core Curriculum Area II or IV	3
General Elective Course		2 General Elective Course	3
	16		16
<b>Senior</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
MA 180 or PUH 250		3 CH 460	3
MIC 403		3 MIC 404	3
Core Curriculum Area II or IV		3 MIC 490 <sup>5</sup>	0
General Elective Course		3 MIC 492 or 499	3
General Elective Course		3 General Elective Course	3
	15		12

Total credit hours: 120

- <sup>1</sup> Students with AP credit for EH 101 may take EH 102 instead.
- <sup>2</sup> Sometimes taken summer after freshman year
- <sup>3</sup> BY 440 requires permission of the program director.
- <sup>4</sup> Students must take a minimum of 6 credit hours of Undergraduate Research (3 credit hours of MIC 398 or MIC 498, and 3 credit hours of MIC 492 or MIC 499). Additional hours of MIC 398 MIC 498 may be taken to fulfill the General Elective requirement. 0-6 credit hours may be taken in any given semester.
- <sup>5</sup> Students should register for MIC 490 in the semester in which they plan to graduate.

## Courses

### MIC 150. Current Topics In Immunology. 1 Hour.

The goal of this seminar course is to present basic concepts in immunology as they relate to important current issues. The importance of the immune system in health and disease will be highlighted.

### MIC 210. Special Topics in Immunology. 1-3 Hour.

This course covers introductory topics that are related to immunology and host defense.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C]

### MIC 250. Seminars in Immunology. 1 Hour.

This seminar will feature a 30-minute introduction of a new basic concept in immunology followed by a 15-minute presentation from an individual faculty member who does research on that basic concept and a 15-minute discussion session.

### MIC 275. Introduction to the Immune System. 3 Hours.

This course will provide a general overview of the immune system in protecting against microbial pathogens. The components of the immune system will be introduced, including the cells and tissues important for mediating immunity.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C]

### MIC 310. Special Topics in Immunology. 1-3 Hour.

This course covers topics related to immunology and host defense.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C] and MIC 275 [Min Grade: C]

### MIC 398. Undergraduate Research in Immunology & Host Defense. 0-6 Hours.

Research project under the supervision of a faculty sponsor. May be repeated for a total of 9 semester hours of credit. Students must have completed 12 semester hours of BY or MIC with a GPA of 3.0 and must receive permission of the instructor.

**Prerequisites:** PSDO 200 [Min Grade: C]

### MIC 400. The Microbiome in Health and Immunity. 3 Hours.

This course will introduce the basic concepts of the immune system, including an understanding of the innate and adaptive arms of the immune response and the cells and organs involved. The course will also introduce the role of the microbiome and nutrition in health and disease. This course is designed to facilitate learning through the reading of primary literature sources, use of appropriate educational and medical databases, writing assignments, and discussion-based activities.

**Prerequisites:** BY 123 [Min Grade: C] and BY 124 [Min Grade: C]

### MIC 401. Foundations in Immunology: The Innate Immune System. 3 Hours.

This course will introduce the cells, receptors, signaling pathways and soluble mediators associated with the innate immune response. The basic components of the innate immune system will then be discussed in the context of their role in the physical, physiological, phagocytic and inflammatory barriers that comprise the innate immune system. Importantly, emphasis will be placed on the molecular and cellular mechanisms that are used by the innate immune system to detect and respond to microbial pathogens to provide the first line of defense.

**Prerequisites:** (BY 210 [Min Grade: C] and MIC 275 [Min Grade: C]) or BY 440 [Min Grade: C] and BY 271 [Min Grade: C](Can be taken Concurrently)

### MIC 402. Foundations in Immunology: The Adaptive Immune System. 3 Hours.

This course will provide an in-depth analysis of the cells (T, B and antigen presenting cells), tissues (primary and secondary) and soluble factors (cytokines and chemokines) that comprise the adaptive humoral immune response. The course will examine how cells of the adaptive immune system discriminate self from non-self, including the nature of antigen receptors, the types of antigens recognized and the signals involved in the generation of effector cells that mediate the response.

**Prerequisites:** BY 210 [Min Grade: C] and (MIC 275 [Min Grade: C] or BY 440 [Min Grade: C]) and BY 271 [Min Grade: C](Can be taken Concurrently)

**MIC 403. Foundations in Immunology: Microbial Pathogen-Immune System Interaction. 3 Hours.**

This course will provide an overview of major concepts related to virulence mechanisms utilized by microbial pathogens and their effect on the host immune response. Emphasis will be placed on important virulence factors/mechanisms associated with bacterial, viral and fungal pathogens and how these alter various components of the innate and adaptive immune responses to allow escape of the pathogen and its survival. This course will introduce the concept of emerging infectious diseases and how their spread is related to their ability to escape detection by the immune system.

**Prerequisites:** MIC 401 [Min Grade: C] and MIC 402 [Min Grade: C]

**MIC 404. Foundations in Immunology: Immunologically-Mediated Diseases. 3 Hours.**

This course will focus on the role of the immune system, including the molecular and cellular processes, that contribute to morbidity and mortality associated with immunodeficiency (congenital and acquired), asthma/allergy, autoimmunity (systemic and organ-specific), transplantation and inflammatory syndromes associated with heart disease, cancer, chronic neurological disease and diabetes.

**Prerequisites:** MIC 401 [Min Grade: C] and MIC 402 [Min Grade: C]

**MIC 410. Special Topics in Immunology. 1-3 Hour.**

This course covers advanced topics related to immunology and host defense.

**Prerequisites:** MIC 401 [Min Grade: C] and MIC 402 [Min Grade: C]

**MIC 450. Current Topics in Immunology. 1 Hour.**

The goal of this seminar course is to present advanced concepts in immunology as they relate to important current issues. The importance of the immune system in health and disease will be highlighted.

**Prerequisites:** MIC 401 [Min Grade: C] and MIC 402 [Min Grade: C]

**MIC 451. Seminar in Immunology Research. 1 Hour.**

This seminar will feature a 30 minute introduction of a new advanced concept/technology in immunology followed by a 15 minute presentation from an individual faculty member who does research on that advanced concept/technology and a 15 minute discussion.

**Prerequisites:** MIC 401 [Min Grade: C] and MIC 402 [Min Grade: C]

**MIC 490. Immunology Thesis. 0 Hours.**

Students in the Undergraduate Immunology Program will submit documents and complete assessments required for graduation.

**MIC 492. Undergraduate Research Seminar in Immunology and Host Defense. 3 Hours.**

Elective course for non-Immunology Honors students who have completed at least one semester (3 credit hours) of MIC 398. Over the course of the semester, students will conduct research and learn how to develop and complete a paper or thesis on their research work while working closely with a supervising faculty member. In addition, the course will prepare them to present their research findings in a seminar format. Through these activities, students will develop effective skills in both written and oral scientific communication. Students will present a formal seminar on their research at the end of the course. Can be taken as a Capstone course (Immunology majors).

**MIC 498. Honors Research in Immunology and Host Defense. 0-6 Hours.**

Independent research under the supervision of a faculty mentor for students participating in the Immunology Honors Program. May be repeated for a total of 9 semester hour credits. Students must have completed 12 semester hours of BY or MIC with a GPA of 3.0 and must receive permission of the instructor.

**Prerequisites:** PSDO 200 [Min Grade: C]

**MIC 499. Honors Research Seminar in Immunology and Host Defense. 3 Hours.**

All Immunology Honors students are required to take this weekly course. Over the course of the semester, students will conduct research and learn how to develop and complete a paper or thesis on their research work while working closely with a supervising faculty member. In addition, the course will prepare them to present their research findings in a seminar format. Through these activities, students will develop effective skills in both written and oral scientific communication. Students will present a formal seminar on their research at the end of the course. This course can be taken the first semester following the completion of Honors Research in Immunology and Host Defense (MIC 498, minimum of 3 credit hours). Can be taken as a Capstone course (Immunology majors).

## Neuroscience

Neuroscience is an ideal major for motivated students who want to pursue careers in medicine, research, and other health related disciplines. The curriculum for a BS degree in Neuroscience combines coursework in biology, chemistry, math, physics, psychology, and neurobiology to provide students an interdisciplinary understanding of the body's most complex organ system.

The UAB Undergraduate Neuroscience Program (UNP) is an interdisciplinary major between the Department of Neurobiology in the Heersink School of Medicine and the [Department of Psychology](#) in the College of Arts and Sciences. Neuroscience is the study of the development, structure, and function of the nervous system, with a special focus on the brain and its role in behavior and cognitive functions. Neuroscience also seeks to understand the molecular basis of nervous system disorders and diseases. Multidisciplinary in nature, the field of Neuroscience spans the anatomy, evolution, development, genetics, biochemistry, cell biology, physiology, electrophysiology, pharmacology, circuitry, and pathology of the nervous system. Therefore, neuroscience integrates biology, chemistry, physics, mathematics, psychology, and computer science. It is one of the most rapidly advancing fields in biomedical research.

The goals of the UNP are to prepare and advance UAB undergraduates to careers in research and health-related sciences in highly competitive programs and to enable UAB graduates to become accomplished research scientists, clinicians and health-care professionals who will be ideally equipped for future study of the nervous system and treatment and discovery of cures for neurological, psychiatric and neurodevelopmental disorders and injury.

The UNP and its Training Faculty accomplish these goals by four complementary mechanisms. First, students are provided with a solid academic and intellectual foundation through coursework in biology, chemistry, mathematics, physics, psychology and neuroscience. Second, students conduct original hands-on laboratory research under the direction of faculty mentors to learn the state-of-the-art experimental approaches and methods in Neuroscience research. Third, students are mentored in the development of skills in scientific method, experimental analysis, and effective oral and written communication. Students are expected to become active "colleagues" in faculty laboratories, which should result in publications in scientific journals and presentations at professional meetings. Fourth, students are provided with one-on-one academic and career counseling to identify professional programs most suited to their interests, and strategies to be competitive applicants to these programs.

Students earning the B.S. in Neuroscience at UAB are ideally suited for admission into the nation's most prestigious graduate programs, medical and professional schools.

## Admissions

The UNP is designed for graduating high school seniors and college freshmen or sophomores with a strong academic record and the motivation to pursue a career in biomedical science. Please note carefully the following items.

High school students with an ACT score of 28 or higher and a GPA of 3.5 or higher (the UAB Honors College admissions criteria) are eligible for immediate acceptance into the Neuroscience major. Others may choose to attend UAB before applying in the freshman or sophomore year. Current UAB students whose high school credentials meet the minimum requirements and/or whose academic performance in freshman science courses is excellent may apply at any time. Please contact Dr. Cristin Gavin (cgvavin@uab.edu) or Dr. Robert Sorge (rsorge@uab.edu), if you would like to be considered for admission to the Program. Program Leadership is available to meet with high school students and their parents, or with current UAB students, to discuss the Program.

## Advising and Information

Program Leadership:

Dr. Cristin Gavin  
Co-Director, Undergraduate Neuroscience Program  
Assistant Professor of Neurobiology, School of Medicine  
(205) 934-6433  
[cgvavin@uab.edu](mailto:cgvavin@uab.edu)

Dr. Robert Sorge  
Co-Director, Undergraduate Neuroscience Program  
Associate Professor of Psychology  
(205) 934-8563  
[rsorge@uab.edu](mailto:rsorge@uab.edu) ([rkana@uab.edu](mailto:rkana@uab.edu))

Academic Advising:

Whitney Woodard  
Heritage Hall Building 402  
(205) 934-6135  
[wmwoodard@uab.edu](mailto:wmwoodard@uab.edu)

## Major Requirements for Neuroscience

Requirements	Hours
<b>Biology</b>	
BY 123 Introductory Biology I	4
BY 124 Introductory Biology II	4
<b>Chemistry</b>	
CH 115 General Chemistry I	4
& CH 116 and General Chemistry I Laboratory	
CH 117 General Chemistry II	4
& CH 118 and General Chemistry II Laboratory	
CH 235 Organic Chemistry I	4
& CH 236 and Organic Chemistry I Laboratory	
CH 237 Organic Chemistry II	4
& CH 238 and Organic Chemistry II Laboratory	
CH 460 Fundamentals of Biochemistry	3
<b>Psychology and Neurobiology</b>	

NBL 230	Brain Science: Biology, Disorders, and Clinical Therapies (Part I of III)	3
or PY 253	Brain, Mind and Behavior	
PY 101/201	Introduction to Psychology	3
NBL 355	Synapses, Neurons and Brains (Part II of III)	3
NBL 356	Mechanisms of Sensation, Movement & Cognition (Part III of III)	3

### Neuroscience Colloquium

401 should be taken fall of sophomore year, and 402 should be taken spring of junior year. 2

NBL 401	Colloquium in Basic, Cognitive and Clinical Neuroscience	
NBL 402	Colloquium in Basic, Cognitive and Clinical Neuroscience	

### Advanced Neuroscience Courses

Select any three courses from the following 9

NBL 410	Molecular Biology of the Neuron	
NBL 420	No Self Control: Motivation, Reward and Addiction	
NBL 423	Functional MRI (The title of this course should be updated to "Functional MRI")	
NBL 425	Methods in Human Neuroimaging	
NBL 427	Anatomical Journey thru the Brain	
NBL 430	How to Build a Brain	
PY 431	The Dynamics of Pain	
NBL 433	Diseases of the Nervous System	
NBL 434	Mechanisms of Memory	
PY 435	Motivation and Emotion	
PY 453	Advanced Behavioral Neuroscience	
PY 463	Cognitive Neuroscience	
or PY 464	Honors Cognitive Neuroscience	
PY 468	Cognitive Neuroimaging	
PY 472	Social Psychophysiology	
VIS 456	Visual Neuroscience	

### Physics

Select one group PH 201 & 202 or PH 221 & 222 8

PH 201 & 201L	College Physics I and College Physics Laboratory I	
PH 202	College Physics II	
PH 221 & 221L	General Physics I and General Physics Laboratory I	
PH 222 & 222L	General Physics II and General Physics Laboratory II	

### General

MA 125	Calculus I	4
PHL 116	Bioethics	3

### Statistics

Select one of the following: <sup>1</sup> 3-4

PUH 250	Biostatistics	
PY 216 & 216L	Elementary Statistical Methods and Elementary Statistical Methods Laboratory	
MA 180	Introduction to Statistics	

### Research

Students may choose to complete a laboratory- or literature-based research thesis. 6 total

For the research-based thesis students complete:

NBL 398	Research Practicum in Neurobiology <sup>2</sup>	
or PY 398	Research Practicum in Psychology	

For the literature-based thesis students complete:

NBL 390 Neurobiology Research Laboratory<sup>3</sup>  
or NBL 398 Research Practicum in Neurobiology

NBL 399 Senior Seminar in Neuroscience

Total Hours 74-69

<sup>1</sup> Medical school requires 6 hours of college math. AP Calculus can be substituted for 3 credit hours, but pre-medical students must take another math course at UAB. MA 180 or PUH 250 both satisfy the requirement; therefore, students planning to attend medical school should take one of those two courses as opposed to other options.

<sup>2</sup> Research credit hours (NBL/PY 398) are distributed across multiple semesters. Students should register for NBL 398 if their research mentor resides in the School of Medicine, Dentistry, or Optometry, and PY 398 if their mentor resides in the College of Arts and Sciences. PSDO 200 is a prerequisite to register for NBL 398. NBL 398 and PY 398 credit can be applied toward completion of the Science and Technology Honors Program.

<sup>3</sup> 3 credit hours of PY 398 can also be applied toward a literature-based thesis.

Neuroscience majors in the laboratory-based research track should be working under the direction of a faculty mentor no later than the first semester of their junior year. However, students may identify a mentor and begin conducting research following completion of PSDO 200 in their freshman year.

#### Recommended but not Required:

NBL 240 Introduction to Neuroscience Methods (3 credit hours)

NBL 327 100 Things You've Always Wanted to Know About the Brain (3 credit hours)

NBL 245 The Neurobiology of Learning and Memory (3 credit hours)

BY 330 Cell Biology (3 credit hours)

BY 210 Genetics (3 credit hours)

PY 236 Introduction to Research with Animal Models (3 credit hours)

PY 340 Behavioral MCAT Preparation (3 credit hours)

PY 372 Social Psychology (3 credit hours)

PY 380 The Sensory and Perceptual Brain (3 credit hours)

PY 390 Animal Behavior (3 credit hours)

PY 470 Introduction to Neurobiology (3 credit hours)

Premedical students should take SOC 100.

**Academic Performance Requirement:** Neuroscience majors must maintain an overall GPA of 3.0 to remain in the program. Any students falling below the academic requirement will be given 2 semesters to raise their GPA and a subsequent semester of academic probation with the program.

## Laboratory-Based Research Options

### Freshman

First Term	Hours	Second Term	Hours
MA 125	4	PY 101 or 201	3
CH 115 & CH 116	4	BY 123	4
PHL 116	3	CH 117 & CH 118	4
PSDO 200	1	NBL 401 <sup>2</sup>	1
HC 117 (or other honors seminar or FYE equivalent)	3	EH 102	3
EH 101 <sup>1</sup>	3		
	18		15

### Sophomore

First Term	Hours	Second Term	Hours
CH 235 & CH 236	4	CH 237 & CH 238	4
BY 124 <sup>3</sup>	4	NBL 355	3
PY 253 or NBL 230	3	PUH 250 or MA 180	3
Core Area II Fine Arts	3	NBL 398 or PY 398 (Begin mentored research) <sup>4</sup>	2
	14		12

### Junior

First Term	Hours	Second Term	Hours
CH 460	3	PH 202 or 222	4
NBL 356	3	Upper level elective	3
PH 201 or 221	4	NBL 401	1
NBL 398 or PY 398	2	Core Area IV Social/Behavioral Science	3
General Elective/Minor	3	NBL 398 or PY 398	2
		General Elective/Minor	3
	15		16

### Senior

First Term	Hours	Second Term	Hours
Upper level elective	3	Upper level elective	3
Core Area II Literature	3	Final History/Lit Series	3
Core Area IV History	3	Area II/Area IV Core	3
General Elective/Minor	3	General Elective/Minor	3
General Elective/Minor	3	General Elective/Minor	3
		NBL 499	0
	15		15

Total credit hours: 120

<sup>1</sup> Often use AP credit for EH 101, can take EH 102 instead

<sup>2</sup> First colloquium is taken spring of freshman year, advanced colloquium is taken spring of junior year

<sup>3</sup> Sometimes taken summer after freshman year

<sup>4</sup> A total of 6 credit hours of NBL 398 or PY 398 can be distributed across multiple semesters.

## Literature-Based Research Option

### Freshman

First Term	Hours	Second Term	Hours
MA 125	4	PY 101 or 201	3
CH 115 & CH 116	4	BY 123	4

EH 101 <sup>1</sup>	3 CH 117 & CH 118	4
HC 117 (or other honors seminar or FYE equivalent)	3 EH 102	3
PSDO 200	1 NBL 401 <sup>2</sup>	1
PHL 116	3	
	18	15

**Sophomore**

First Term	Hours	Second Term	Hours
CH 235 & CH 236	4 CH 237 & CH 238		4
BY 124 <sup>3</sup>	4 NBL 355		3
PY 253 or NBL 230	3 PUH 250 or MA 180		3
Core Area II Fine Arts	3 Core Area IV History		3
	14		13

**Junior**

First Term	Hours	Second Term	Hours
CH 460	3 PH 202 or 222		4
NBL 356	3 NBL 390 or 240 <sup>4</sup>		3
PH 201 or 221	4 NBL 401		1
Core Area II Literature	3 Upper level elective		3
General Elective/Minor	3 Core Area IV Social/Behavioral Science		3
	General Elective/Minor		3
	16		17

**Senior**

First Term	Hours	Second Term	Hours
NBL 399	3 Upper level elective		3
Upper level elective	3 Area II/Area IV Core		3
Final History/Lit Series	3 General Elective/Minor		3
General Elective/Minor	3 General Elective/Minor		3
General Elective/Minor	General Elective/Minor		3
NBL 499	0		
	12		15

Total credit hours: 120

<sup>1</sup> Often use AP credit for EH 101, can take EH 102 instead<sup>2</sup> First colloquium is taken spring of freshman year, advanced colloquium is taken spring of junior year<sup>3</sup> Sometimes taken summer after freshman year<sup>4</sup> NBL 240/NBL 390 can be taken any semester after a student completes PSDO 200. Three credit hours of NBL 398 or PY 398 can satisfy the requirement for NBL 240/390.

## Minor Requirements for Neuroscience

Requirements	Hours
PY 253 Brain, Mind and Behavior	3
or NBL 230 Brain Science: Biology, Disorders, and Clinical Therapies	
NBL 355 Synapses, Neurons and Brains	3
NBL 356 Mechanisms of Sensation, Movement & Cognition	3
or PY 353 Behavioral Neuroscience	
<b>Required: 3 electives at the 200 level or above with one elective at the 400 level or above</b>	<b>9</b>
NBL 210 Scientific Reasoning and Medical Research Design	
NBL 225 No Self Control: Motivation, Reward and Addiction	
NBL 240 Introduction to Neuroscience Methods	
NBL 245 The Neurobiology of Learning and Memory	

NBL 324	Anatomical Journey thru the Brain
NBL 327	100 Things You've Always Wanted to Know About the Brain
NBL 410	Molecular Biology of the Neuron
NBL 420	No Self Control: Motivation, Reward and Addiction
NBL 425	Methods in Human Neuroimaging
NBL 427	Anatomical Journey thru the Brain
NBL 430	How to Build a Brain
NBL 433	Diseases of the Nervous System
NBL 434	Mechanisms of Memory
NBL 440	Memento Mori: neurodegeneration from cradle to coffin and bench to bedside
PY 201	Honors Introduction to Psychology
PY 340	Behavioral MCAT Preparation
PY 354	Autism: Brain and Cognition
PY 363	Cognitive Psychology
PY 380	The Sensory and Perceptual Brain
PY 390	Animal Behavior
PY 405	Biofeedback, Meditation, and Self-Regulation
PY 420	Special Topics in Psychology
PY 431	The Dynamics of Pain
PY 435	Motivation and Emotion
PY 453	Advanced Behavioral Neuroscience
PY 455	Psychology of Eating Disorders and Obesity
PY 463	Cognitive Neuroscience
PY 468	Cognitive Neuroimaging
VIS 429	Intro to Neurobiology
VIS 456	Visual Neuroscience

Total Hours 18

## Courses

**NBL 120. Basic Neuroscience. 3 Hours.****NBL 121. Basic Neuroscience. 3 Hours.****NBL 150. The Brain: A User's Guide. 4 Hours.**

Neuroscience is one of the fastest growing disciplines in all of science. Using tools and perspectives adopted from across many scientific realms, neuroscience researchers have now learned more about the brain in the last two decades than in all of human history combined. Like never before, neuroscience is providing us with information pertinent to our everyday lives and in the process become a part of contemporary culture. In this lecture and integrated lab course, we will explore a range of neuroscience-related topics, including but not limited to creativity, consciousness, perception, love and emotion, brain health, motivation, stress, personality, and the differences between the male and female brain. There will be no required text for the course, and participants need no scientific background to participate.

**NBL 210. Scientific Reasoning and Medical Research Design. 3 Hours.**

The goal of this course is to teach biomedical research design basics and critical thinking skills in the context of neuroscience research. This knowledge should be helpful for understanding and conducting scientific research, as well as for the updated sections of the 2015 MCAT test for medical school admission.

**NBL 220. Special Topics Neuroscience 1. 1 Hour.**

This course covers different topics that have to do with Neurobiology.

**NBL 222. Special Topics Neuroscience 2. 2 Hours.**

This course covers different topics that have to do with Neurobiology.

**NBL 225. No Self Control: Motivation, Reward and Addiction. 3 Hours.**

Survival of self and species has been evolutionarily wired into the brain. Largely, involving sub-cortical networks, animals are strongly rewarded by beneficial outcomes and driven away from aversive situations. Overseeing these opposing subconscious determinants of motivated behavior is a pre-frontal cortical command center, which along with additional systems that provide for experiential memory and emotional significance, guide the choices we make. This course will provide the participant with an introduction to the neuronal pathways that underlie normal decision making, with a major focus on how this circuitry becomes compromised during addiction. These topics should be relevant to students interested in biomedicine, health professions or counseling.

**NBL 230. Brain Science: Biology, Disorders, and Clinical Therapies. 3 Hours.**

This course is an introduction to the mammalian nervous system, intended to give a strong foundation or understanding of the human brain. Topics include the composition and function of neurons and glia, sensory systems and perception, movement, basic learning and memory, and select diseases of the brain. Students also explore the principles of experimental design and apply those to contemporary neuroscience techniques. PY 101 (or equivalent) and BY 123 strongly recommended.

**NBL 240. Introduction to Neuroscience Methods. 3 Hours.**

This course is designed to develop practical, experience-based laboratory skills in undergraduate student researchers with minimal prior laboratory exposure. Students will be exposed to a variety of techniques ranging from cellular and molecular to vertebrate animal applications. Any student that completes this course should have the rudimentary skills (and confidence!) to begin supervised research in primary laboratories around campus. No background in Neuroscience required.

**NBL 245. The Neurobiology of Learning and Memory. 3 Hours.**

This course focuses on the biological mechanisms involved in the processes of learning and memory in the nervous system. We will examine these mechanisms at the molecular, cellular and systems levels of the brain. Topics range from memory-associated molecules and synaptic plasticity to animal models and human behavior. In addition, students will be introduced to the many behavioral paradigms and molecular genetic techniques used by neuroscientists to study learning and memory in the brain.

**NBL 298. Special Topics Neuroscience 4. 1 Hour.**

This course covers different topics that have to do with Neurobiology.

**NBL 310. Evolution of the Vertebrate Brain. 3 Hours.****NBL 311. From Wet Brains to Artificial Stupidity. 1-3 Hour.****NBL 323. Special Topics Neurobiology 1. 1 Hour.**

This course covers different topics that have to do with Neurobiology.

**NBL 324. Anatomical Journey thru the Brain. 3 Hours.**

Have you every wanted to know where the amygdala sits in the brain, or how the brainstem connects to the thalamus and basal ganglia? Would you like to know about processing in the spinal cord, and how this information is sent to and from the cortex? This course will show you how to find any structure in the nervous system, and how these regions interact to control body movements, give rise to sensory perception, generate emotions and experiences, make decisions, and create personality. Each week will use interactive didactic sessions, anatomical drawing exercises, real brain lab experiences, radiographic imaging, and small group medical case discussions, to break down the brain into manageable components, to see how its outer coverings, blood supply, gray and white matter are structurally and functionally organized to make you who you are. This course may be beneficial for students considering careers in the medical, dental or optometry fields, along with those wanting to pursue graduate research in neuroscience. Students without a general neuroscience background may consider taking NBL 230 or PY 253 (recommended but not required).

**NBL 325. Special Topics Neurobiology 3. 2 Hours.**

This course covers different topics that have to do with Neurobiology.

**NBL 327. 100 Things You've Always Wanted to Know About the Brain. 3 Hours.**

This course examines intriguing questions in neuroscience as they are presented to the layperson through TED Talks, video presentations, podcasts, Scientific American articles, and newspaper/magazine science op-eds. The aim is to expose students to a wide range of topics about the brain, some fundamental, some controversial, in ways they may not have thought about before; challenging them to discuss the evidence for and against various theories of brain function. There will be no memorization of information, only the willingness to read, post and discuss scientific opinions on articles/videos. Non majors are encouraged!.

**NBL 355. Synapses, Neurons and Brains. 3 Hours.**

Introduction to the cellular and molecular biology, biochemistry, biophysics, genetics and function of the mammalian nervous system. This course will emphasize the development, anatomy, cellular and molecular biology and biochemistry of neurons and glial cells, and introduce electrical, biophysical and chemical signaling within and across neurons.

**Prerequisites:** BY 123 [Min Grade: C] and (CH 117 [Min Grade: C] or CH 127 [Min Grade: C]) and (NBL 230 [Min Grade: C] or PY 253 [Min Grade: C])

**NBL 356. Mechanisms of Sensation, Movement & Cognition. 3 Hours.**

Introduction to the cellular and molecular biology, biochemistry, biophysics, genetics and function of the mammalian nervous system. This course will emphasize mechanisms of synaptic transmission, sensory systems, neuropharmacology, and synaptic plasticity; and introduce the molecular basis of diseases and disorders of the central and peripheral nervous systems.

**Prerequisites:** PY 355 [Min Grade: C] or NBL 355 [Min Grade: C]

**NBL 390. Neurobiology Research Laboratory. 3 Hours.**

Hands-on instruction will be provided in contemporary methods used in neurobiology research. These will include molecular cloning, DNA sequencing, cell transformation and culture, western blotting, immunohistochemistry and electrophysiology.

**NBL 396. Teaching Practicum in Neurobiology. 1 Hour.**

Teaching experience in neurobiology courses, supervised by a faculty member. Student must have previously taken the course for which the student will work within.

**NBL 397. Community-Based Practicum in Neurobiology. 1-6 Hour.**

Community work in various supervised settings related to practical applications of neuroscience (for example, non-profits, educational settings, and other outreach) are significant components of this course.

**NBL 398. Research Practicum in Neurobiology. 0-6 Hours.**

Project or research activity supervised by faculty. Cannot be taken Pass/Fail.

**Prerequisites:** PSDO 200 [Min Grade: C]

**NBL 399. Senior Seminar in Neuroscience. 3 Hours.**

All (Thesis Track) Neuroscience majors will participate in the Senior Seminar, which is a capstone experience in their study of Neuroscience. The seminar will meet weekly for in-depth discussions of current topics in neuroscience. Over the course of the semester, students will independently develop and complete a capstone research paper on a topic of their choosing while working closely with a supervising faculty member. The research report serves as a culminating academic and intellectual experience that works to develop critical thinking, research skills, and both written and oral communication. Students will present their papers at the completion of the course. (Fall and Spring availability).

**NBL 400. Special Topics in Neurobiology 1. 3 Hours.**

This course covers different topics that have to do with Neurobiology.

**NBL 401. Colloquium in Basic, Cognitive and Clinical Neuroscience. 1 Hour.**

The Colloquium in Basic, Cognitive and Clinical Neuroscience is a faculty seminar. The Colloquium will expose students to cutting edge research programs and technologies from approximately 25 faculty each year who serve as mentors for the Undergraduate Neuroscience Major and Graduate Neuroscience Program. Faculty will also discuss strategies for development of careers in medicine and research. Students will prepare by reading an assigned research article authored by the speaker and be prepared for a group discussion. Class meets for one and a half hours a week.

**NBL 402. Colloquium in Basic, Cognitive and Clinical Neuroscience. 1 Hour.**

This class serves as an introduction to professional expectations and practices related to careers in the biomedical field. Students will identify and discuss pre-professional competencies, create discipline-specific writing for applications to graduate and professional school, and develop competency in oral communication on topics such as research and leadership. This class is open to Neuroscience majors in their junior or senior year.

**Prerequisites:** NBL 401 [Min Grade: C]

**NBL 403. Special Topics in Neurobiology 2. 3 Hours.**

This course covers different topics that have to do with Neurobiology.

**NBL 410. Molecular Biology of the Neuron. 3 Hours.**

Molecular Neuroscience will provide students an advanced understanding of how the brain works with a focus on protein function. Everything the brain does is built upon the actions of proteins, many of which are completely unique to the brain. Together we will work to thoroughly understand the exact molecular mechanisms utilized by the brain to support the complex function of our most fascinating organ. Topics covered will include brain morphogenesis, axonal outgrowth, synapse formation, neurotransmitter biosynthesis, intracellular signaling, and the blood brain barrier. This lecture course is designed to fulfill a neuroscience major's requirement for an advanced course. Non-neuroscience majors should seek course master approval before enrolling and must have a significant background in biology and/or chemistry. Students will be required to purchase a text. Grades will be assigned based on points accumulated through weekly quizzes, cumulative exams, and written reports.

**Prerequisites:** (NBL 230 [Min Grade: C] or PY 253 [Min Grade: C]) and (NBL 355 [Min Grade: C] or PY 355 [Min Grade: C]) and (NBL 356 [Min Grade: C] or PY 356 [Min Grade: C])

**NBL 420. No Self Control: Motivation, Reward and Addiction. 3 Hours.**

Survival of self and species has been evolutionarily wired into the brain. Largely, involving sub-cortical networks, animals are strongly rewarded by beneficial outcomes and driven away from aversive situations.

Overseeing these opposing subconscious determinants of motivated behavior is a pre-frontal cortical command center, which along with additional systems that provide for experiential memory and emotional significance, guide the choices we make. This course will provide the participant with an introduction to the neuronal pathways that underlie normal decision making, with a major focus on how this circuitry becomes compromised during addiction. These topics should be relevant to students interested in biomedicine, health professions or counseling. In addition to listed prerequisites, NBL 356 is strongly recommended.

**Prerequisites:** (NBL 230 [Min Grade: C] or PY 253 [Min Grade: C]) and (NBL 355 [Min Grade: C] or PY 353 [Min Grade: C])

**NBL 423. Functional MRI. 3 Hours.**

This course covers different topics that have to do with Neurobiology.

**NBL 425. Methods in Human Neuroimaging. 3 Hours.**

The ability to perform neuroimaging studies on awake human individuals has produced a conceptual revolution in the study of human cognition. This course will examine the methods and techniques in human neuroimaging with the primary goal of building basic understanding of how these tools work. The course will explore techniques, such as single cell recordings, deep brain stimulation, electroencephalography, magnetoencephalography, and diffusion weighted imaging, and focuses on functional magnetic resonance imaging. By the end of the course, students will have gained basic knowledge in the field and will be able to read and critically assess scientific journal articles that make use of a variety of neuroimaging methods. The secondary and implicit goal of this course is to create and nurture, in students, a genuine interest in neuroscience and neuroimaging.

**NBL 427. Anatomical Journey thru the Brain. 3 Hours.**

Have you every wanted to know where the amygdala sits in the brain, or how the brainstem connects to the thalamus and basal ganglia? Would you like to know about processing in the spinal cord, and how this information is sent to and from the cortex? This course will show you how to find any structure in the nervous system, and how these regions interact to control body movements, give rise to sensory perception, generate emotions and experiences, make decisions, and create personality. Each week will use interactive didactic sessions, anatomical drawing exercises, real brain lab experiences, radiographic imaging, and small group medical case discussions, to break down the brain into manageable components, to see how its outer coverings, blood supply, gray and white matter are structurally and functionally organized to make you who you are. This course may be beneficial for students considering careers in the medical, dental or optometry fields, along with those wanting to pursue graduate research in neuroscience. Students without a general neuroscience background may consider taking NBL 230 or PY 253 (recommended but not required).

**NBL 430. How to Build a Brain. 3 Hours.**

It starts with a dividing glob of cells. Not a single cell is any different, but with the right application of magic and a few short days, not only is your stomach a stomach, and your brain a brain, but all of the different kinds of cells of your brain needs to function are in the perfect spot and at the perfect number. Every neuron finds its exact target even when that means having to read a complex set of signals that change every few micrometers. Add to this exquisite complexity, all the things that can go wrong from genetics to environmental exposures and it is truly amazing that neurodevelopment happens successfully as often as it does. This course will explore the “magic” that is the development of the nervous system. Students will understand the complex cellular and molecular mechanisms at play to form a functional brain and explore where problems can occur to cause the most common neurodevelopmental disorders.

**NBL 433. Diseases of the Nervous System. 3 Hours.**

Molecular mechanisms and treatments for neurological, psychiatric, and injury based disorders and diseases of the nervous system. Topics include neurodevelopmental disorders (including intellectual disability and autism spectrum disorders), neurological disorders (including neurodegenerative and demyelinating disease), neuropsychiatric disorders (including depression disorders and schizophrenia), and injury to the nervous system (including stroke and traumatic brain and spinal cord injury).

**Prerequisites:** PY 356 [Min Grade: C] or NBL 356 [Min Grade: C]

**NBL 434. Mechanisms of Memory. 3 Hours.**

Molecular, cellular, systems and medical components of neuroscience, with an emphasis on cognition and cognitive disorders. Covers topics ranging from genes and molecules to human behavior, using cognitive function and clinical cognitive disorders as the unifying theme, with a focus on learning and memory and disorders of these processes.

**Prerequisites:** (NBL 355 [Min Grade: C] or PY 355 [Min Grade: C]) and (NBL 356 [Min Grade: C] or PY 356 [Min Grade: C])

**NBL 440. Memento Mori: neurodegeneration from cradle to coffin and bench to bedside. 3 Hours.**

We all die. We live in a wealthy enough country that many of us will survive long enough to die with a neurodegenerative disease. As the population ages, neurodegenerative diseases are becoming more and more common, so it's important to understand them and figure out how to treat them. This course will cover multiple neurodegenerative diseases, from ones that begin in childhood to slow-progressing diseases that occur late in life. We will discuss approaches to treat the diseases, the basics of the therapeutic pipeline, basic disease mechanisms, and common themes across neurodegeneration. Prerequisites: NBL 230 or PY 253 are required, and NBL 433 is recommended but not required.

**Prerequisites:** NBL 230 [Min Grade: C] or PY 253 [Min Grade: C]

**NBL 442. Sp Tp Neuroscience 2. 2 Hours.**

This course covers different topics that have to do with Neurobiology.

**NBL 444. Special Topics Neuroscience 3. 3 Hours.**

This course covers different topics that have to do with Neurobiology.

**NBL 446. Special Topics Neuroscience 4. 4 Hours.**

This course covers different topics that have to do with Neuroscience.

**NBL 454. Mind/Brain Course. 3 Hours.****NBL 499. Neurobiology Thesis. 0 Hours.**

Students should register for this class the semester they plan to submit their undergraduate thesis. If completing a literature based thesis in NBL 399, register for this class concurrently.

# School of Education

**Interim Dean:** Michelle Robinson, D.M.D., M.A.

The School of Education offers a wide range of educator preparation degrees and teacher certification options as well as non-teacher education degrees, majors, concentrations, and minors.

**Educator Preparation Options.** The School of Education offers educator preparation options that are fully approved by the Council for the National Council for Accreditation of Teacher Education and the Alabama State Board of Education (ALSBOE). These options lead to Bachelor of Science degrees and Alabama teacher certification in early childhood and elementary education, high school (secondary) education, and kinesiology (physical education). The School of Education also collaborates with the College of Arts and Sciences to offer pathways to teacher certification in a wide range of teaching fields, including music, science, and mathematics.

**Kinesiology, Community Health and Human Services Preparation Options.** There are several non-educator preparation options available for individuals seeking degrees at the undergraduate level. These degrees prepare students for employment in a variety of wellness, health, and fitness and sports (community, commercial, clinical, and corporate) agencies/facilities and/or admission to health-related graduate programs (e.g., physical therapy, medicine, occupational therapy). Degrees, majors, concentrations, and minors are available in community health, human services and kinesiology.

## Educator Preparation Programs

At the undergraduate level, students may complete programs that lead to Alabama Class B certification in the following areas:

Certification Area & Grade Levels	Undergraduate Major	Teacher Education Department
Biology (6-12)	Biology*	Curriculum & Instruction
Chemistry (6-12)	Chemistry*	Curriculum & Instruction
Early Childhood (P-3)	Early Childhood Education	Curriculum & Instruction
Early Childhood (P-3) and Elementary Education (K-6)	Early Childhood & Elementary Education	Curriculum & Instruction
Elementary Education (K-6)	Elementary Education	Curriculum & Instruction
English Language Arts (6-12)	High School Education/English**	Curriculum & Instruction
General Science (6-12)	Biology, Chemistry, or Physics***	Curriculum & Instruction
General Social Science (6-12)	High School Education/History**	Curriculum & Instruction
Mathematics (4-8)	Mathematics*	Curriculum & Instruction
Mathematics (6-12)	Mathematics*	Curriculum & Instruction
Music - Instrumental (P-12)	Music	Curriculum & Instruction

Music - Vocal/Choir (P-12)	Music	Curriculum & Instruction
Kinesiology (P-12)	Kinesiology (Physical Education)	Human Studies
Physics (6-12)	Physics*	Curriculum & Instruction

\* Please refer to UABTeach information located in the College of Arts and Sciences portion of the Undergraduate Catalog and in the sections that follow.

\*\* These programs require a dual major in the teaching field and high school education.

\*\*\* Individuals seeking certification in General Science must complete a major in biology, chemistry, or physics and meet additional coursework requirements as approved by the Alabama State Department of Education.

**Please Note:** Students seeking teacher certification in the programs above must meet all requirements for program admission, retention, completion, and certification as required by the Alabama State Department of Education (ALSDE). Alabama certification regulations are subject to change and requirements delineated in this catalog may not reflect current requirements. **Therefore, students are urged to seek advisement through the Office of Student Services each term to stay abreast of current teacher certification requirements.**

These baccalaureate degrees above lead to Class B certification. Once a student has successfully completed all degree and program requirements, he or she can apply for Alabama teacher certification through the School of Education Office of Student Services. The School of Education only recommends a student for certification, and the ultimate certification decision is made by the Alabama State Board of Education.

## Non-Teacher Certification Programs

At the undergraduate level, students may complete non-teacher certification concentrations in the following areas:

Program Area/Concentration	Undergraduate Major	Department
Community Health	Community Health and Human Services	Human Studies
Exercise Science	Kinesiology	Human Studies
Exercise Bioenergetics	Kinesiology	Human Studies
Fitness Leadership	Kinesiology	Human Studies
Human Services	Community Health and Human Services	Human Studies
2+2 Early Childhood Non-Certification	Early Childhood Education	Curriculum and Instruction
4 Year Early Childhood Non-Certification	Early Childhood Education	Curriculum and Instruction

## School of Education Minors

The School of Education offers the following minors:

Minor	Program	Department
Athletic Coaching	Kinesiology	Human Studies
Community Health	Community Health and Human Services	Human Studies
Exercise Science	Kinesiology	Human Studies

Human Services	Community Health and Human Services	Human Studies
STEM Education	Science, Technology, Engineering and Mathematics	UABTeach

## Office of Clinical Experiences

The Office of Clinical Experiences is responsible for coordinating student teaching and other clinical experiences for the School of Education. Information concerning student teaching applications, placement, and field experiences may be found in EEC 219D in the Education and Engineering Complex.

## Office of Student Services

The Office of Student Services, located in EEC 311 in the Education and Engineering Complex, provides academic advising to undergraduate Education majors. This office is also responsible for academic records and recommendations for teacher certification for the School of Education. Application materials for the Teacher Education Program and for Alabama teacher certification can be found at <http://www.uab.edu/soestudentservices/>.

Alabama teacher certification programs and basic degree requirements vary among majors. Students should contact this office early in their studies to be certain they will meet School of Education requirements and Alabama Department of Education teacher certification requirements. The Alabama State Department of Education sets requirements for teacher education majors. Changes to these requirements may occur periodically so students should meet with their academic advisor at least once per semester to receive the most updated information about the Alabama State Department of Education requirements.

## Honors Program in Exercise Bioenergetics, Exercise Science, and Fitness Leadership

The Department of Human Studies offers an Honors Program for Exercise Bioenergetics, Exercise Science, and Fitness Leadership students. Highly qualified students will have the opportunity to work one-on-one with a mentor in an area of mutual interest and conduct either a research or civic engagement project designed to meet some particular need as it relates to pertinent areas of fitness, exercise, and physical activity. For more information go to: <https://www.uab.edu/education/home/hs-honors-program>.

## Honors Program in Early Childhood and Education

Students in the Early Childhood and Elementary Honors Program graduate with departmental honors that will be designated on their transcripts and recognized during commencement exercises. In order to become eligible for this designation, students must meet the following criteria:

- Demonstrated commitment to Early Childhood and Elementary Education.
- Junior standing and the completion of nine (9) hours pre-professional education courses from ECY 300, EEC 300, EEC 301, EDF 362, and EPR 363.

- 3.5 GPA in Education courses taken, 3.0 GPA overall.

In order to participate in the Honors Program and graduate with "Honors Designation", students must file an application with the Office of Curriculum & Instruction (Room 100) following an invitation from the respective program area. Following acceptance, students must enroll and complete the following two Education Honors Courses: EDH 491- Honors Education Research and EDH 492 - Honors Education Service Project. Students must maintain an overall GPA of 3.0 or above and 3.25 in education courses through graduation.

EDH 491 - Education Research. Prerequisite: admission into the EEC Honors Program.

EDH 492 - Honors Education Service Project. Prerequisite: admission into the EEC Honors Program and completion of EHS 491.

## Admission and Program of Student Requirements

Admission and program of student requirements for all undergraduate degrees, majors, and concentrations may be located at <http://www.uab.edu/education/studentservices/admissions/checklists/undergraduate/bachelors>

## TEP Retention Requirements

A student may be dropped from the Teacher Education Program for failure to maintain satisfactory academic performance or professional dispositions as described by School of Education policy. Consistent with UAB policy on readmission, students readmitted to UAB must complete all program requirements, including TEP admissions and retention and completion requirements as outlined in the catalog under which they are officially readmitted.

1. Additional retention requirements by program:
  - a. Early Childhood/Elementary Education
    - i) Grade of "C" or better in all Pedagogy I courses and a GPA of 3.0 or higher in the Pedagogy I courses.
    - ii) Grade of "C" or better in all Pedagogy II courses and a GPA of 3.0 or higher in the Pedagogy II courses.

## Student Teaching Requirements

All students seeking baccalaureate degrees leading to teaching certificates must participate in a student teaching internship. All students must apply for student teaching by January 31 of the academic year that precedes student teaching. Applications are available online at the School of Education website, Office of Clinical Experiences. For additional information contact the Office of Clinical Experiences in Suite 232 of the Education Building.

To be eligible for this internship, students must have an approved student teaching application based on the following:

### Early Childhood/Elementary Education:

1. Formal admission to the Teacher Education Program (TEP).
2. Student teaching application approved by the faculty in the Early Childhood/Elementary program.
3. Minimum higher education GPA of 2.75.

4. Minimum GPA of 2.75 in core curriculum courses.
5. Minimum GPA of 2.75 in all Professional Studies courses.
6. Minimum GPA of 2.75 in all Teaching Field courses.
7. Completion of all methods courses, see Teaching Field for respective Checklist.
8. Passing score on all three parts of the Alabama Educator Certification Testing Program (AECAP).
9. Passing score on all parts of the Praxis II: Elementary Education Multiple Subjects .
10. Passing score on Praxis II: Early Childhood Content Knowledge.
11. Passing score on Praxis II: Teaching Reading.
12. Passing score on the edTPA.
13. Demonstration of the dispositions needed to be successful as a teacher of young children, including children with special needs.
14. Documentation of requisite field experience hours in schools.
15. Criminal history background check status shown as "cleared" on the Alabama State Department of Education database.

Students approved to teach in Early Childhood/Elementary Education must be concurrently enrolled in EEC 490 Internship in P-3/3-6 and EEC 491 Internship Seminar in P-6 Education. Students cannot take additional coursework besides these two courses during the term in which they student teach.

### Kinesiology: (Physical Education):

1. Formal admission to the Teacher Education Program (TEP).
2. Student teaching application approved by the faculty in the Kinesiology program.
3. Minimum higher education GPA of 2.75.
4. Minimum GPA of 2.75 in core curriculum courses.
5. Minimum GPA of 2.75 in all Professional Studies courses.
6. Minimum GPA of 2.75 in all Teaching Field courses.
7. Completion of all teaching field courses (KIN 307, KIN 308, KIN 311, KIN 320, KIN 320L, KIN 400, KIN 402, KIN 409, and KIN 489) with a grade of "C" or better.
8. Passing score on Praxis II: Physical Education P-12.
9. Passing score on the edTPA.
10. Demonstration of the dispositions needed to be successful as a teacher.
11. Documentation of the requisite field experience hours in schools.
12. Criminal history background check status shown as "cleared" on the Alabama State Department of Education database.

### High School and Middle School Education:

1. Formal admission to the Teacher Education Program (TEP).
2. Student teaching application approved by the faculty in the High School Education program.
3. Minimum higher education GPA of 2.75.
4. Minimum GPA of 2.75 in core curriculum courses.
5. Minimum GPA of 2.75 in all Professional Studies courses.
6. Minimum GPA of 2.75 in all Teaching Field courses.
7. Completion of all coursework. In some instances, a student may be allowed to take a teaching field course during the semester that immediately follows the student teaching semester. Students should regularly consult with their advisor to plan their program so that all teaching field courses are completed prior to student teaching.

8. Passing score on the appropriate Praxis II Subject Assessment.
9. Passing score on the edTPA.
10. Demonstration of the dispositions needed to be a successful teacher of middle and high school students, including students with special needs.
11. Documentation of requisite field experience hours in schools.
12. Criminal history background check status shown as "cleared" on the Alabama State Department of Education database.

Students approved to teach in Secondary Education must be concurrently enrolled in EHS 490 Secondary School Student Teaching I and EHS 489 Internship Seminar in Secondary Education. Students cannot take additional coursework besides these two courses during the term in which they student teach.

## TEP Completion and Certification Requirements

A student who satisfies TEP admission and retention requirements and who meets the following completion requirements will be recommended for "Class B" teacher certification. Students must apply for certification. Certification application packets are available on the School of Education-Office of Student Services website [www.uab.edu/soestudentservices](http://www.uab.edu/soestudentservices), and should be completed and returned to the Office of Student Services, Suite 232, Education Building during the semester of program completion.

1. Students must have a minimum 2.75 higher education GPA, 2.75 teaching field GPA, and 2.75 professional studies GPA with no grade below "C" in professional studies courses.
2. Students must complete all courses on the Alabama State Board of Education approved checklist for the teaching field(s) in which certification is sought.
3. Students must demonstrate readiness to teach through on-the-job performance as a student teacher. This evaluation is conducted by the School of Education faculty and appropriate personnel from local school systems.
4. Students must document a passing score on the Praxis I and all appropriate Praxis II and the edTPA. Official score reports must be sent to both UAB and the Alabama State Department of Education.
5. The Alabama State Department of Education has additional requirements for teacher certification. Included in these are fees associated with obtaining a certificate which are set by legislative action and may be changed. Students seeking initial certification are required to obtain background clearance to determine any criminal history through a fingerprint review conducted by the Alabama Bureau of Investigation (ABI) and the Federal Bureau of Investigation (FBI) prior to the issuance of a teaching certificate. A current application and fee payment for official transcripts are also required. Information on these requirements is available in the Office of Student Services, in EEC 311 in the Education and Engineering Complex, and is included in the certification application packet.

## Teacher Certification for Students who Hold a Baccalaureate Degree

There are several routes to teacher certification in the state of Alabama for those who already hold a baccalaureate degree. One option is to return to school to complete the current undergraduate coursework required for teacher certification. In general, individuals exercising this option are required to meet the same requirements for admission to,

retention in, and exit from the Teacher Education Program as indicated above. Additionally, these students are required to have a program plan approved by the department chair before enrolling in any courses. A second option is to pursue the Alternative Master's Program. Completion of this program and all its requirements leads to a master's degree in education and Alabama "Class A" teacher certification.

Additional information on these and other options may be found on the Alabama State Department of Education's web site ([www.alsde.edu](http://www.alsde.edu)) or by contacting The Office of Student Services.

## UABTeach

<http://www.uab.edu/uabteach/>

### Program Director

Dr. Paulette Evans  
UAB School of Education / Department of Curriculum and Instruction  
(205) 975-7419  
[pgevans@uab.edu](mailto:pgevans@uab.edu)

UABTeach is the program for all students seeking certification to teach secondary school (grades 6-12) in the sciences and mathematics, and in middle school mathematics (grades 4-8), with an undergraduate degree.

It is a cooperative program among the College of Arts and Sciences (CAS), the School of Education, and the School of Engineering. To obtain teaching certification in Chemistry, Biology, Physics, General Science, or Mathematics, students major in their STEM field (Science, Technology, Engineering, and Mathematics) and participate in the UABTeach program. UABTeach is not a major, but rather leads to a minor in STEM Education (through the School of Education) and a Class B teaching certificate. Students considering seeking teaching certification in a STEM field should contact both their STEM advisor and the UABTeach advisor (HHB 210, 205-975-9920, UABTeach).

UABTeach consists of a sequence of eight courses (24 credit hours), ideally taken over seven semesters as outlined below. Courses with an EHS prefix are normally taken in sequence. However, there are pathways for students entering UABTeach after the first semester of their freshman year, and up until the first semester of their junior year, described in detail on the UABTeach website, which allow some overlap of courses. Normally, students can complete the UABTeach courses without adding any additional time to their degree, provided they are on schedule in their STEM major, and have not already begun their junior year. Currently, UABTeach courses are offered only in Fall and Spring semesters.

- Semester 1: Step1, Inquiry Approaches to Teaching (EHS 125, 1 hour; also counts as First Year Experience course in CAS)
- Semester 2: Step2, Inquiry-Based Lesson Design (EHS 126, 1 hour)
- Semester 3: Knowing and Learning in Mathematics and Science (EHS 325, 3 hours)
- Semester 4: Perspectives on Science and Mathematics (HY 275) or Science, Knowledge, and Reality (PHL 270, 3 hours)
- Semester 5: Classroom Interactions (EHS 326, 3 hours)
- Semester 6: Project-Based Instruction (EHS 327, 3 hours)
- Semester 7: Apprentice Teaching (EHS 425 and EHS 426, 7 hours)

The following table lists the currently available certifications, and the majors leading to them, under UABTeach.

Class B Certification	Grade Level	Applicable Majors
Biology	6-12	Biology, Biomedical Engineering, Biomedical Sciences
Chemistry	6-12	Chemistry, Chemistry-Chemical Education Track
General Science	6-12	Biophysics, Materials Engineering, Mechanical Engineering, Neuroscience
Mathematics	6-12	Mathematics, Civil Engineering, Electrical Engineering, Computer Science
Mathematics, Middle School	4-8	Mathematics-Mathematical Reasoning Track
Physics	6-12	Physics
Computer Science	K-12	Mathematics

Students can begin the program in either fall or spring semesters. For more information, please visit the UABTeach website: <http://www.uab.edu/uabteach/>

## Minor in STEM (Science, Technology, Engineering, and Math) Education

The STEM Education Minor includes the same courses UABTeach students take to earn Alabama teacher certification. So UABTeach students can add a minor with no additional coursework and have an element of their academic transcript reflect the work they have done to prepare themselves for teaching. The STEM Education Minor also includes an elective pathway designed to allow UABTeach students who elect not to complete Apprentice Teaching (EHS 425) and their certification requirements to add education electives to bring their minor coursework up to the required minimum of 18 hours.

Requirements	Hours
<u>EHS 125</u> Inquiry Approaches to Teaching	1
<u>EHS 126</u> Step 2: Inquiry Based Lesson Designs	1
<u>EHS 325</u> Knowing and Learning in Mathematics and Science	3
<u>EHS 326</u> Classroom Interactions	3
<u>PHL 270</u> Science, Knowledge, and Reality	3
or <u>HY 275</u> Perspectives on Science & Mathematics	
<b>Teaching Courses</b>	
TEP Admission required before taking the following:	
<u>EHS 327</u> Problem-Based Instruction	3
<b>Internship</b>	
<u>EHS 425</u> Apprentice Teaching	6
<u>EHS 426</u> Apprentice Teaching Seminar	1
Total Hours	21

## EDU-Education Courses

### EDU 100. Touch the Future. 2-3 Hours.

Introduction to education for students with the intent to be teachers and students entering professions where a degree in education would be beneficial. Students own experiences will be used as input for developing habits of mind and dispositions necessary for success in the field of education. Required for entering freshmen education majors.

### EDU 200. Education as a Profession. 3 Hours.

Formal introduction to the Teacher Education Program (TEP). Using writing and discussion, the class provides a clear and realistic understanding of issues involved in choosing education as a career. Writing is a significant component of this course. Field experience required.

### EDU 210. Writing and Speaking Skills for the Education Professional. 3 Hours.

Development of essential writing and speaking skills required for successful education practice. Writing is a significant component of this course.

### EDU 300. Special Topics in Education. 3 Hours.

This course will focus on various topics currently trending in education.

### EDU 425. Stem Applications for the Classroom. 1 Hour.

This course will familiarize teacher candidates with STEM applications in the classroom, including state initiatives such as Alabama Math and Science Initiative (AMSTI).

### EDU 481. Student Teaching. 1-9 Hour.

Supervised teaching experience that includes individual mentoring and candidate support in meeting Alabama Educator Certification Assessment Program requirements.

## GEO-Geography Courses

### GEO 101. Intro to Geography. 3 Hours.

Basic concepts and principles underlying major research traditions of geography, including earth science, culture-environment, and location and area analysis.

### GEO 109. Intro to Urban Geography. 3 Hours.

External and internal spatial processes of cities and city systems with emphasis on contemporary urban problems.

### GEO 121. World Regional Geography. 3 Hours.

Modern worlds great culture realms using basic ideas and concepts in field of geography.

### GEO 221. Geography of North America. 3 Hours.

Nature and character of places, especially as caused by relationship between human beings and environment.

### GEO 304. Looking at Earth: Maps Satellite Images and GIS. 3 Hours.

Introduction to maps as analytic tools in the social behavioral, and applied sciences. Students are provided training in the theory and methods of cartographic representation, aerial and satellite image analysis and geographic information system. Equal weight will be placed on first principles, practical training in computer methods, and case studies selected from different regions of the earth.

**Prerequisites:** GEO 101 [Min Grade: C]

### GEO 415. Political Economy/Race in Bham. 3 Hours.

Critical analysis of race in the political economy of Birmingham from the postbellum period to the era of Civil Rights.

### GEO 491. Environmental Policy. 3 Hours.

Institutions, processes, actors and key issues in environmental policy.

## Department of Curriculum and Instruction

**Chair:** Steven L. Turner, Ph.D.

The Department of Curriculum and Instruction offers undergraduate programs leading to a B.S. degree and Alabama "Class B" certification in elementary education (grades K-6), early childhood/elementary education (grades Pre-K-6), and secondary education (grades 6-12). Teacher education programs are offered in conjunction with the College of Arts and Sciences in the following areas: music (choral and instrumental), science, and mathematics.

Students preparing to teach are expected to participate in a series of planned assignments in community and/or school settings both before and after admission to the Teacher Education Program. These opportunities to work with children and youth are designed to enhance the students' professional development and to supplement their campus coursework.

## Early Childhood Education - Non-Certification Program

***The Early Childhood Education Non-Certification Program has accepted its final cohort of students for fall 2019. The program is temporarily suspending admissions beginning spring term 2020.***

The early childhood education non-certification program is designed to prepare students to work in a variety of early care and educational settings serving children ages birth to five. Career options include but are not limited to childcare administration, childcare resource and referral, and teaching in preschool and Head Start classrooms. Students successfully completing the program will receive a baccalaureate degree in early childhood education. In addition to studying general child development content, students will learn the basics of planning, implementing, and evaluating early childhood programs. Professional preparation includes courses in child development, curriculum, instructional strategies, assessment, and technology. The program includes extensive field experiences in infant, toddler, and preschool classrooms.

There are two pathways to earning an early childhood non-certification bachelor's degree. One option, the 2+2 option, is designed for students who complete an Associate degree in child development at an Alabama community college. These students transfer to UAB and complete the second half of the early childhood education non-certification bachelor's degree program. Option two is for students who begin their post-secondary education at a four-year institution.

## Major in Early Childhood Education (Non-Certification)

Requirements	Hours
<b>Core Curriculum Requirements <sup>1</sup></b>	<b>41</b>
EH 101 English Composition I <sup>2</sup>	
EH 102 English Composition II <sup>2</sup>	
CMST 101 Public Speaking <sup>3</sup>	
PY 101 Introduction to Psychology <sup>4</sup>	

<b>Early Childhood Courses (Non-Certification) (Common to all in Major)</b>		
ECY 300	Survey of Special Education	3
ECE 320	Early Childhood Curriculum and Teaching	3
EEC 300	Child Development/Family Relationships	3
or ECE 334	Young Children: Family/School	
Expressive Arts		4
EEC 302	Expressive Arts (P-6)	
EEC 405	Children's Literature in Early Childhood and Elementary Education	3
or ECE 332	Literature for the Young Child	
EEC 415	Learning Environments through Positive Behavior Support	3
EPR 363	Foundations of Education II: Psychological	3
EDF 362	Foundations of Education I: Social, Historical, Philosophical	3
Health and Physical Education		3
<b>Early Childhood Non-Certification Concentration (Track)</b>		
EEC 301	Introduction to P-6 Education	3
ECE 347	Language Experiences for the Young Child	3
ECE 410	Organize Programs: Young Children	3
ECE 445	Young Children: Math/Science/Social Studies	6
ECE 446	Communication Arts/Reading: Young Child	6
ECE 448	Infant/Toddler Development	3
ECE 449	Education Environment: Infant/Parent	3
ECE 492	Family Engagement and Home Visitation Curriculum Projects	3
ECE 494	Field Work in Early Childhood Education	3
ECE 460	Current Topics in Early Childhood Education Assessment	3
KIN 305	Motor Development	3
ECE 390	Practicum in Early Childhood Education	3
ECE 490	Student Teaching in Early Childhood Education I	9
Total Hours		120

A minimum of 120 hours are required for graduation. Students may need to take general electives to reach the credit hour requirement. Elective hours may vary based on course selection.

- <sup>1</sup> Core Curriculum requirements
- <sup>2</sup> Course listed may also fulfill Core Curriculum Area I.
- <sup>3</sup> Course listed may also satisfy Core Area II Humanities
- <sup>4</sup> Course may also satisfy Core Area IV: Social & Behavioral Science

## Early Childhood Education-Teacher Certification

<b>Requirements</b>		<b>Hours</b>
<b>Core Curriculum</b> <sup>1,2,3</sup>		<b>41</b>
EH 101	English Composition I	
EH 102	English Composition II	
CMST 101	Public Speaking	
Select Biology for One Core Area III		
PY 101	Introduction to Psychology	
<b>Additional Math Requirement</b>		
MA 313	Patterns, Functions and Algebraic Reasoning	3
MA 314	Geometric and Proportional Reasoning	3
MA 316	Numerical Reasoning	3

### Internship

ECE 490	Student Teaching in Early Childhood Education I	9
EEC 491	Internship Seminar in P-6 Education	1-3

### Professional Studies

CHHS 200	Quality of Life	2
EDU 200	Education as a Profession	3
ECY 300	Survey of Special Education	3
EDF 362	Foundations of Education I: Social, Historical, Philosophical	3
EPR 363	Foundations of Education II: Psychological	3
KIN 301	Teaching Health Education and Physical Education in Elementary Schools	3

### Teaching Field Courses

<b>Pre-TEP Courses</b>		
EEC 300	Child Development/Family Relationships	3-4
EEC 301	Introduction to P-6 Education	3
EEC 302	Expressive Arts (P-6)	1
EEC 405	Children's Literature in Early Childhood and Elementary Education	3
ECE 410	Organize Programs: Young Children	3
EEC 415	Learning Environments through Positive Behavior Support	1-3

### The following require admission to TEP before they may be taken:

ECE 320	Early Childhood Curriculum and Teaching	3
ECE 331	Creative Learning Expression: Young Child	1-3
ECE 332	Literature for the Young Child	3
ECE 460	Current Topics in Early Childhood Education Assessment	3
EDR 440	Developmental Reading I	3
EEC 402	Primary Math Methods	3
EEC 406	Language Arts in Early Childhood and Elementary Education	3
ECE 445	Young Children: Math/Science/Social Studies	3-6
EEC 440	Workshop in Education: Strategies for English Learners	1-6
ECE 494	Field Work in Early Childhood Education	3-4
Total Hours		117-133

- <sup>1</sup> A minimum of 120 hours are required to complete a baccalaureate degree some students may need to take general electives to meet the minimum credit hour requirement.
- <sup>2</sup> Prospective and admitted students should **not** begin any coursework without seeking advisement from the Office of Student Services (205) 934-7530 each term. Students who ignore this admonition assume responsibility for their own mistakes.
- <sup>3</sup> Each semester a student enrolls in a pedagogy course (EDR 440, EEC 402, EEC 406, ECE 320, ECE 331, ECE 460, ECE 410) and also enroll for two hours of EEC 494 Field Work in Early Childhood and Elementary Education for a maximum of 8 hours.

## Elementary Education

Students successfully completing the program and all requirements outlined below will receive a baccalaureate degree and be eligible for Alabama "Class B" professional teaching certificates in elementary education (grades K-6).

Professional preparation includes courses in humanistic and behavioral studies, elementary education, curriculum and teaching, evaluation of teaching and learning, extensive pre-internship field experiences in K-6 settings, and an internship. Students must work closely with their faculty

advisor for appropriate selection of courses in each area of general and professional studies.

## Major in Elementary Education

Requirements		Hours
<b>Core Curriculum Requirements</b> <sup>1</sup>		<b>41</b>
EH 101	English Composition I <sup>2</sup>	
EH 102	English Composition II <sup>2</sup>	
CMST 101	Public Speaking <sup>3</sup>	
Select Biology for one Core Area III <sup>4</sup>		
PY 101	Introduction to Psychology <sup>5</sup>	
<b>Additional Elementary Education Requirements</b>		
MA 313	Patterns, Functions and Algebraic Reasoning	3
Select 1 Additional Core Lab Science <sup>6</sup>		4
Select two additional math courses at 100-level or higher (MA 314 and MA 316 preferred)		6
<b>Professional Studies</b>		
CHHS 200	Quality of Life	2
EDU 200	Education as a Profession	3
ECY 300	Survey of Special Education	3
EDF 362	Foundations of Education I: Social, Historical, Philosophical	3
EPR 363	Foundations of Education II: Psychological	3
Internship <sup>7</sup>		10
EEC 490	Internship in P-3/3-6	
EEC 491	Internship Seminar in P-6 Education	
Teaching Field		
EEC 300	Child Development/Family Relationships	3
EEC 301	Introduction to P-6 Education	3
KIN 301	Teaching Health Education and Physical Education in Elementary Schools	3
EEC 302	Expressive Arts (P-6)	1
EEC 405	Children's Literature in Early Childhood and Elementary Education	3
EPR 410	Measurement and Evaluation in Education	3
EEC 415	Learning Environments through Positive Behavior Support	3
These courses require TEP admission before they can be taken:		
EDR 440	Developmental Reading I	3
EEC 402	Primary Math Methods	3
EEC 406	Language Arts in Early Childhood and Elementary Education	3
EEC 412	Math in Early Childhood and Elementary Education	3
EEC 413	Science in Early Childhood and Elementary Education	3
EEC 414	Social Studies in Early Childhood and Elementary Education	3
EEC 440	Workshop in Education: Strategies for English Learners	3
EDR 443	Developmental Reading II	3
Fieldwork in Education <sup>8</sup>		4-8
EEC 494	Field Work in Early Childhood and Elementary Education	
Total Hours		125-129

A minimum of 120 hours are required for graduation. Students may need to take general electives to reach the credit hour requirement. Elective hours may vary based on course selection.

- <sup>1</sup> Core Curriculum requirements
- <sup>2</sup> Fulfills a Core Area I: Composition requirement.
- <sup>3</sup> Fulfills Core Area II: Humanities requirement.
- <sup>4</sup> Fulfills Core Area III: Natural Science requirement.
- <sup>5</sup> Fulfills a Core Area IV: Social Behavioral Science requirement.
- <sup>6</sup> May NOT be used to fulfill a Core Area III: Natural Science, but is required in addition to the core. Select from AST 101/AST 111, AST 102/AST 112, AST 103/AST 113, AST 105/AST 115, BY 101/BY 102, BY 111/BY 112, BY 123, BY 124, CH 105/CH 106, CH 107/CH 108, CH 115/CH 116, CH 117/CH 118, ENV 108/ENV 109, ES 101/ES 102, ES 103/ES 104, PH 201, PH 202, PH 221, PH 222, PHS 101.
- <sup>7</sup> Internship courses must be taken AFTER admission to TEP
- <sup>8</sup> Each semester a student enrolls in a pedagogy course (EDR 440, EDR 443, EEC 402, EEC 406, EEC 412, EEC 413, EEC 414, EEC 440) he or she must also enroll for two hours of EEC 494 Fieldwork in Education for a maximum of 8 hours.

## Early Childhood and Elementary Education (Teacher Certification Program)

The early childhood/elementary education program is designed as a double major program. Students successfully completing the program and all requirements outlined below will receive a baccalaureate degree and be eligible for Alabama "Class B" professional teaching certificates in early childhood education (grades P-3) and elementary education (grades K-6).

Professional preparation includes courses in humanistic and behavioral studies, early childhood education, elementary education, curriculum and teaching, evaluation of teaching and learning, extensive pre-internship field experiences in P-6 settings, and an internship. Students must work closely with their faculty advisor for appropriate selection of courses in each area of general and professional studies.

## Early Childhood & Elementary Education Teacher Certification

Requirements		Hours
<b>Core Curriculum Requirements</b> <sup>1</sup>		<b>41</b>
EH 101	English Composition I <sup>2</sup>	
EH 102	English Composition II <sup>2</sup>	
CMST 101	Public Speaking <sup>3</sup>	
Select Biology for one Core Area III <sup>4</sup>		
PY 101 <sup>5</sup>		
<b>Additional Math &amp; Science</b>		
Select 1 Additional Core Lab Science <sup>6</sup>		4
MA 313	Patterns, Functions and Algebraic Reasoning	3
Select two additional math courses at 100-level or higher (MA 314 and MA 316 preferred)		6
<b>Professional Studies</b>		
CHHS 200	Quality of Life	2
EDU 200	Education as a Profession	3
ECY 300	Survey of Special Education	3
EDF 362	Foundations of Education I: Social, Historical, Philosophical	3
EPR 363	Foundations of Education II: Psychological	3
Internship <sup>7</sup>		13

ECE 490	Student Teaching in Early Childhood Education I	
EEC 491	Internship Seminar in P-6 Education	
ECE 491	Student Teaching in Early Childhood Education II	
<b>Teaching Field</b>		
EEC 300	Child Development/Family Relationships	3
EEC 301	Introduction to P-6 Education	3
KIN 301	Teaching Health Education and Physical Education in Elementary Schools	3
EEC 302	Expressive Arts (P-6)	1
EEC 405	Children's Literature in Early Childhood and Elementary Education	3
EPR 410	Measurement and Evaluation in Education	3
EEC 415	Learning Environments through Positive Behavior Support	3
These courses require TEP admission before they may be taken:		
ECE 320	Early Childhood Curriculum and Teaching	3
ECE 331	Creative Learning Expression: Young Child	1
ECE 460	Current Topics in Early Childhood Education Assessment	3
EDR 440	Developmental Reading I	3
EEC 402	Primary Math Methods	3
EEC 406	Language Arts in Early Childhood and Elementary Education	3
EEC 412	Math in Early Childhood and Elementary Education	3
EEC 413	Science in Early Childhood and Elementary Education	3
EEC 414	Social Studies in Early Childhood and Elementary Education	3
EEC 440	Workshop in Education: Strategies for English Learners	3
EDR 443	Developmental Reading II	3
<b>Fieldwork in Education<sup>8</sup></b>		<b>4-8</b>
EEC 494	Field Work in Early Childhood and Elementary Education	
Total Hours		135-139

A minimum of 120 hours are required for graduation. Students may need to take general electives to reach the credit hour requirement. Elective hours may vary based on course selection

<sup>1</sup> Core Curriculum requirements

<sup>2</sup> Fulfills a Core Area I: Composition requirement.

<sup>3</sup> Fulfills Core Area II: Humanities requirement.

<sup>4</sup> Fulfills Core Area III: Natural Science requirement.

<sup>5</sup> Fulfills a Core Area IV: Social Behavioral Science requirement.

<sup>6</sup> May NOT be used to fulfill a Core Area III: Natural Science, but is required in addition to the core. Select from AST 101/AST 111, AST 102/AST 112, AST 103/AST 113, AST 105/AST 115, BY 101/BY 102, BY 111/BY 112, BY 123, BY 124, CH 105/CH 106, CH 107/CH 108, CH 115/CH 116, CH 117/CH 118, ENV 108/ENV 109, ES 101/ES 102, ES 103/ES 104, PH 201, PH 202, PH 221, PH 222, PHS 101.

<sup>7</sup> Internship courses must be taken AFTER admission to TEP.

<sup>8</sup> Each semester a student enrolls in a pedagogy course (EDR 440, EDR 443, EEC 402, EEC 406, EEC 412, EEC 413, EEC 414, EEC 440) he or she must also enroll for two hours of EEC 494 Fieldwork in Education for a maximum of 8 hours.

## Middle School Education

A program in middle grades mathematics (grades 4-8) is offered in conjunction with the College of Arts and Sciences. Students following this program must meet TEP entrance, retention, and completion requirements as outlined in previous sections in order to be recommended for Alabama teacher certification. Students seeking certification in middle grades mathematics should complete the Mathematical Reasoning track of the Mathematics major within the Department of Mathematics (See Catalog). For education course requirements, contact the Office of Student Services (934-7530), within the School of Education, for the current checklist. This program is a part of the **UABTeach Program**. For more information on UABTeach contact [Paulette Evans at pgevans@uab.edu](mailto:Paulette.Evans@uab.edu) ([Imeadows@uab.edu](mailto:Imeadows@uab.edu)) or visit the website at [www.uab.edu/uabteach](http://www.uab.edu/uabteach).

## Arts Education with a Concentration in Music (Instrumental and Vocal/Choral)

Programs leading to grades (P-12) certification in music (instrumental and vocal/choral) are offered in conjunction with the Department of Music within the College of Arts and Sciences. Candidates obtain a major in music and should seek advising on music courses from their music/CAS advisors. Candidates also complete a series of education courses leading to teacher certification and should seek advising related to teacher certification from the **Office of Student Services, Education Building, Suite #232, Phone: (205) 934-7530**. Candidates must meet all requirements for admission to the Teacher Education Program (TEP) and complete all requirements (such as state mandated tests) leading to teacher certification. Students should consult with their education advisor once per term and also with a content advisor in CAS to insure they stay on track for all requirements.

## High School Education

Secondary education has programs leading to teacher certification in biology, chemistry, physics, general science, English language arts, general social science, mathematics, and music education as described below.

Secondary education offers a major in secondary education and certification for grades 6-12 in English language arts (ELA) and in general social science (GSS). Candidates obtaining certification in these two teaching fields must either have an academic major (in English for ELA or in history for GSS) or meet the highly qualified condition specified by the Alabama State Department of Education (ALSDE). Because of teacher certification requirements, content coursework may slightly differ from those courses required of traditional English or history majors. Thus, candidates should follow the appropriate program checklist assigned by the Office of Student Services within the School of Education to insure that they meet certification requirements. Although an academic major in English or history may be built into the certification checklists, candidates should seek advising for these content majors from College of Arts and Science (CAS) advisors to insure they meet all current degree requirements for either English or history. Students who complete requirements for both an academic major and an education major will receive a single degree with both majors listed.

Due to ALSDE regulations for teachers, Core Curriculum requirements for education majors are more specific than Core Curriculum requirements for academic majors. Students should seek advising and obtain a program checklist from the **Office of Student Services, Education Building, Suite #232, Phone: (205) 934-7530**. Students should also

consult with their education advisor once per term and also with a content advisor in CAS to insure they stay on track for all requirements.

## Bachelor of Science with a Major in High School Education/English Language Arts

This curriculum results in a major in secondary education with teacher certification in English language arts.

### Major in High School Education - English

Requirements		Hours
<b>Core Curriculum Requirements <sup>1</sup></b>		<b>41</b>
EH 101	English Composition I <sup>2</sup>	
EH 102	English Composition II <sup>2</sup>	
CMST 101	Public Speaking <sup>3</sup>	
THR 100	Introduction to the Theatre <sup>4</sup>	
EH 221	British and Irish Literature I: Before 1800 <sup>3</sup>	
EH 222	British and Irish Literature II: 1800-Present <sup>3</sup>	
PY 101	Introduction to Psychology <sup>5</sup>	
<b>Additional English Language Arts Requirements</b>		
EH 217	World Literature I: Before 1660	3
or EH 218	World Literature II: 1660-Present	
EH 223	American Literature I: Before 1865	3
or EH 224	American Literature II: 1865-Present	
CMST 103	History of Mass Media	3
CMST 210	Media Writing	3
<b>Major in High School Education</b>		
<b>Foundations &amp; Professional Studies</b>		
CHHS 200	Quality of Life	2
EDU 200	Education as a Profession	3
EDF 362	Foundations of Education I: Social, Historical, Philosophical	3
EPR 363	Foundations of Education II: Psychological	3
<b>Secondary Education Courses (requires TEP admission)</b>		
EHS 436	Methods I: English Language Arts, 6-12	3
EHS 430	Practicum	1
ECY 300	Survey of Special Education	3
EHS 466	Methods II: Language Arts 6-12	3
EHS 470	Practicum II	1
EPR 411	Measurement and Evaluation in Education	3
EHS 456	Classroom Management in Secondary Schools	3
EHS 497	Special Problems in Education	3
EDR 442	Reading in Content Areas	3
<b>Internship <sup>6</sup></b>		
EHS 490	Secondary School Student Teaching I	6
EHS 489	Internship Seminar in Secondary Education	1
<b>Major in English Literature</b>		
Teaching field courses previously listed		
EH 101	English Composition I	
EH 102	English Composition II	
CMST 101	Public Speaking	
THR 100	Introduction to the Theatre	
EH 221	British and Irish Literature I: Before 1800	
EH 222	British and Irish Literature II: 1800-Present	
EH 217	World Literature I: Before 1660	
or EH 218	World Literature II: 1660-Present	
EH 223	American Literature I: Before 1865	

EH 224	American Literature II: 1865-Present	
CMST 103	History of Mass Media	
CMST 210	Media Writing	
<b>Writing</b>		
EH 301	Reading, Writing, and Research for Literature Classes	3
<b>Professional Writing/Technical Writing:</b>		<b>6</b>
Select two from the following at least one with an asterisk:		
EH 401	Tutoring Writing	
EH 402	Writing in Popular Periodicals	
EH 403	Business Writing *	
EH 404	Technical Writing *	
EH 430	Professional Writing: Special Topics	
EH 433	Academic Writing	
<b>Language Linguistics &amp; grammar</b>		
EH 350	Introduction to Linguistics	3
or EH 351	Structure of English	
EH 452	Grammar and Usage for English Teachers	3
<b>Literature: Shakespeare</b>		
EH 476	Shakespeare	3
<b>Young Adult Literature</b>		
EDR 441	Literature for Adolescents	3
or EH 419	Young Adult Literature	
<b>African-American Literature/Multicultural Literature</b>		<b>3</b>
Select any three credit hour course from the following:		
EH 365	African American Literature, 1746-1954	
EH 366	African American Literature, 1954-Present	
EH 422	African Literature	
EH 423	African Women's Literature	
EH 424	African-American Special Topics	
EH 447	African American Dramatic Tradition	
EH 448	African American Poetry Tradition	
EH 466	The Slave Narrative and Its Literary Expressions	
EH 467	Black Women Writers	
EH 468	The Harlem Renaissance	
<b>Other Literature Courses</b>		<b>3</b>
<b>Pre-1800 Literature</b>		
Select any three hour course from the following:		
American Literature		
EH 461	American Literature, 1620 - 1820	
British Literature		
EH 469	Medieval Culture: Literature and Society	
EH 470	Arthurian Legend	
EH 471	Beowulf in Context	
EH 473	Chaucer: Pilgrimage to Canterbury	
EH 474	English Renaissance Drama (Excluding Shakespeare)	
EH 475	English Renaissance Poetry and Prose	
EH 478	Milton	
<b>Post-1800 Literature</b>		<b>3</b>
Select any three credit hour course from the following:		
American Literature		
EH 416	Modern American Poetry	
EH 442	Literary Theory and Criticism, the Twentieth Century to the Present	
EH 444	Women's Literature and Theory	
EH 460	American Women Writers Before 1900	
EH 462	American Literature, 1820 - 1870	
EH 463	American Literature, 1870 - 1914	

EH 464	American Literature, 1914 - 1945	
EH 465	American Literature, 1945-Present	
British Literature		
EH 414	Modern British and European Drama	
EH 481	The Eighteenth Century: Literature and Culture	
EH 482	The Eighteenth Century: Theory and Interpretation	
EH 483	British Romanticism	
EH 486	Eighteenth-Century British Novel	
EH 487	Nineteenth-Century British Novel	
EH 488	British Novel: The Modern Age	
EH 489	James Joyce	
<b>Capstone Requirement</b>		<b>3</b>
Take a 400-level English course as approved by your advisor.		
Total Hours		127

A minimum of 120 hours are required for graduation. Students may need to take general electives to reach the credit hour requirement. Elective hours may vary based on course selection.

- <sup>1</sup> [Core Curriculum](#) requirements
- <sup>2</sup> Fulfills a Core Curriculum Area I: Composition requirement.
- <sup>3</sup> Fulfills a Core Curriculum Area II requirement.
- <sup>4</sup> Fulfills a Core Curriculum Area II: Fine Art requirement
- <sup>5</sup> Fulfills a Core Curriculum Area IV: Social & Behavioral Science requirement.
- <sup>6</sup> Internship courses must be taken AFTER admission to TEP.

## Bachelor of Science with a Major in High School Education/General Social Science

This curriculum results in a major in secondary education, with teacher certification in general social science. A history major may also be obtained by completing requirements specific to that major.

### High School Education/General Social Science Major

Requirements	Hours
<b>Core Curriculum Requirements</b> <sup>1</sup>	<b>41</b>
EH 101 English Composition I <sup>2</sup>	
EH 102 English Composition II <sup>2</sup>	
CMST 101 Public Speaking <sup>3</sup>	
HY 101 Western Civilization I <sup>4</sup>	
HY 102 Western Civilization II <sup>4</sup>	
PY 101 Introduction to Psychology <sup>5</sup>	
GEO 121 World Regional Geography <sup>5</sup>	
<b>Additional Social &amp; Behavioral Science</b>	
HY 120 The United States To 1877	3
HY 121 The United States Since 1877	3
SOC 100 Introduction to Sociology	3
GEO 221 Geography of North America	3
PSC 101 Foundations of American Government	3
PSC 221 American State and Local Government	3
<b>Major in High School Education</b>	
<b>Foundations &amp; Professional Studies</b>	
CHHS 200 Quality of Life	2
EDU 200 Education as a Profession	3

EDF 362	Foundations of Education I: Social, Historical, Philosophical	3
EPR 363	Foundations of Education II: Psychological	3
<b>Secondary Educaiton Courses (Requires admission to TEP)</b>		
EHS 438	Methods I: Social Science, 6-12	3
EHS 430	Practicum	1
ECY 300	Survey of Special Education	3
EHS 468	Methods II: Social Science 6-12	3
EHS 470	Practicum II	1
EPR 411	Measurement and Evaluation in Education	3
EHS 456	Classroom Management in Secondary Schools	3
EHS 497	Special Problems in Education	3
EDR 442	Reading in Content Areas	3
<b>Internship</b> <sup>6</sup>		
EHS 490	Secondary School Student Teaching I	6
EHS 489	Internship Seminar in Secondary Education	1
<b>Major in History</b>		
Teaching field courses previously listed under Core Curriculum		
HY 101	Western Civilization I	
HY 102	Western Civilization II	
HY 120	The United States To 1877	
HY 121	The United States Since 1877	
PY 101	Introduction to Psychology	
GEO 121	World Regional Geography	
SOC 100	Introduction to Sociology	
PSC 101	Foundations of American Government	
GEO 221	Geography of North America	
PSC 221	American State and Local Government	
<b>Additional Teaching Field Courses</b>		
HY 225	History of Alabama	3
HY 300	The Historian's Craft	3
Non-Western History <sup>7</sup>		3
HY 497	History Capstone	3
HY 300-400 Level Electives <sup>8</sup>		15
EC 440	Economics for Educators	3
Total Hours		130

A minimum of 120 hours are required for graduation. Students may need to take general electives to reach the credit hour requirement. Elective hours may vary based on course selection.

**For other history courses see the current checklist in the Offices of Student Services within the School of Education. See the requirements for a history major within the catalog listings for the College of Arts and Sciences. You should confer with advisors in Education and CAS about specific history requirements. Students seeking teacher certification may have more specific requirements than non-certification students.**

- <sup>1</sup> [Core Curriculum](#) requirements
- <sup>2</sup> Fulfills a Core Curriculum Area I: Composition requirement
- <sup>3</sup> Fulfills a Core Curriculum Area II: Humanities requirement.
- <sup>4</sup> Fulfills a Core Curriculum Area IV: History requirement
- <sup>5</sup> Fulfills a Core Curriculum Area IV: Social & Behavioral Science requirement
- <sup>6</sup> Internship courses much be taken AFTER admission to TEP

<sup>7</sup> Please consult your academic advisor for this requirement.

<sup>8</sup> At least 9 hours of history electives must be at the 400-level.

## High School Education – All Areas of Science and Mathematics

Programs leading to grades (6-12) certification in biology, chemistry, physics, general science, and mathematics are offered in conjunction with the College of Arts and Sciences and the School of Engineering as part of the **UABTeach program**. The **UABTeach** program is an innovative program modeled after the national UTeach program developed at the University of Texas at Austin. The aim of this program is to produce well prepared teachers of mathematics and the sciences within a 4-year period and to increase the number of teachers in the STEM (science, technology, engineering, and mathematics) disciplines. The **UABTeach** program requires a major in an academic field such as biology, chemistry, engineering, mathematics, etc. The program requires several innovative and intensive education courses aimed at preparing teachers for grades 6-12 and leading to Class B teacher certification. The academic majors are housed within the appropriate departments within the College of Arts and Sciences and the School of Engineering. Students should contact their CAS or Engineering advisors for advising on their major. Information on the Education components of the program can be found by contacting the **Office of Student Services, Education Building, Suite #232, Phone: (205) 934-7530**. For more information contact **Paulette Evans** at [pgevens@uab.edu](mailto:pgevens@uab.edu) (%20lmeadows@uab.edu) or visit the website at [www.uab.edu/uabteach](http://www.uab.edu/uabteach).

## Bachelor of Science with a Major in High School Education/ Mathematics, Biology, Chemistry, General Science, Physics

UAB offers certification in grades 6-12 for Mathematics, Biology, Chemistry, General Science, and Physics through the **UABTeach** program. Students in STEM majors in the College of Arts and Sciences and the School of Engineering may seek teacher certification in an appropriate field listed above. Students majoring in computer science or engineering should contact **Dr. Lee Meadows** ([lmeadows@uab.edu](mailto:lmeadows@uab.edu)), (205) 975-7424, or visit the website at [www.uab.edu/uabteach](http://www.uab.edu/uabteach), for guidance in selecting a certification area.

## Core Curriculum Mathematics, Biology, Chemistry, General Science, Physics

Students should follow the core curriculum for their STEM major. See the catalog for majors in CAS and Engineering and speak with an advisor in these programs.

## Major Requirements Mathematics, Biology, Chemistry, General Science, Physics

Students should follow the curriculum prescribed for their STEM major.

See the catalog for majors in CAS and Engineering and speak with an advisor in these programs.

## Requirements in Education and the UABTeach Program Leading to Teacher Certification

Requirements	Hours
<b>Foundational Courses</b> (These courses are required for admission to TEP)	
EHS 125 Inquiry Approaches to Teaching	1

EHS 126	Step 2: Inquiry Based Lesson Designs	1
EHS 325	Knowing and Learning in Mathematics and Science	3

### Advanced Courses in Education (Must be admitted to TEP prior to taking these courses)

EHS 326	Classroom Interactions	3
EHS 327	Problem-Based Instruction	3
EHS 425	Apprentice Teaching	6
EHS 426	Apprentice Teaching Seminar	1

### Other UABTeach Courses

HY 275	Perspectives on Science & Mathematics	3
BY 492	Biology Capstone - Undergraduate Research <sup>1</sup>	4
or CH 492	Research Methods	
or PH 494	Research Methods in Physics	
MA 361	Mathematical Modeling <sup>2</sup>	3
Total Hours		28

<sup>1</sup> Required for students getting certified in an area of Science. May be used as an elective for those seeking certification in Mathematics.

<sup>2</sup> Required for students getting certified in Mathematics. May be used as an elective for those seeking certification in an area of Science.

## Proposed Program of Study in Early Childhood and Elementary Education

### Freshman

First Term	HourSecond Term	Hours
EDU 100	2 EH 102 or 107	3
EH 101 or 106	3 CMST 101	3
BY 101 & BY 102	4 MA 313	3
MA 110 (or Core Curriculum Area III: Mathematics)	3 PY 101	3
Core Area II: Fine Art	3 Core Area II: Humanities or Fine Arts	3
Core Area IV: Social Science <sup>Non-History</sup>	3 Core Area IV: History	3
	18	18

### Sophomore

First Term	HourSecond Term	Hours
EDU 200	3 EDF 362	3
ECY 300	3 Math Elective <sup>MA 314 or MA 316 Preferred</sup>	3
Core Area IV: History	3 EEC 300	3
Core Area III: Science with Laboratory <sup>Non-Biology</sup>	4 Core Area II: Literature	3
Math Elective <sup>MA 314 or MA 316 Preferred</sup>	3 EEC 415	3
CHHS 200	2 EEC 405	3
	18	18

### Junior

First Term	HourSecond Term	Hours
EPR 363	3 EEC 402	3
EPR 410	3 EEC 440	3
EEC 301	3 EEC 406	3
KIN 301	3 EDR 440	3
Core Area III: Science with Laboratory	4 EEC 494	2
EEC 302	1	
	17	14

Senior			
First Term	Hours	Second Term	Hours
EDR 443	3	EEC 490	9
EEC 412	3	EEC 491	1
EEC 413	3		ECE 460
EEC 414	3		ECE 491
EEC 494	2		
	14	10	10-18
Total credit hours: 137-145			

## Proposed Program of Study in Elementary

Freshman			
First Term	Hours	Second Term	Hours
EDU 100	2-3	EH 102	3
EH 101		3 CMST 101	3
BY 101		4 MA 313	3
& BY 102			
MA 110		3 PY 101	3
Core Area II: Fine Art		3 Core Area II: Humanities & Fine Arts	3
Core Area IV: Social Science <sup>Non-History</sup>		3 Core Area IV: History	3
	18-19		18

Sophomore			
First Term	Hours	Second Term	Hours
EDU 200		3 EDF 362	3
ECY 300		3 MA Elective <sup>MA 314 or MA 316 Preferred</sup>	3
Core Area IV: History		3 EEC 300	3-4
Core Area III: Science with Laboratory <sup>Non-Biology</sup>		4 Core Area II: Literature	3
MA Elective <sup>MA 314 or MA 316 Preferred</sup>		3 EEC 415	1-3
CHHS 200		2 EEC 405	3
	18		16-19

Junior			
First Term	Hours	Second Term	Hours
EPR 363		3 EEC 402	3
EPR 410		3 EEC 440	1-6
EEC 301		3 EEC 406	3
Core Area III: Science with Laboratory		4 EDR 440	3
KIN 301		3 EEC 494	2
EEC 302		1	
	17		12-17

Senior			
First Term	Hours	Second Term	Hours
EDR 443		3 EEC 490	9
EEC 412		3 EEC 491	1-3
EEC 413		3	
EEC 414		3	
EEC 494		2	
	14		10-12

Total credit hours: 123-134

## Proposed Program of Study in Early Childhood (Non-Certification)

Freshman			
First Term	Hours	Second Term	Hours
EDU 100	2-3	EH 102 or 107	3
EH 101 or 106		3 CMST 101	3
Core Area III: Math		3 Core Area II: Humanities or Fine Art	3
Core Area III: Science with Laboratory		4 Core Area IV: Social Science <sup>Non-History</sup>	
Core Area II: Fine Art		3 Core Area II: Science with Laboratory	4
	15-16		13

Sophomore			
First Term	Hours	Second Term	Hours
Core Area II: Literature		3 Core Area IV: History or Social Science	3
ECY 300		3 EEC 300	3-4
Core Area IV: Social Science		3 EDF 362	3
Core Area IV: History		3 KIN 301	3
EEC 301		3 EPR 363	3
	15		15-16

Junior			
First Term	Hours	Second Term	Hours
ECE 448		3 ECE 460	3
ECE 449		3 ECE 445	3-6
EEC 415		1-3 KIN 305	3
EEC 302		1 EEC 405	3
ECE 347		3	
	11-13		12-15

Senior			
First Term	Hours	Second Term	Hours
ECE 492		3 ECE 490	9
ECE 494		2-4 ECE 390	1-6
ECE 446		3-6 EEC 440	1-6
ECE 410		3	
	11-16		11-21

Total credit hours: 103-125

## Proposed Program of Study in Music Education (Instrumental)

Freshman			
First Term	Hours	Second Term	Hours
CAS 112	1	EH 102 or 107	3
		3 Core Area III: Science with Laboratory	4
EH 106 or 107		3 Core Area III: Math <sup>MA 105/110 or Higher</sup>	3
		3 Core Area IV: Social Science <sup>SOC 100, ANTH 101, or GEO 121</sup>	
CMST 101	3	MU 115	3
MU 120	3	MUP 122	1
MU 224	1	MU 222	3
MUP 001	0	MU 225	1
Applied Lessons	2	MUP 001	0
Ensemble	1	Applied Lessons	2
		Ensemble	1
	14		17

7

**Sophomore**

First Term	Hours	Second Term	Hours	Summer Term	Hours
EDU 200	3	PY 101	3	Core Area III: Science with Laboratory	4
EDF 362	3	EPR 363	3	Core Area II: Literature	2
MU 321	3	MU 322	3		
MU 324	1	MU 325	1		
MUP 132	1	MUP 134	1		
MUP 136	1	MU 366	2-3		
MUP 125	0	MUP 001	0		
MUP 001	0	Applied Lessons	2		
Applied Lessons	2	Ensemble	1		
Ensemble	1				
	15		16-17		6

**Junior**

First Term	Hours	Second Term	Hours	Summer Term	Hours
Core Area IV: History	3	MU 433	3	Core Area II: Fine Arts	3
MU 431	3	ECY 300	3	Core Area IV: Elective	3
EDR 421	1	MU 429	2		
MU 329	2	MU 472	3		
MU 471	3	MUP 001	0		
MUP 138	1	Applied Lessons	2		
MUP 001	0	Ensemble	1		
Applied Lessons	2				
Ensemble	1				
	16		14		6

**Senior**

First Term	Hours	Second Term	Hours
MU 463	3	EMU 490	6-9
EPR 411	3	EMU 499	1-3
EHS 497	3		
MUP 001	0		
Applied Lessons	2		
Ensemble	1		
	12		7-12

Total credit hours: 130-136

## Proposed Program of Study in Music Education (Choral)

**Freshman**

First Term	Hours	Second Term	Hours	Summer Term	Hours
CAS 112	1	EH 102 or 107	3	Core Area III: Science with Laboratory	4
EH 101 or 106	3	Area III: Math <sup>MA</sup> 105/110 or Higher	3	Core Area IV: Social Science <sup>SOC 100, ANTH 101, or GEO 121</sup>	3
CMST 101	3	MU 115	3		
MU 120	3	MU 222	3		
MU 221	3	MU 225	1		
MU 224	1	MUP 001	0		
MUP 001	0	Applied Lessons	2		
Applied Lessons	2	Ensemble	1		
Ensemble	1				
	17		16		7

**Sophomore**

First Term	Hours	Second Term	Hours	Summer Term	Hours
EDU 200	3	PY 101	3	Core Area III: Science with Laboratory	4
EDF 362	3	EPR 363	3	Core Area II: Literature	3
MU 321	3	MU 322	3		
MUP 132	1	MU 325	1		

MUP 136	1	MUP 134	1
MUP 125	0	MU 366	2-3
MUP 001	0	MUP 001	0
Applied Lessons	2	Applied Lessons	2
Ensemble	1	Ensemble	1
	14		16-17
			7

**Junior**

First Term	Hours	Second Term	Hours	Summer Term	Hours
Core Area IV: History	3	MU 432	3	Core Area II: Humanities or Fine Arts	3
MU 341	3	ECY 300	3	Core Area IV: Elective	3
EDR 421	1	MU 429	2		
MU 329	2	MU 472	3		
MU 471	3	MUP 001	0		
MUP 138	1	Applied Lessons	2		
Applied Lessons	2	Ensemble	1		
Ensemble	1				
	16		14		6

**Senior**

First Term	Hours	Second Term	Hours
MU 462	3	EMU 490	6-9
EPR 411	3	EMU 499	1-3
EHS 497	3		
MUP 001	0		
Applied Lessons	2		
Ensemble	1		
	12		7-12

Total credit hours: 132-138

## Proposed Program of Study in High School Education/English Language Arts

**Freshman**

First Term	Hours	Second Term	Hours
EDU 100	2-3	EDU 200	3
PY 101	3	EH 102 or 107	3
EH 101	3	THR 100	3
CMST 101	3	Core Area IV: Social Science <sup>Non-History</sup>	3
Core Area III: Science with Laboratory	4	Core Area IV: History and Social Science	3
Core Area III: Mathematics <sup>MA</sup> 105/110 or Higher	3	Core Area IV: History	3
	18-19		18

**Sophomore**

First Term	Hours	Second Term	Hours
EDF 362	3	EPR 363	3
EH 221	3	EH 222	3
EH 223 or 224	3	CHHS 200	2
EH 217 or 218	3	EH 301	3
CMST 103	3	EDR 441	3
CMST 210	3	Core Area III: Science with Laboratory	4
	18		18

**Junior**

First Term	Hours	Second Term	Hours
LING 350	3	EHS 436	3
EH 452	3	EHS 430	1
EHS 456	3	ECY 300	3
EHS 497	3	Multicultural Literature	3

Pre-1800 Literature Course	3	Technical EH Course	3
Technical EH Course	3	EH 476	3
	18		16

**Senior**

First Term	Hours	Second Term	Hours
EHS 466	3	EHS 490	3-9
EHS 470	1	EHS 489	1,3
EPR 411	3		
Post-1800 Literature Course	3		
EDR 442	3		
EH 442 or 444	3		
	16		4-12

Total credit hours: 126-135

## Proposed Program of Study in High School Education/General Social Science

**Freshman**

First Term	Hours	Second Term	Hours
EDU 100	2	EDU 200	3
CMST 101	3	CHHS 200	2
EH 101 or 106	3	EH 102 or 107	3
HY 101	3	HY 102	3
Core Area III: Science with Laboratory	4	Core Area III: Science with Laboratory	4
PY 101	3	SOC 100	3
	18		18

**Sophomore**

First Term	Hours	Second Term	Hours
EDF 362	3	EPR 363	3
HY 120	3	HY 121	3
GEO 121	3	GEO 221	3
PSC 101	3	PSC 221	3
Core Area III: Mathematics <sup>MA</sup> 105/110 or Higher	3	Core Area II: Humanities and Fine Arts	3
Core Area II: Literature	3	Core Area II: Fine Arts	3
	18		18

**Junior**

First Term	Hours	Second Term	Hours
EHS 456	3	EHS 438	3
EHS 497	3	EHS 430	1
HY 300	3	ECY 300	3
Non-Western HY	3	EC 440	3
300-Level HY	3	HY 225	3
300-Level HY	3	400-Level HY	3
	18		16

**Senior**

First Term	Hours	Second Term	Hours
EHS 468	3	EHS 490	6
EHS 470	1	EHS 489	1
EPR 411	3		
EDR 442	3		
400-Level HY	3		
400-Level- HY	3		

HY 497	3
	19
	7

Total credit hours: 132

<sup>1</sup> Non-Western History Select One: HY 271, HY 476 or HY 477.

## Minor in Education

Requirements	Hours
<u>EDU 200</u> Education as a Profession	3
<u>EDF 362</u> Foundations of Education I: Social, Historical, Philosophical	3
<u>EPR 363</u> Foundations of Education II: Psychological	3
<b>Choose three of the courses below:</b>	<b>9</b>
<u>EHS 497</u> Special Problems in Education	
<u>EEC 302</u> Expressive Arts (P-6)	
<u>EEC 440</u> Workshop in Education: Strategies for English Learners	
<u>EDU 300</u> Special Topics in Education	
<u>EPR 214</u> Introduction to Educational Statistics	
<u>EPR 414</u> Lifespan Human Development	
<u>CHHS 342</u> The Health Education/Promotion Specialist	
<u>CHHS 402</u> Mental Health, Stress Management & Wellness Promotion	
<u>CHHS 404</u> Global Trends in Health Education/Promotion	
<u>CHHS 408</u> Substance Abuse Prevention and Education	
<u>KIN 305</u> Motor Development	
<u>KIN 407</u> Coaching Young Athletes	
Total Hours	18

## Minor in STEM (Science, Technology, Engineering, and Math) Education

The STEM Education Minor includes the same courses UABTeach students take to earn Alabama teacher certification. So UABTeach students can add a minor with no additional coursework and have an element of their academic transcript reflect the work they have done to prepare themselves for teaching. The STEM Education Minor also includes an elective pathway designed to allow UABTeach students who elect not to complete Apprentice Teaching (EHS 425) and their certification requirements to add education electives to bring their minor coursework up to the required minimum of 18 hours.

Requirements	Hours
<u>EHS 125</u> Inquiry Approaches to Teaching	1
<u>EHS 126</u> Step 2: Inquiry Based Lesson Designs	1
<u>EHS 325</u> Knowing and Learning in Mathematics and Science	3
<u>EHS 326</u> Classroom Interactions	3
<u>PHL 270</u> Science, Knowledge, and Reality	3
or <u>HY 275</u> Perspectives on Science & Mathematics	
<b>Teaching Courses</b>	
TEP Admission required before taking the following:	
<u>EHS 327</u> Problem-Based Instruction	3
<b>Internship</b>	
<u>EHS 425</u> Apprentice Teaching	6
<u>EHS 426</u> Apprentice Teaching Seminar	1
Total Hours	21

## ECE-Early Childhood Educ Courses

### **ECE 320. Early Childhood Curriculum and Teaching. 3 Hours.**

Provides basic knowledge of early childhood curriculum for programs serving preschool children in a variety of settings. Emphasizes the relationship of child growth and development in the planning and implementation of all areas of curriculum. Whole program overview. Extensive field experience required.

### **ECE 331. Creative Learning Expression: Young Child. 1-3 Hour.**

Planning and implementation of activities in art, music, movement, and play considering growth patterns of individual child. Emphasis on preserving and maintaining creative expressions. Laboratory experiences. Extensive field experience required. Open access.

### **ECE 332. Literature for the Young Child. 3 Hours.**

Literature suitable for young children (birth-age 8). Reading aloud, storytelling, and other planned experiences. Extensive field experience required. Open access.

### **ECE 334. Young Children: Family/School. 3 Hours.**

Introduction and practicum in early childhood education. Programs, teaching opportunities, professional organizations and publications, trends, contemporary problems, parent involvement, and family relationships. Conducting parent conferences and using volunteers in classroom. Directed observation and participation with children in learning environment required. Extensive field experience required. Open access.

### **ECE 347. Language Experiences for the Young Child. 3 Hours.**

Emphasizes the learning processes in language arts and effective teaching strategies for children birth to age five with particular focus on infants and toddlers. Open Access.

### **ECE 390. Practicum in Early Childhood Education. 1-6 Hour.**

Supervised teaching in an early childhood program serving children ages birth to five. Assignments include participation, observation, planning and implementing lessons.

**Prerequisites:** ECE 320 [Min Grade: C] or EEC 301 [Min Grade: C]

### **ECE 410. Organize Programs: Young Children. 3 Hours.**

Trends, practices, and research in administration, organization, evaluation, and design of early childhood programs. Main focus NAEYC Accreditation.

### **ECE 445. Young Children: Math/Science/Social Studies. 3-6 Hours.**

Provides for development of concepts required for teaching mathematics, science, and social studies to young children. Emphasizes child growth and development as a basic for planning and teaching the three curricular areas in a variety of programs. Includes teaching methods and use of technology. Extensive field experience required.

### **ECE 446. Communication Arts/Reading: Young Child. 3-6 Hours.**

Nature of reading and language arts experiences for pre-school children. Technology, materials, experiences, programs, strategies to facilitate development of communication abilities with emphasis on preserving and maintaining creative expression. Integration of learning in areas of listening, speaking, reading, composition, literature, handwriting, spelling and other communication arts. Extensive field experience required.

**Prerequisites:** ECE 320 [Min Grade: C] or EEC 301 [Min Grade: C]

### **ECE 448. Infant/Toddler Development. 3 Hours.**

The course covers the social-emotional, physical, cognitive, language, and creative development of infants and toddlers and the corresponding appropriate curriculum materials to support development. Extensive field experience required. Open access.

### **ECE 449. Education Environment: Infant/Parent. 3 Hours.**

This course provides an overview of infant and toddler parenting programs. Topics include parent as child's first teacher, teacher as parent educator, organization and management strategies for parent/child educational programming, parent involvement, and family literacy. Extensive field experience required. Open access.

**Prerequisites:** ECE 448 [Min Grade: C]

### **ECE 460. Current Topics in Early Childhood Education Assessment. 3 Hours.**

In depth experiences in evaluating growth and development of children. Techniques for assessing needs, motivations, self-concept and achievements of children.

**Prerequisites:** EEC 301 [Min Grade: C]

### **ECE 490. Student Teaching in Early Childhood Education I. 9 Hours.**

Supervised teaching in early childhood program (grades N-3).

**Prerequisites:** (ECE 320 [Min Grade: C] or EEC 301 [Min Grade: C]) and ECE 445 [Min Grade: C] and ECE 446 [Min Grade: C] and ECE 460 [Min Grade: C]

### **ECE 491. Student Teaching in Early Childhood Education II. 3-9 Hours.**

Supervised teaching in early childhood program (grades N-3).

### **ECE 492. Family Engagement and Home Visitation Curriculum Projects. 3 Hours.**

Field projects in family engagement and home visitation with parents and children ages 0-5.

### **ECE 494. Field Work in Early Childhood Education. 2-4 Hours.**

Observation and participation experiences with children ages 0-3.

## ECY-Special Education Courses

### **ECY 300. Survey of Special Education. 3 Hours.**

Characteristic and needs of children and youth with exceptionalities. Special education law and policy, characteristics of children and youth with disabilities and their families, and critical issues in the field of special education. This course fulfills requirements for Ethics and Civil Responsibility (ECR).

**Prerequisites:** EDU 200 [Min Grade: C](Can be taken Concurrently)

## EDA-Art Education Courses

### **EDA 483. Methods of Teaching Art. 3 Hours.**

Preparation to teach art in schools. Learning experiences necessary for development of essential teaching competencies. Materials and methods in art studio media, technology skills for art classroom, art history and criticism, and current issues in art education.

### **EDA 484. Methods of Teaching Art Laboratory. 1 Hour.**

Observations in schools. Concurrent enrollment in EDA 483 required.

### **EDA 490. Student Teaching in Art N-12. 3-9 Hours.**

Supervised student teaching in elementary and secondary art.

### **EDA 499. Internship Seminar in Art Educ. 1 Hour.**

Problem solving related to situations such as classroom management, grading, professionalism and ethics, legal issues, and teacher's rights.

## EDR-Reading Education Courses

### **EDR 341. Beginning Reading Experiences for the Young Child. 3 Hours.**

Beginning reading experiences for the young child. Open Access.

**EDR 421. Reading in Content Areas. 1 Hour.**

Application of principle of reading process to content -area materials and instruction. Designed for pre-service teachers. Field experience required concurrently with the field experience in a teaching methods course. Supervision fee.

**EDR 440. Developmental Reading I. 3 Hours.**

Materials and methods. Emphasis on planning balanced program and understanding reading process. Extensive field experience required.

**EDR 441. Literature for Adolescents. 3 Hours.**

Literary works written for or about adolescents.

**EDR 442. Reading in Content Areas. 3 Hours.**

Application of principles of reading process to content-area materials and instruction. Designed for elementary, middle, and high school pre-service teachers. Extensive field experience required. Admission to TEP required. Supervision fee.

**EDR 443. Developmental Reading II. 3 Hours.**

Application of principles of reading process to content-area materials and instruction. Designed for elementary and middle school pre-service teachers. Extensive field experience required.

**Prerequisites:** EDR 440 [Min Grade: C]

**EDR 450. Literature for Elementary/Middle School. 3 Hours.**

Needs of children, selection of books, societal issues in children's literature, and role of media in children's literature.

## EDT-Educational Technology Courses

**EDT 440. Workshops in Education: Technology Issues. 1-3 Hour.**

This course focuses on current issues, trends, and techniques related to teaching with technology. Topics include emerging education technologies, innovative technology integration, virtual reality in the classroom, differentiation and personalization with technology, & digital citizenship.

## EEC-Elem Early Childhood Courses

**EEC 240. Child Growth/Development/Learning I. 3 Hours.**

Interrelationships of physical, emotional, intellectual, and social development, and influence of home, school, and social environments on children's growth. Early childhood (birth-6 years). Includes field experiences.

**EEC 241. Child Growth/Development/Learning II. 3 Hours.**

Interrelationships of physical, emotional, intellectual, and social development, and influence of home, school, and social environments on children's growth. Middle childhood (6-12 years). Includes field experiences.

**EEC 300. Child Development/Family Relationships. 3-4 Hours.**

Interrelationship of physical, emotional, intellectual, and social development, and influence of home, school, and social environments on human growth from conception through adolescent years. Extensive field experience required.

**Prerequisites:** EDU 200 [Min Grade: C]

**EEC 301. Introduction to P-6 Education. 3 Hours.**

Basic knowledge of early childhood and elementary school curricula in variety of settings from infancy programs through elementary school. Theories and practical approaches to teaching and to curriculum development; relationship between child growth and development and areas of curriculum. Observation in early childhood and elementary programs required. Extensive field experience required.

**Prerequisites:** EDU 200 [Min Grade: C]

**EEC 302. Expressive Arts (P-6). 1 Hour.**

Creativity through numerous experiences in music, theatre, dance, and visual arts. Experiences correlate with literacy skills, critical thinking skills, symbols, and images that can be directly applied to both teacher-centered and child-centered methods of teaching. Extensive field experience required.

**EEC 402. Primary Math Methods. 3 Hours.**

A math methods course focusing on emergent mathematical concepts for young children. Extensive field experience required.

**EEC 405. Children's Literature in Early Childhood and Elementary Education. 3 Hours.**

Materials and methods. Needs of children, selection of books, societal issues in children's literature, and role of media in children's literature. Extensive field experience required.

**EEC 406. Language Arts in Early Childhood and Elementary Education. 3 Hours.**

Materials and methods. Communication-based approach in developing effective language arts program. All aspects of language arts program addressed. Extensive field experience required.

**EEC 411. Discipline and Classroom Management. 3 Hours.**

Theoretical and practical application of various theories of discipline. Development of skills in management of student behavior and classroom environment.

**EEC 412. Math in Early Childhood and Elementary Education. 3 Hours.**

Materials and methods. Scope, sequence, and content of mathematics program. Computational skills and problem solving. Field experiences required.

**Prerequisites:** EEC 406 [Min Grade: C] and EDR 440 [Min Grade: C] and EEC 402 [Min Grade: C]

**EEC 413. Science in Early Childhood and Elementary Education. 3 Hours.**

Materials and methods. Scope, sequence, and content of science program. Inquiry, science process skills, and concept development. Extensive field experience required.

**Prerequisites:** EEC 406 [Min Grade: C] and EDR 440 [Min Grade: C] and EEC 402 [Min Grade: C]

**EEC 414. Social Studies in Early Childhood and Elementary Education. 3 Hours.**

Materials and methods. Scope, sequence, and content of social studies curriculum. Teaching strategies, program articulation, and instructional planning. Extensive field experience required.

**Prerequisites:** EEC 406 [Min Grade: C] and EDR 440 [Min Grade: C] and EEC 402 [Min Grade: C]

**EEC 415. Learning Environments through Positive Behavior Support. 1-3 Hour.**

Theoretical approaches that focus on child centered curriculum, classroom management, discipline strategies and cultural, linguistic, and developmentally appropriate instruction. Extensive field experience required.

**EEC 440. Workshop in Education: Strategies for English Learners. 1-6 Hour.**

Strengthen proficiency in teaching English learners in the mainstream classroom. Develop understanding of second language acquisition, culturally responsive teaching, accommodations for varying language levels, and appropriate assessments for English learners. Practice family planning, implementing, and managing sheltered instructions.

**EEC 460. Current Topics in Elementary and Early Childhood Education. 3-6 Hours.**

Topics vary. May be repeated for maximum of six hours of differing topics. Open Access.

**EEC 465. Teaching Globe and Map Skills. 3 Hours.**

Concepts and skills related to understanding functional use of globes and maps. Strategies and methods for teaching concepts and skills to children. Curriculum scope, sequence, continuity, and application within social studies program. Materials and resources for teaching.

**EEC 490. Internship in P-3/3-6. 9 Hours.**

Supervised capstone teaching experience in early childhood (P-3) and elementary (K-6) program. Gradual assumption of responsibility for planning and teaching for the entire class (minimum of 12 weeks). Supervision in working with resource professionals and parents.

**EEC 491. Internship Seminar in P-6 Education. 1-3 Hour.**

Supports and extends efforts of student teaching. Problem solving related to classroom situations such as classroom management, grading, professionalism and ethics, legal issues, teacher rights, and others that occur during internship.

**EEC 492. Individual Curriculum Project: Area Specific. 3-6 Hours.**

Field projects in curriculum modification and improvement of classroom practice. Permission of instructor required.

**EEC 493. Individual Readings. 1-3 Hour.**

Individualized readings on special topics. Permission of instructor required.

**EEC 494. Field Work in Early Childhood and Elementary Education. 2 Hours.**

Observation and participation experiences with children.

**EESL-English as Second Language Courses****EESL 007. Community English Teaching. 0 Hours.**

Students in the MAEd/ESL Program's International Track must enroll in EESL 007 for four semesters. During their first three semesters, the EESL 007 students plan, teach, and assess the weekly Community English Classes hosted by the Department of Curriculum and Instruction for adult language learners. During their fourth semester, experienced EESL 007 students mentor new EESL 007 students with teaching these classes. In the Fall and Spring semesters, these Community English Classes take place on Thursday evenings (7:30-9:00 pm) OR Friday mornings (9:15-10:45 am). In the 10-week Summer term, they take place on Thursday evenings (5:30-7:00 pm). EESL 007 grades are based on Pass/Fail.

**EHS-High School Education Courses****EHS 125. Inquiry Approaches to Teaching. 1 Hour.**

This Step 1 allows students to explore teaching as a career. Following an introduction to the theory and practice behind excellent inquiry-based science and mathematics instruction, students teach lessons in elementary classrooms to obtain firsthand experience in planning and implementation. The goal of Step 1 is to have students explore the possibility of teaching in science, mathematics, or computer science. Students teach science or mathematics lessons in local elementary classrooms and obtain first-hand experience with planning and implementing inquiry-based curriculum.

**EHS 126. Step 2: Inquiry Based Lesson Designs. 1 Hour.**

In Step 2, students continue developing the lesson planning skills learned in EHS 125: Step 1. After observing a lesson being taught in a local school district classroom, students plan and teach three inquiry-based lessons to sixth, seventh, or eighth graders. Middle school science or mathematics classrooms are selected both for the diversity of the student body and the quality of the classroom teachers, who serve as mentors for the Step 2 students assigned to them.

**Prerequisites:** EHS 125 [Min Grade: C]

**EHS 320. Geography for Teachers. 3 Hours.**

Unifying themes and concepts of geography. Culture and characteristics of places, especially as caused by relationships between humans and their environment.

**EHS 325. Knowing and Learning in Mathematics and Science. 3 Hours.**

Knowing and Learning in Mathematics and Science is the first in a sequence of three, 3- credit teaching methods courses in the UABTeach program. Knowing and Learning in Mathematics and Science is more than simply a general survey of theories in the STEM fields, its goal being for students to construct a model of knowing and learning that will guide their future classroom practice. Students begin by considering what standards for knowing are to be used, how knowing and learning are structured, and how what is known changes and develops. Ultimately, students must think about the tensions between general, cross-disciplinary characterizations of knowing (e.g., intelligence) and the specifics of coming to understand powerful ideas in mathematics and science.

**Prerequisites:** EHS 125 [Min Grade: C] and EHS 126 [Min Grade: C] (Can be taken Concurrently)

**EHS 326. Classroom Interactions. 3 Hours.**

Classroom Interactions builds on the Knowing and Learning course, moving from a focus on thinking and learning to a focus on teaching and learning. The course is centered around a close examination of the interplay between teachers, students, and content, and how these types of interactions enable students to develop deep conceptual understanding. The goals for this course are to: Provide students with opportunities to see how theories explored in Knowing and Learning play out in instructional settings by designing and implementing instructional activities informed by their own understanding of what it means to know and learn mathematics and science, and then evaluating the outcomes of those activities on the basis of student artifacts (i.e., what students say, do, or create). It provides students with frameworks for thinking about equity issues in the classroom and larger school settings, make students aware of equity issues in classroom settings and their effects on learning, and provide students with strategies for teaching diverse students equitably.

**Prerequisites:** EHS 125 [Min Grade: C] and EHS 126 [Min Grade: C] and EHS 325 [Min Grade: C]

**EHS 327. Problem-Based Instruction. 3 Hours.**

Problem-Based Instruction (PBI) is the capstone course in the sequence of teaching methods courses (Knowing and Learning, Classroom Interactions, and PBI) UABTeach students take prior to Apprentice Teaching. PBI is the course in which a number of the major principles and themes of the UTeach program—integration of mathematics and science content; infusion of technology in representation, analysis, modeling, assessment and contextualization of content; immersion in intensive field-based experiences; and a focus on designing equitable learning environments for diverse students—are synthesized as the students develop an intellectually challenging problem-based instructional unit. When students complete PBI, they are fully prepared for Apprentice Teaching.

**Prerequisites:** EHS 125 [Min Grade: C] and EHS 126 [Min Grade: C] and EHS 325 [Min Grade: C] and EHS 326 [Min Grade: C]

**EHS 401. Secondary Education Curriculum and Methods. 3 Hours.**

Interaction with middle and high school teachers and students and representatives from support agencies in their respective environments. Extensive field experience required.

**EHS 402. Practicum I. 1 Hour.**

Reading strategies for 6-12 instruction provide foundation for constructing lesson plans in EHS 401.

**EHS 425. Apprentice Teaching. 6 Hours.**

The purpose of Apprentice Teaching is to offer UABTeach students a culminating experience that provides them with the tools needed for their first teaching jobs. In Apprentice Teaching, students are immersed in the expectations, processes, and rewards of teaching. When making placements, UABTeach master teachers consider each apprentice teacher's characteristics and abilities as well as the cooperating teacher's teaching and mentoring styles.

**EHS 426. Apprentice Teaching Seminar. 1 Hour.**

Apprentice teachers sign up for two courses: the one-hour Seminar and the six-hour Apprentice Teaching course. The Apprentice Teaching seminar provides a supportive environment where apprentice teachers share their experiences and work on solutions to difficulties they are experiencing. The seminar is a good forum for students to get the guidance they consistently want on classroom management.

**EHS 430. Practicum. 1 Hour.**

Field experience in school-based setting. Admission to Alternative Master's Program required.

**EHS 436. Methods I: English Language Arts, 6-12. 3 Hours.**

Introduction to teaching English language arts in secondary school settings. Developing basic skills in planning, instruction, and assessment. Admission to TEP required.

**EHS 438. Methods I: Social Science, 6-12. 3 Hours.**

Introduction to teaching the social sciences in secondary school settings. Developing basic skills in planning, instruction, and assessment. Admission to TEP required.

**EHS 456. Classroom Management in Secondary Schools. 3 Hours.**

Management and instructional problems in secondary schools; techniques for improving study skills and developing better instructional planning.

**EHS 458. Science Technology and Society: A Primer for Educators. 3 Hours.**

Nature of momentous changes: origin, current status, and future direction. Role of educational community in helping young people better understand and deal with various issues raised.

**EHS 465. Methods II: Mathematics 6-12. 3 Hours.**

Planning and organization, methods and techniques of teaching mathematics. Extensive field experience required. Note: Fee will apply to course.

**EHS 466. Methods II: Language Arts 6-12. 3 Hours.**

Curriculum and instruction in English/language arts. Extensive field experience required. Note: Fee will apply to course.

**EHS 467. Methods II: Science 6-12. 3 Hours.**

Teaching methods and curricula in secondary science programs. Extensive field experience required. Note: Fee will apply to course.

**EHS 468. Methods II: Social Science 6-12. 3 Hours.**

Curriculum and instruction in social studies. Extensive field experience required. Note: Fee will apply to course.

**EHS 469. Secondary School Curriculum: Foreign Language. 3 Hours.**

Approaches and methods of teaching and testing foreign language. Selection and use of audiovisual equipment and materials. Extensive field experience required. Note: Fee will apply to course.

**EHS 470. Practicum II. 1 Hour.**

Coherent view of effective teaching and instructional design in middle and high schools. Extensive guided teaching experiences. Students implement full range of instructional process: planning, delivery, and evaluation.

**EHS 471. Special Education Accommodation / Modification Lab. 1 Hour.**

Knowledge and skills for helping students with special needs to successfully progress in the general education curriculum. Managing verbal and physical aggression, collaborative teaching, and strategies for adapting the general education curriculum for students with special needs.

**EHS 489. Internship Seminar in Secondary Education. 1,3 Hour.**

Supports and extends efforts of student teaching. Problem solving related to classroom situations such as classroom management, grading, professionalism and ethics, legal issues, teacher rights, and others that occur during internship.

**EHS 490. Secondary School Student Teaching I. 3-9 Hours.**

Capstone experience involving observation and teaching in secondary schools.

**EHS 491. Secondary School Student Teaching II. 3-6 Hours.**

Supervised teaching in high school.

**EHS 497. Special Problems in Education. 3 Hours.**

Topics of current interest. May be repeated for total of 6 hours. Note: Fee will apply to course.

**EHS 499. Field Studies: Select Education Setting. 1-3 Hour.**

Field visits to locations of high educational impact.

## EMS-Middle School Education Courses

### EMS 326. Class Room Interactions. 3 Hours.

Classroom Interactions builds on the Knowing and Learning course, moving from a focus on thinking and learning to a focus on teaching and learning. The course is centered around a close examination of the interplay between teachers, students, and content, and how these types of interactions enable students to develop deep conceptual understanding. The goals for this course are to: Provide students with opportunities to see how theories explored in Knowing and Learning play out in instructional settings by designing and implementing instructional activities informed by their own understanding of what it means to know and learn mathematics and science, and then evaluating the outcomes of those activities on the basis of student artifacts (i.e., what students say, do, or create). It provides students with frameworks for thinking about equity issues in the classroom and larger school settings, make students aware of equity issues in classroom settings and their effects on learning, and provide students with strategies for teaching diverse students equitably. EMS 326 is a cross-listed section of EHS 326 and is specifically designed for student pursuing middle school teaching certification in science or mathematics.

**Prerequisites:** EHS 125 [Min Grade: C] and EHS 126 [Min Grade: C] and EHS 325 [Min Grade: C]

### EMS 327. Project-Based Instruction. 3 Hours.

Project-Based Instruction (PBI) is the capstone course in the sequence of professional development courses (Knowing and Learning, Classroom Interactions, and PBI) UTeach students take prior to Apprentice Teaching. PBI is the course in which a number of the major principles and themes of the UTeach program—integration of mathematics and science content; infusion of technology in representation, analysis, modeling, assessment and contextualization of content; immersion in intensive field-based experiences; and a focus on designing equitable learning environments—are synthesized as the students develop an intellectually challenging project-based instructional unit. When students complete PBI, they are fully prepared for Apprentice Teaching.

**Prerequisites:** EHS 125 [Min Grade: C] and EHS 126 [Min Grade: C] and EHS 325 [Min Grade: C] and EHS 326 [Min Grade: C]

### EMS 351. Teaching Language Arts in Middle/Junior High School. 3 Hours.

Methods of teaching middle grades language arts. Extensive field experiences required. Supervision fee.

### EMS 352. Teaching Mathematics in Middle/Junior High School. 3 Hours.

Methods of teaching middle grades mathematics. Extensive field experiences required. Admission to TEP required.

### EMS 355. Laboratory/Practicum in Middle School Education. 1 Hour.

This course serves as a laboratory practicum for undergraduate students who are pursuing teacher certification in middle school education.

### EMS 425. Apprentice Teaching. 6 Hours.

The purpose of Apprentice Teaching is to offer UABTeach students a culminating experience that provides them with the tools needed for their first teaching jobs. In Apprentice Teaching, students are immersed in the expectations, processes, and rewards of teaching. When making placements, UABTeach master teachers consider each apprentice teacher's characteristics and abilities as well as the cooperating teacher's teaching and mentoring styles. EMS 425 is a cross-listed section of EHS 425 and is specifically designed for student pursuing middle school teaching certification in science or mathematics.

### EMS 426. Apprentice Teaching Seminar. 1 Hour.

Apprentice teachers sign up for two courses: the one-hour Seminar and the six-hour Apprentice Teaching course. The Apprentice Teaching seminar provides a supportive environment where apprentice teachers share their experiences and work on solutions to difficulties they are experiencing, including classroom management.

### EMS 451. Workshop in the Middle School. 1-3 Hour.

This course is a workshop for undergraduate students who wish to teach at the middle school level.

## Department of Human Studies

**Interim Chair: Eric P. Plaisance, Ph.D., FACS**

The Department of Human Studies offers undergraduate majors in both Community Health and Human Services and Kinesiology. Community Health and Human Services majors choose between two concentrations: Community Health (non-teaching) or Human Services (non-teaching). Community Health and Human Services also offers a minor in Community Health and a minor in Human Services. Kinesiology majors choose among four concentrations: Physical Education Teacher Certification (grades P-12), Fitness Leadership (non-teaching), Exercise Bioenergetics (non-teaching), or Exercise Science (non-teaching).

Kinesiology also offers a minor in Athletic Coaching and a minor in Exercise Science. Programs leading to degrees and/or certificates in Counseling and Educational Leadership are offered at the graduate level.

Students should contact the Office of Student Services, Suite 232, Education Building, (205) 934-7530, early in their studies to obtain the name of their advisor and pertinent program information related to the Core Curriculum. Students should consult their advisor prior to each registration period for the appropriate guidance (e.g., students are expected to take courses in the appropriate sequence, including prerequisites).

The Department of Human Studies offers an Honors Program for Exercise Bioenergetics, Exercise Science, and Fitness Leadership students. Highly qualified students will have the opportunity to work one-on-one with a mentor in an area of mutual interest and conduct either a research or civic engagement project designed to meet some particular need as it relates to pertinent areas of fitness, exercise, and physical activity. For more information go to: <https://www.uab.edu/education/home/pe-honors-program/>.

## Major in Community Health and Human Services with a Community Health Concentration

**A grade of "C" or better is required in all majors courses.**

### Required Courses in Core Curriculum

Students, in consultation with their academic advisor, must sequence requirements to meet any stated prerequisite requirements for specific courses in their curriculum, including UAB Core Curriculum requirements stated in this catalog. **These courses are required for this major and can also fulfill core curriculum requirements:**

Area II Humanities and Fine Arts: CMST 101

Area III Natural Science with Lab: BY 101 & BY 102 and CH 105 & CH 106

Area IV Social Science: PY 101 or SOC 100 and one of the following:  
PY 212 or ANTH 101

Literature sequence preferred: EH 217 & EH 218 or EH 221 & EH 222 or  
EH 223 & EH 224

## Major in Community Health and Human Services with a Community Health Concentration

Requirements		Hours
<b>Core Curriculum Requirements</b> <sup>1</sup>		<b>41</b>
EH 101	English Composition I <sup>2</sup> or EH 106 Introduction to Freshman Writing I	
EH 102	English Composition II <sup>2</sup> or EH 107 Introduction to Freshman Writing II	
CMST 101	Public Speaking <sup>3</sup>	
BY 101 & BY 102	Topics in Contemporary Biology and Topics Contemporary Biology Laboratory <sup>4</sup>	
CH 105 & CH 106	Introductory Chemistry I and Introductory Chemistry I Laboratory <sup>4</sup>	
ANTH 101	Introduction to Cultural Anthropology <sup>5</sup> or GEO 121 World Regional Geography	
PY 101	Introduction to Psychology <sup>5</sup>	
SOC 100	Introduction to Sociology <sup>5</sup>	
<b>Lower Level Requirements</b>		
CHHS 140	First Aid	3
CHHS 141	Personal Health & Wellness	3
EPR 214	Introduction to Educational Statistics	3
BY 115	Human Anatomy	4
BY 116	Introductory Human Physiology	4
NTR 222	Nutrition and Health	3
<b>Major Requirements</b> <sup>6</sup>		
CHHS 223	Introduction to Disease Prevention in Community Health and Human Services	3
CHHS 342	The Health Education/Promotion Specialist	3
CHHS 343	Behavioral Theory in Health Education/Promotion	3
CHHS 402	Mental Health, Stress Management & Wellness Promotion	3
CHHS 408	Substance Abuse Prevention and Education	3
CHHS 423	Human Sexuality	3
CHHS 421	Health Communications & Health Coaching	3
CHHS 431	Planning and Implementing Health Education/Promotion Programs	3
CHHS 432	Administration of Health Education/Promotion Programs	3
EPR 414	Lifespan Human Development	3
CHHS 452	Evaluation and Grantsmanship in Health Education/Promotion Programs	3
CHHS 499	Community Health Internship	9
Community Health Concentration Electives or Minor: <sup>6</sup>		18
BY 261	Introduction to Microbiology	
CHHS 300	Ethics and Policy in Human Services	
CHHS 305	Social and Cultural Diversity in Human Services	
CHHS 350	The Human Services Professional	
CHHS 404	Global Trends in Health Education/Promotion	
CHHS 415	Case Management in Human Services	
CHHS 420	Helping Skills in Human Services	
CHHS 425	Community Mobilization in Human Services	
CHHS 426	Wellness Promotion Peer Educators Part 1	

CHHS 427	SHAPE Peer Education
CHHS 428	Wellness Promotion Peer Education Part 2
CHHS 455	Fundraising and Philanthropy in Human Services
CHHS 460	Management of Human Services Organizations
CHHS 489	Intervention Strategies for Health Education/Promotion
CHHS 490	Special Projects in Health Education
CHHS 491	Problems in Health Education
CHHS 498	Lifespan Dimensions in Women's Health and Nutrition
<hr/>	
Total Hours	121

A minimum of 120 credit hours is required for degree.

- <sup>1</sup> Core Curriculum requirements
- <sup>2</sup> Fulfills a Core Curriculum Area I: Composition requirement.
- <sup>3</sup> Fulfills a Core Curriculum Area II requirement.
- <sup>4</sup> Fulfills a Core Curriculum Area III: Natural Science requirement.
- <sup>5</sup> Fulfills a Core Area IV: Social & Behavioral Science requirement
- <sup>6</sup> Students may choose to complete 18 hours of Program Coordinator Approved Community Health Concentration Electives with a C or better or students may choose a university approved major as described in the statement below. With advisor assistance students may choose electives that would meet graduate school nursing pre-requisites.
- <sup>7</sup> An 18 semester hour minor area of study is required. Advisor approval is required. Students may select from current UAB approved minor areas of study. Recommended minors include: Human Services, Criminal Justice, Spanish and Psychology. The requirements for the selected minor must be completed in their entirety.

## Major in Community Health and Human Services with a Human Services Concentration (Online)

A grade of "C" or better is required in all majors courses.

### Required Courses in Core Curriculum

Students, in consultation with their academic advisor, must sequence requirements to meet any stated prerequisite requirements for specific courses in their curriculum, including UAB Core Curriculum requirements stated in this catalog. **These courses are required for this major and can also fulfill core curriculum requirements:**

Area II Humanities and Fine Arts: CMST 101

Area III Natural Science with Lab: BY 101 & BY 102, CH 105 & CH 106

Area IV Social Science: PY 101 and one of the following: SOC 100 or ANTH 101 or PY 212

## Major in Community Health with a Concentration in Human Services

Requirements		Hours
<b>Core Curriculum Requirements</b> <sup>1</sup>		<b>41</b>
EH 101	English Composition I <sup>2</sup> or EH 106 Introduction to Freshman Writing I	
EH 102	English Composition II <sup>2</sup> or EH 107 Introduction to Freshman Writing II	
CMST 101	Public Speaking <sup>3</sup>	

<u>BY 101</u>	Topics in Contemporary Biology	
& <u>BY 102</u>	and Topics Contemporary Biology Laboratory <sup>4</sup>	
<u>CH 105</u>	Introductory Chemistry I	
& <u>CH 106</u>	and Introductory Chemistry I Laboratory <sup>4</sup>	
<u>PY 101</u>	Introduction to Psychology <sup>5</sup>	
<u>SOC 100</u>	Introduction to Sociology <sup>5</sup>	
	or <u>ANTH 1</u> Introduction to Cultural Anthropology	
	or <u>GEO 1</u> World Regional Geography	
<b>Lower Division Requirements <sup>6</sup></b>		
<u>PY 218</u>	Abnormal Psychology	3
<u>PSC 101</u>	Foundations of American Government	3
<u>CHHS 141</u>	Personal Health & Wellness	3
<u>CHHS 223</u>	Introduction to Disease Prevention in Community Health and Human Services	3
<u>SW 200</u>	Professional Communication in Social Work	3
<u>EPR 214</u>	Introduction to Educational Statistics	3
<b>Human Services Requirements <sup>6</sup></b>		
<u>CHHS 300</u>	Ethics and Policy in Human Services	3
<u>CHHS 305</u>	Social and Cultural Diversity in Human Services	3
<u>CHHS 350</u>	The Human Services Professional	4
<u>CHHS 402</u>	Mental Health, Stress Management & Wellness Promotion	3
<u>CHHS 408</u>	Substance Abuse Prevention and Education	3
<u>CHHS 415</u>	Case Management in Human Services	3
<u>CHHS 420</u>	Helping Skills in Human Services	4
<u>CHHS 423</u>	Human Sexuality	3
<u>CHHS 425</u>	Community Mobilization in Human Services	3
<u>CHHS 455</u>	Fundraising and Philanthropy in Human Services	3
<u>CHHS 460</u>	Management of Human Services Organizations	3
<u>CHHS 489</u>	Intervention Strategies for Health Education/Promotion	3
<u>CHHS 497</u>	Human Services Internship	9
<u>EPR 414</u>	Lifespan Human Development	3
Concentration Electives <sup>7</sup>		12
Total Hours		121

<sup>1</sup> Core Curriculum Requirements

<sup>2</sup> Fulfills a Core Area I: Composition requirement.

<sup>3</sup> Fulfills a Core Area II Humanities requirement.

<sup>4</sup> Fulfills a Core Area II Natural Science with lab requirement.

<sup>5</sup> Fulfills a Core Area IV: Social Science requirement.

<sup>6</sup> Must earn a C or better to fulfill the requirements in this area.

<sup>7</sup> Concentration electives may vary based on internship credits completed.

\*A minimum of 120 credit hours are required for degree.

## Kinesiology Programs

Students majoring in Kinesiology may choose from three concentrations: teacher certification, exercise bioenergetics, exercise science, and fitness leadership. The teacher certification program prepares students for entry into teaching positions in grades P-12. The exercise bioenergetics program prepares students for academic, industry, and research careers in the areas of clinical nutrition, sports nutrition, research in human health and disease, human performance, and aging. The exercise science program prepares students for graduate work in exercise physiology or health related careers such as physical therapy and occupational

therapy. The fitness leadership program prepares students to be fitness leaders in fitness centers, clinics, or industrial settings.

## Kinesiology Major: Teacher Certification

A grade of "C" or better is required in all math, science, and major courses.

### Core Curriculum for Kinesiology Major: Teacher Certification.

EH 101/102 requires one grade of at least a "B" or higher and one grade of "C" or higher for teacher certification.

## Major in Kinesiology with a Teacher Certification Concentration

Requirements		Hours
Core Curriculum Requirements <sup>1</sup>		41
EH 101	English Composition I <sup>2</sup>	
EH 102	English Composition II <sup>2</sup>	
CMST 101	Public Speaking <sup>3</sup>	
PY 101	Introduction to Psychology <sup>4</sup>	
See Biology for one Core Curriculum Area III: Natural Science		
See Chemistry for one Core Curriculum Area III: Natural Science		
<b>Lower Division Requirements</b>		
CHHS 200	Quality of Life	2
BY 115	Human Anatomy	4
BY 116	Introductory Human Physiology	4
EPR 214	Introduction to Educational Statistics	3
or MA 180	Introduction to Statistics	
CHHS 140	First Aid <sup>5</sup>	3
<b>Foundations &amp; Professional Studies</b>		
EDU 200	Education as a Profession	3
ECY 300	Survey of Special Education	3
EDF 362	Foundations of Education I: Social, Historical, Philosophical	3
EPR 363	Foundations of Education II: Psychological	3
EDR 421	Reading in Content Areas	1
<b>Major Requirements</b>		
<b>Aquatics</b>		<b>1</b>
Select one of the following courses:		
KIN 101	Beginning and Advanced Beginning Swimming	
KIN 102	Intermediate Swimming/Swimmer Course	
KIN 103	Lifeguard Training	
<b>Kinesiology Courses</b>		
KIN 112	Dance and Gymnastics	1
KIN 114	Rec Games/Outdoor Leisure	1
KIN 115	Weight Training	1
KIN 117	Team Sports	1
KIN 118	Sports Using Implements	1
KIN 131	Aerobics	1
KIN 132	Group Exercise Leadership	1
KIN 136	Intro to Physical Education Fitness and Sport	3
KIN 201	Officiating Techniques	1
KIN 300	Organization and Administration of Physical Education	3
KIN 305	Motor Development	3
KIN 307	Applied Kinesiology	3
KIN 400	Physiology of Exercise	4

KIN 402	Basic Athletic Training	2
KIN 407	Coaching Young Athletes	3
<b>Kinesiology Teaching Field Courses (TEP Admission Required)</b>		
KIN 308	Adapted Physical Education	3
KIN 311	Elementary School Physical Education	3
KIN 320 & 320L	Fitness/Motor Skill Acquisition and Sports Skill Proficiency	4
KIN 323	Techniques Teaching Fitness and Nutrition in Sec. Schools	3
KIN 409	Assessment in Physical Education	3
KIN 489	Instructional Strategy for Physical Education K-12	6
<b>Internship</b>		
KIN 495	Elementary/Secondary Physical Education Student Teaching	9
Total Hours		131

A minimum of 120 hours are required for graduation. Students may need to take general electives to reach the credit hour requirement. Elective hours may vary based on course selection.

- <sup>1</sup> Core Curriculum requirements
- <sup>2</sup> Fulfills a Core Curriculum Area I: Composition requirement
- <sup>3</sup> Fulfills a Core Curriculum Area II: Humanities requirement.
- <sup>4</sup> Fulfills a Core Curriculum Area IV: Social & Behavioral Science Requirement.
- <sup>5</sup> See Kinesiology program policy for 0 credit hour CHHS 140 wavier criteria: <http://www.uab.edu/education/home/images/pdf/hs/chhs-140-substitution-policy-for-kinesiology.pdf>

## Kinesiology Major: Exercise Bioenergetics Concentrations

A grade of C or better is required in all math, science, and major courses. Note: UAB requires 120 total semester hours in order to graduate. Students with this major may need additional electives to meet this requirement.

### Required Courses in Core Curriculum

Students, in consultation with their academic advisor, must sequence requirements to meet any stated prerequisite requirements for specific courses in their curriculum, including UAB Core Curriculum requirements stated in this catalog. **These courses are required for this major and can also fulfill core curriculum requirements:**

## Requirements for Kinesiology with a Concentration in Exercise Bioenergetics

Requirements	Hours
<b>Core Curriculum Requirements <sup>1</sup></b>	<b>41</b>
<u>EH 101</u> English Composition I <sup>2</sup> or <u>EH 106</u> Introduction to Freshman Writing I	
<u>EH 102</u> English Composition II <sup>2</sup> or <u>EH 107</u> Introduction to Freshman Writing II	
<u>CMST 101</u> Public Speaking <sup>3</sup>	
Area III: Natural Science <sup>4</sup>	
<u>MA 106</u> Pre-Calculus Trigonometry <sup>5</sup>	
<u>PY 101</u> Introduction to Psychology <sup>6</sup>	
<b>Lower Level <sup>7</sup></b>	<b>24-25</b>
<u>BY 115</u> Human Anatomy	

<u>BY 116</u> Introductory Human Physiology	
<u>CHHS 140</u> First Aid <sup>8</sup>	
<u>CHHS 141</u> Personal Health & Wellness	
<u>EPR 214</u> Introduction to Educational Statistics	
<u>NTR 222</u> Nutrition and Health	
<u>CH 105</u> Introductory Chemistry I & <u>CH 106</u> and Introductory Chemistry I Laboratory <sup>9</sup> or <u>CH 115</u> General Chemistry I & <u>CH 116</u> and General Chemistry I Laboratory	
<u>CH 107</u> Introductory Chemistry II & <u>CH 108</u> and Introductory Chemistry II Laboratory	
<u>MA 106</u> Pre-Calculus Trigonometry <sup>9</sup>	
<u>PH 201</u> College Physics I <sup>9</sup> or <u>PH 221</u> General Physics I: Mechanics	
<u>PY 101</u> Introduction to Psychology <sup>9</sup>	

### Major Requirements <sup>7</sup>

Aquatics	1
Select one from the following:	
<u>KIN 101</u> Beginning and Advanced Beginning Swimming	
<u>KIN 102</u> Intermediate Swimming/Swimmer Course	
<u>KIN 103</u> Lifeguard Training	
<u>KIN 115</u> Weight Training	1
<u>KIN 132</u> Group Exercise Leadership	1
<u>KIN 136</u> Intro to Physical Education Fitness and Sport	3
<u>KIN 222</u> Concepts of Health and Fitness	3
<u>KIN 307</u> Applied Kinesiology	3
<u>KIN 400</u> Physiology of Exercise	4
<u>KIN 405</u> Sports Nutrition	3
<u>KIN 485</u> Exercise Testing/Prescription <sup>11</sup>	3
Kinesiology Elective Courses	12

Select twelve credits from the following:

<u>KIN 305</u> Motor Development	
<u>KIN 340</u> Planning/Management of Fitness Facilities	
<u>KIN 402</u> Basic Athletic Training	
<u>KIN 440</u> Principles of Conditioning the Athlete	
<u>KIN 450</u> Physical Activity for Individuals with Disabilities/SL	
<u>KIN 451</u> Physical Activity for Senior Adults	
<u>KIN 460</u> Clinical Exercise Physiology	
<u>KIN 470</u> Advanced Treatment Athletic Training	
<u>KIN 499</u> Fitness Internship <sup>10</sup>	
<u>BY 261</u> Introduction to Microbiology	4
<u>NTR 232</u> Lifecycle Nutrition	3
<u>NTR 320</u> Nutrition and the Consumer	3
<u>NTR 330</u> Nutrition and Metabolism	3
<u>NTR 420</u> Nutritional Genetics	3
<u>NTR 421</u> Nutrition Assessment and the Nutrition Care Process	3
Internship	
<u>KIN 499</u> Fitness Internship <sup>11</sup>	3
Total Hours	121-122

A minimum of 120 hours are required for graduation. Students may need to take general electives to reach the credit hour requirement. Elective hours may vary based on course selection. A grade of "C" or higher is required in all math, science, and major courses and CMST 101.

- <sup>1</sup> Core Curriculum requirements
- <sup>2</sup> Fulfills a Core Curriculum Area I: Composition requirement.
- <sup>3</sup> Fulfills a Core Curriculum Area II: Humanities requirement.

- <sup>4</sup> Fulfills Core Area III: Natural Science. Select one sequence from CH 105 & CH 106 or CH 115 & 116. Select one from PH 201 or PH 221.
- <sup>5</sup> Fulfills a Core Curriculum Area III: Mathematics Requirement
- <sup>6</sup> Fulfills a Core Curriculum Area IV: Social & Behavioral Science requirement
- <sup>7</sup> Must earn a C or better to fulfill requirements in Lower Level and Major.
- <sup>8</sup> See Kinesiology program policy for 0 credit hour CHHS 140 wavier criteria: <http://www.uab.edu/education/home/images/pdf/hs/chhs-140-substitution-policy-for-kinesiology.pdf>.
- <sup>9</sup> Must take if not taken as a part of Core Curriculum requirements.
- <sup>10</sup> This three hour elective is in addition to the three hours of KIN 499 in the Internship section. No more than a total of six hours of KIN 499 may be applied to degree.
- <sup>11</sup> Students who are in the Department of Human Studies Honors Program will be placed in the Honors Section of KIN 485 and 499.

## Kinesiology Major: Exercise Science Concentration

A grade of C or better is required in all math, science, and major courses. Note: UAB requires 120 total semester hours in order to graduate. Students with this major may need additional electives to meet this requirement.

### Required Courses in Core Curriculum

Students, in consultation with their academic advisor, must sequence requirements to meet any stated prerequisite requirements for specific courses in their curriculum, including UAB Core Curriculum requirements stated in this catalog. **These courses are required for this major and can also fulfill core curriculum requirements:**

Area II Humanities and Fine Arts: CMST 101

Area III Natural Science with Lab: PH 201 or PH 221 and CH 105 & CH 106

## Kinesiology with a Concentration in Exercise Science

Requirements	Hours
<b>Core Curriculum Requirements <sup>1</sup></b>	<b>41</b>
EH 101 English Composition I <sup>2</sup> or EH 106 Introduction to Freshman Writing I	
EH 102 English Composition II <sup>2</sup> or EH 107 Introduction to Freshman Writing II	
CMST 101 Public Speaking <sup>3</sup>	
Area III: Natural Science <sup>4</sup>	
MA 106 Pre-Calculus Trigonometry <sup>5</sup>	
PH 201 College Physics I or PH 221 General Physics I	
CH 105 Introductory Chemistry I & CH 106 and Introductory Chemistry I Laboratory or CH 115 General Chemistry I & CH 116 and General Chemistry I Laboratory	
Area IV: Social and Behavioral Sciences	
History	
PY 101 Introduction to Psychology	
Social Science	

### Lower Level Requirements <sup>7</sup>

BY 115	Human Anatomy	4
BY 116	Introductory Human Physiology	4
CHHS 140	First Aid	3
CHHS 141	Personal Health & Wellness	3
EPR 214	Introduction to Educational Statistics	3
or MA 180	Introduction to Statistics	

### Major Requirements <sup>7</sup>

Aquatics		1
Select one of the following:		
KIN 101	Beginning and Advanced Beginning Swimming	
KIN 102	Intermediate Swimming/Swimmer Course	
KIN 103	Lifeguard Training	
KIN 115	Weight Training	1
KIN 131	Aerobics	1
KIN 136	Intro to Physical Education Fitness and Sport	3
KIN 307	Applied Kinesiology	3
KIN 400	Physiology of Exercise	4
KIN 405	Sports Nutrition	3
KIN 425	Biomechanics	3
KIN 485	Exercise Testing/Prescription <sup>12</sup>	3
Kinesiology Elective Courses		16-19
KIN 132	Group Exercise Leadership	
KIN 222	Concepts of Health and Fitness	
KIN 305	Motor Development	
KIN 340	Planning/Management of Fitness Facilities	
KIN 402	Basic Athletic Training	
KIN 440	Principles of Conditioning the Athlete	
KIN 450	Physical Activity for Individuals with Disabilities/SL	
KIN 451	Physical Activity for Senior Adults	
KIN 460	Clinical Exercise Physiology	
KIN 470	Advanced Treatment Athletic Training	
KIN 499	Kinesiology Internship <sup>9</sup>	
CHHS 223	Introduction to Disease Prevention in Community Health and Human Services	
Major Science Elective Requirements <sup>10, 11</sup>		18-21
KIN 499	Kinesiology Internship <sup>12</sup>	3
General Elective		
Total Hours		117-123

A minimum of 120 hours is required for graduation. Students may need to take general electives to reach the credit hour requirement. Elective hours may vary based on course selection.

<sup>1</sup> Core Curriculum requirements

<sup>2</sup> Fulfills Core Area I: Composition requirement.

<sup>3</sup> Fulfills Core Area II: Humanities requirement.

<sup>4</sup> Fulfills Core Area III: Natural Science. Select one sequence from CH 105 & CH 106 or CH 115 & 116. Select one from PH 201 or PH 221.

<sup>5</sup> Fulfills Core Area III: Mathematics.

<sup>6</sup> Fulfills Core Area IV: Social & Behavioral Science.

<sup>7</sup> Must earn a C or better to fulfill requirements in Lower Level and Major.

<sup>8</sup> Must take if not taken as a part of Core Curriculum requirements.

<sup>9</sup> This elective is in addition to the 3 hours of KIN 499 in the Internship section. No more than a total of 6 hours of KIN 499 may be applied to the degree.

<sup>10</sup> Courses taken may not be applied to both major requirements and core curriculum. A maximum of 10 hours of PH, MA, CH, or BY courses can be taken to meet this requirement.

<sup>11</sup> Major science electives may be chosen from: HCM 330, HCM 350, BY 123, BY 124, BY 210, BY 216 or NMT 320, BY 261, BY 271, BY 314, BY 327, BY 330, BY 409, BY 420, CH 107/CH 108 or CH 117/CH 118, CH 235/CH 236, CH 237/CH 238, CH 460, MA 125, MA 126, MHP 601, PY 218, PY 330, PH 202 or PH 222, and NMT 605

<sup>12</sup> Students who are in the Department of Human Studies Honors Program will be placed in the Honors Section of KIN 485 and 499.

## Kinesiology Major: Fitness Leadership Concentration

A grade of "C" or better is required in all math, science, and major courses. Note: UAB requires 120 total semester hours in order to graduate. Students with this major will need additional electives to meet this requirement.

### Required Courses in Core Curriculum

Students, in consultation with their academic advisor, must sequence requirements to meet any stated prerequisite requirements for specific courses in their curriculum, including UAB Core Curriculum requirements stated in this catalog. **These courses are required for this major and can also fulfill core curriculum requirements:**

Area II Humanities and Fine Arts: CMST 101

Area III Natural Science with Lab: PH 201 or BY 101 & BY 102

Area IV Social Science: PY 101

## Major in Kinesiology with a Sports Physiology & Performance Concentration

Requirements	Hours
<b>Core Curriculum Requirements <sup>1</sup></b>	<b>41</b>
EH 101 English Composition I <sup>2</sup> or EH 106 Introduction to Freshman Writing I	
EH 102 English Composition II <sup>2</sup> or EH 107 Introduction to Freshman Writing II	
CMST 101 Public Speaking <sup>3</sup>	
PH 201 College Physics I <sup>4</sup> or BY 101 Topics in Contemporary Biology & BY 102 and Topics Contemporary Biology Laboratory	
CH 105 Introductory Chemistry I & CH 106 and Introductory Chemistry I Laboratory <sup>4</sup>	
PY 101 Introduction to Psychology <sup>5</sup>	
<b>Lower Level <sup>6</sup></b>	
BY 115 Human Anatomy	4
BY 116 Introductory Human Physiology	4
CHHS 140 First Aid <sup>7</sup>	3
CHHS 141 Personal Health & Wellness	3
EPR 214 Introduction to Educational Statistics	3
KIN 222 Concepts of Health and Fitness	3
CH 105 Introductory Chemistry I & CH 106 and Introductory Chemistry I Laboratory <sup>8</sup>	
PY 101 Introduction to Psychology <sup>8</sup>	

BUS 101 Introduction to Business	3
or BUS 102 Business Foundations	
<b>Business Electives <sup>9</sup></b>	
Select two from the following:	6
FN 101 Personal Finance	
LS 246 Legal Environment of Business	
EC 210 Principles of Microeconomics	
EC 110 Economics and Society	
<b>Major Requirements <sup>6</sup></b>	
<b>Aquatics</b>	<b>1</b>
Select one of the following:	
KIN 101 Beginning and Advanced Beginning Swimming	
KIN 102 Intermediate Swimming/Swimmer Course	
KIN 103 Lifeguard Training	
KIN 115 Weight Training	1
KIN 131 Aerobics	1
KIN 132 Group Exercise Leadership	1
<b>Activity Elective</b>	<b>1</b>
Select one of the following:	
KIN 105 Golf	
KIN 112 Dance and Gymnastics	
KIN 114 Rec Games/Outdoor Leisure	
KIN 116 Ballroom and Latin Dancing	
KIN 117 Team Sports	
KIN 118 Sports Using Implements	
KIN 124 Beginning Whitewater Kayaking	
KIN 126 Flying Disc Sports	
KIN 130 Scuba Diving	
KIN 136 Intro to Physical Education Fitness and Sport	3
KIN 307 Applied Kinesiology	3
KIN 340 Planning/Management of Fitness Facilities	3
KIN 400 Physiology of Exercise	4
KIN 405 Sports Nutrition	3
KIN 440 Principles of Conditioning the Athlete	3
KIN 485 Exercise Testing/Prescription <sup>10</sup>	3
<b>Major Electives</b>	<b>4</b>
Select four from the following:	
KIN 305 Motor Development	
CHHS 342 The Health Education/Promotion Specialist	
KIN 402 Basic Athletic Training	
KIN 407 Coaching Young Athletes	
KIN 450 Physical Activity for Individuals with Disabilities/SL	
KIN 451 Physical Activity for Senior Adults	
KIN 460 Clinical Exercise Physiology	
KIN 470 Advanced Treatment Athletic Training	
PY 218 Abnormal Psychology <sup>11</sup> or PY 330 Sport Psychology	
KIN 499 Kinesiology Internship	6
<b>General Electives</b>	<b>13</b>
<b>Total Hours</b>	<b>120</b>

A minimum of 120 hours are required for graduation. Students may need to take general electives to reach the credit hour requirement. Elective hours may vary based on course selection.

<sup>1</sup> Core Curriculum requirements

<sup>2</sup> Fulfills Core Area I: Composition requirement

- <sup>3</sup> Fulfills Core Area II: Humanities requirement.
- <sup>4</sup> Fulfills Core Area III: Natural Science requirement.
- <sup>5</sup> Fulfills Core Area IV: Social & Behavioral Science requirement.
- <sup>6</sup> Must earn a C or better to fulfill a lower level or major requirement.
- <sup>7</sup> See Kinesiology program policy for 0 credit hour CHHS 140 wavier criteria: <http://www.uab.edu/education/home/images/pdf/hs/chhs-140-substitution-policy-for-kinesiology.pdf>
- <sup>8</sup> Must take if not taken as a part of the core curriculum.
- <sup>9</sup> May not choose more than one Economics course to fulfill the requirement.
- <sup>10</sup> Students who are in the Department of Human Studies Honors Program will be placed in the Honors Section of KIN 485 and KIN 499.
- <sup>11</sup> May not choose more than one Psychology elective

## Department of Human Studies Honors Program

### Kinesiology: Physical Education Honors Program

#### Requirements

- Junior standing
- Completion of 9 hours pre-professional education courses
- 3.5 GPA in Education courses
- 3.0 GPA overall
- Faculty recommendation from Mentor

#### About the Honors Program

The Department of Human Studies Physical Education Honors Program provides high achieving Physical Education Teacher Certification students with the opportunity to participate in honors (HON) sections of KIN 409 and KIN 489. During which time the teacher candidate will collaborate with faculty mentors (Dr. Sims and Dr. Mowling) in pursuit of their intellectual interests and complete an honors project. As a result of participating in the Honors program, the teacher candidate will have an opportunity to conduct an in-depth literature review plus a research project designed to meet some particular need related to physical education.

#### Honors Coursework

By the completion of KIN 489 HON (6 credits), students should have devoted at least 90 hours to their honors project. Faculty mentors submit either a satisfactory or unsatisfactory progress report and a copy of each student's written report—while each student submits a journal (hourly log) of his or her activities signed by the faculty mentors. Honors Project

In order to complete the honors project successfully, each student must produce a written report and a public presentation that meets stated criteria in the syllabus.

#### Graduating with Honors

Honors students must earn a grade of 'A' in HON sections of both KIN 409 and KIN 489 in order to graduate with "Honors in Education." Honors students must also maintain an overall GPA of 3.5 or higher throughout their degree. Honors graduates will wear a 'white cord' at the Commencement ceremony (picked up from the Honors table), and with 'Honors in Education' will be printed by their name in the Program.

## Community Health and Human Services: Community Health Concentration Proposed Program of Study

### Freshman

First Term	Hours	Second Term	Hours
EDU 100		2-3 EH 102 or 107	3
EH 101 or 106		3 CMST 101	3
Area III: Natural Science <sup>BY</sup> 101/102 Strongly Preferred		4 CH 105 & CH 106	4
Area III: Math <sup>MA</sup> 105/110 or Higher		3 Area II: Fine Arts	3
CHHS 140		3 CHHS 141	3
	15-16		16

### Sophomore

First Term	Hours	Second Term	Hours
Area II: Literature		3 Area II: Literature	3
Area IV: Social and Behavioral Science <sup>ANTH</sup> 101 or GEO 121 Strongly Preferred		3 Area IV: History, Social, and Behavioral Science <sup>PY</sup> 101 and SOC 100 Strongly Preferred	3
Area IV: History		3 Area IV: History, Social, and Behavioral Science <sup>PY</sup> 101 and SOC 100 Strongly Preferred	3
BY 115		4 BY 116	4
CHHS 223		3 Minor Area Course	3
	16		16

### Junior

First Term	Hours	Second Term	Hours
NTR 222		3 EPR 414	3
CHHS 342		3 CHHS 343	3
EPR 214		3 CHHS 421	3
Minor Area Course		3 Minor Area Course	3
Minor Area Course		3 Minor Area Course	3
	15		15

### Senior

First Term	Hours	Second Term	Hours
CHHS 452		3 CHHS 499	3-9
CHHS 431		3 CHHS 432	3
Minor Area Course		3 CHHS Elective	3
CHHS Elective	3		
CHHS Elective	3		
	15		9-15

Total credit hours: 117-124

## Community Health and Human Services: Human Services Concentration Proposed Program of Study

### Freshman

First Term	Hours	Second Term	Hours
UASC 101		3 CMST 101	3
EH 101 or 106		3 EH 102 or 107	3
Area III: Natural Science <sup>BY</sup> 101/102 Strongly Preferred		4 Area III: Natural Science CH 105/106 Strongly Preferred	4
Area III: Math <sup>MA</sup> 105/110 of Higher		3 Area II: Fine Arts	3
CHHS 140		3 CHHS 141	3
	16		16

Sophomore			
First Term	Hour	Second Term	Hours
PY 101	3	Area IV: History, Behavioral, Social Sciences SOC 100, ANTH 101, or GEO 121 Preferred	3
Area II: Literature	3	Area II: Literature	3
Area IV: History	3	Area IV: Elective	3
PSC 101	3	SW 200	3
EPR 214	3		
	15		12

Junior			
First Term	Hour	Second Term	HourSummer TermHours
CHHS 350	4	CHHS 415	3 CHHS 3053
CHHS 300	3	CHHS 455	3 CHHS 4083
PY 218	3	CHHS 402	3
PY 372	3	Concentration Elective	3
Concentration Elective	3	Concentration Elective	3
	16		156

Senior			
First Term	Hour	Second Term	Hours
CHHS 423	3	CHHS 499	3-9
CHHS 420	3-4	CHHS 460	3
CHHS 425	3		
EPR 414	3		
Concentration Elective	3		
	15-16		6-12

Total credit hours: 117-124

## Kinesiology (Teacher Certification) Proposed Program of Study

Freshman			
First Term	Hour	Second Term	HourSummer TermHours
EDU 100	2-3	EH 102	3 ECY 300 (Online )3
PY 101	3	EDU 200	3 SOC 100 (Online)3
MA 105	3	HY 102	3 THR 100 (Online)3
EH 101	3	KIN 112	1
KIN 101	1	BY 101 & BY 102	4
HY 101	3	KIN 114	1
		KIN 118	1
	15-16		169

Sophomore			
First Term	Hour	Second Term	HourSummer TermHours
KIN 117	1	KIN 136	3 CHHS 1403
EH 217	3	BY 115	4
EDF 362	3	EPR 363	3
CMST 101	3	KIN 201	2
CH 105 & CH 106	4	MU 120	3
KIN 115	1	KIN 132	1
KIN 131	1		
	16		163

Junior			
First Term	Hour	Second Term	Hours
KIN 300	3	KIN 320 & 320L	4
BY 116	4	EPR 214	3
KIN 307	3	KIN 323	3
KIN 407	3	KIN 311	3
CHHS 200	2	KIN 409	3

KIN 117	1	
	16	16
Senior		
First Term	Hour	Second TermHours
KIN 489	6	KIN 4959
KIN 400	4	
KIN 402	2	
KIN 308	3	
	15	9

Total credit hours: 131-132

## Kinesiology Exercise Science Concentration - Proposed Program of Study

Freshman			
First Term	Hour	Second Term	HourSummer TermHours
EDU 100	3	EH 102 or 107	3 *CHHS 140 Waiver or Taken Summer0
EH 101 or 106	3	KIN 136	3
MA 106	3	CHHS 141	3
PY 101	3	Area IV: Social ScienceNON-History	3
CMST 101	3	Area IV: History	3
	15		150

Sophomore			
First Term	Hour	Second Term	Hours
BY 115	4	BY 116	4
Area II: Literature	3	EPR 214	3
Area IV: Social Science	3	Area II: Fine Art	3
CH 115 & CH 116	4	AREA IV: Social Science	3
KIN 101	1	KIN 131	1
		KIN 115	1
	15		15

Junior			
First Term	Hour	Second Term	Hours
Area II: Fine Art or Humanities	3	KIN 340	3
KIN 307	3	PH 201	4
CH 117 & CH 118	4	KIN 132	1
KIN 400	4	KIN 440	3
KIN 402	2	BY 123	4
	16		15

Senior			
First Term	Hour	Second Term	Hours
KIN 485	3	KIN 499	3
BY 124	4		
PY 218	3		
CHHS 342	3		
KIN 405	3		
	16		3

Total credit hours: 110

## Kinesiology Fitness Leadership Concentration - Proposed Program of Study

Freshman			
First Term	HourSecond Term	HourSummer Term	Hours
EDU 100	3 CH 105 & CH 106	4 * CHHS 140 Waiver Course Summer *	
EH 101 or 106	3 EH 102 or 107	3	
Area III: Math	3 Area IV: Social Science Non-History	3	
BY 101 & BY 102	4 KIN 136	3	
Area IV: History	3 Area II: Humanities OR Fine Art	3	
	16	16	0
Sophomore			
First Term	HourSecond Term	Hours	
CMST 101	3 PY 101	3	
Area II: Literature	3 BY 116	4	
KIN 101	1 Area IV: Social Science	3	
KIN 115	1 CHHS 141	3	
Area II: Fine Arts	3 KIN 131	1	
BY 115	4 KIN 132	1	
KIN 117	1		
	16	15	
Junior			
First Term	HourSecond Term	Hours	
FN 101	3 BUS 101	3	
LS 246	3 KIN 305	3	
EPR 214	3 KIN 307	3	
PY 218	3 KIN 340	3	
KIN 222	3 KIN 400	4	
	15	16	
Senior			
First Term	HourSecond Term	Hours	
KIN 405	3 KIN 499	6	
KIN 440	3		
KIN 485	3		
KIN 407	3		
CHHS 342	3		
	15	6	
Total credit hours: 115			

## Kinesiology Exercise Bioenergetics Concentration - Proposed Program of Study

Freshman			
First Term	HourSecond Term	HourSummer Term	Hours
EH 101 or 106	3 EH 102 or 107	3 CMST 101	3
MA 106	3 CH 107 & CH 108	4 Area IV: History	3
CH 105 & CH 106	4 KIN 101	1 CHHS 141	3
NTR 222	3 PY 101	3 PH 201	4
KIN 136	3 NTR 232	3	
	16	14	13
Sophomore			
First Term	HourSecond Term	HourSummer Term	Hours
Area II: Literature	3 CHHS 140	3 KIN 307	3
BY 115	4 BY 116	4 NTR 330	3

EPR 214	3 NTR 320	3 Area IV: Social Science	3
Area II: Fine Arts	3 Kinesiology Elective	3 BY 261	4
KIN 115	1		
	14	13	13
Junior			
First Term	HourSecond Term	HourSummer Term	Hours
KIN 400	4 KIN 405	3 Area II: Humanities or Fine Art	3
Area IV: Social Science	3 KIN 485	3 KIN 499	3
NTR 420	3 NTR 421	3 Kinesiology Elective	3
Kinesiology Elective	3 Kinesiology Elective	3 KIN 222	3
	KIN 132	1	
	13	13	12
Total credit hours: 121			

## Community Health and Human Services Minors

The Community Health and Human Services program offers two minors.

The Community Health minor provides background information related to health issues and health programming. A grade of "C" or better is required in all courses in the minor. Students cannot apply courses toward both a major and a minor.

### Minor in Community Health

The Community Health Minor provides students with a background in developing implementation strategies to improve the health of individuals, families, and communities. A grade of "C" or better is required in all courses. Students cannot apply courses toward both a major and a minor. This minor is open to all students except Community Health majors. Approximately 80% of this minor can be completed online.

Requirements	Hours
Community Health	
<u>CHHS 141</u> Personal Health & Wellness	3
<u>CHHS 223</u> Introduction to Disease Prevention in Community Health and Human Services	3
<u>CHHS 342</u> The Health Education/Promotion Specialist	3
<u>CHHS 404</u> Global Trends in Health Education/Promotion	3
Community Health Electives	
Select three of the following courses:	9
<u>CHHS 343</u> Behavioral Theory in Health Education/Promotion	
<u>CHHS 402</u> Mental Health, Stress Management & Wellness Promotion	
<u>CHHS 408</u> Substance Abuse Prevention and Education	
<u>CHHS 421</u> Health Communications & Health Coaching	
<u>CHHS 423</u> Human Sexuality	
<u>CHHS 426</u> Wellness Promotion Peer Educators Part 1	
<u>CHHS 427</u> SHAPE Peer Education	
<u>CHHS 431</u> Planning and Implementing Health Education/Promotion Programs	
<u>CHHS 432</u> Administration of Health Education/Promotion Programs	
<u>CHHS 452</u> Evaluation and Grantsmanship in Health Education/Promotion Programs	
<u>CHHS 489</u> Intervention Strategies for Health Education/Promotion	
<u>CHHS 498</u> Lifespan Dimensions in Women's Health and Nutrition	
This minor is not available to Community Health majors	
Total Hours	21

## Minor in Human Services

The Human Services Minor provides students with a foundation for serving diverse populations as a helping professional. A grade of "C" or better is required in all courses. Students cannot apply courses toward both a major and a minor. This minor is open to all students except Humans Services majors. This minor is offered completely online.

Requirements	Hours
CHHS 350 The Human Services Professional	4
CHHS 415 Case Management in Human Services	3
CHHS 420 Helping Skills in Human Services	4
CHHS 425 Community Mobilization in Human Services	3
CHHS 455 Fundraising and Grantmanship in Human Services	3
CHHS 460 Management of Human Services Organizations	3
Total Hours	20

## Minor in Kinesiology Exercise Science

A grade of 'C' or better is required in all courses in the minor. Students cannot apply courses toward both major and minor course requirements. Students may need to take additional electives to reach the 20-hour requirement in order to receive the minor.

Requirements	Hours
CHHS 140 First Aid	3
CHHS 141 Personal Health & Wellness	3
or KIN 222 Concepts of Health and Fitness	
BY 115 Human Anatomy	4
BY 116 Introductory Human Physiology	4
KIN 400 Physiology of Exercise	4
<b>Electives (Choose 2-6 Hours)</b>	<b>2-6</b>
KIN 132 Group Exercise Leadership <sup>1</sup>	
KIN 305 Motor Development	
KIN 307 Applied Kinesiology	
KIN 402 Basic Athletic Training <sup>1</sup>	
KIN 405 Sports Nutrition	
KIN 425 Biomechanics <sup>1</sup>	
KIN 440 Principles of Conditioning the Athlete	
KIN 450 Physical Activity for Individuals with Disabilities/SL <sup>1</sup>	
KIN 451 Physical Activity for Senior Adults <sup>1</sup>	
KIN 460 Clinical Exercise Physiology <sup>1</sup>	
KIN 470 Advanced Treatment Athletic Training <sup>2</sup>	
KIN 485 Exercise Testing/Prescription <sup>1</sup>	
Total Hours	20-24

The BY 115, BY 116, and CHHS 140 requirements are waived for ONLY students majoring in Biomedical Sciences, who have completed BMD 310 (4 hrs.), BMD 315 (4 hrs.), and CDS 425 (1 hr.), respectively. As BMD 310, BMD 315, and CDS 425 cannot be used to satisfy both the Biomedical Sciences major and the Exercise Science minor, students must replace these 9 hours with courses from the Electives listed below. These replacement hours must include KIN 307.

<sup>1</sup> Pre-reqs will be waived for electives as long as the student has completed the required courses.

<sup>2</sup> Requires successful completion of KIN 402.

## Minor in Physical Education Athletic Coaching

A grade of "C" or better is required in all courses in the minor. Students cannot apply courses toward both a major and minor.

Requirements	Hours
<b>First Aid/CPR Certification Required</b>	<b>0-3</b>
CHHS 140 First Aid <sup>1</sup>	
<b>Biology</b>	
BY 115 Human Anatomy	4
<b>Kinesiology</b>	
KIN 222 Concepts of Health and Fitness	3
KIN 115 Weight Training	1
KIN 117 Team Sports	1
KIN 118 Sports Using Implements	1
KIN 201 Officiating Techniques	1-2
KIN 307 Applied Kinesiology	3
KIN 402 Basic Athletic Training	2
KIN 407 Coaching Young Athletes	3
<b>Kinesiology Elective</b>	
Take any 100 Level KIN course	1
Total Hours	20-24

<sup>1</sup> See Kinesiology program policy for 0 credit hour CHHS 140 waiver criteria: <http://www.uab.edu/education/home/images/pdf/hs/chhs-140-substitution-policy-for-kinesiology.pdf>

## CHHS-Comm Hlth Human Serv Courses

### CHHS 140. First Aid. 3 Hours.

This course provides students with knowledge and skills necessary to perform basic first aid and CPR procedures.

### CHHS 141. Personal Health & Wellness. 3 Hours.

This course provides students with knowledge and skills that support a healthy lifestyle. Topics include dimensions of wellness, psychological health, spiritual health, stress, social health, nutrition, weight management, fitness, sexual behavior/issues, addictions related to alcohol, tobacco, and other drugs, preventable diseases and infectious illnesses, consumer health, injury and violence prevention, and environmental health.

### CHHS 200. Quality of Life. 2 Hours.

Total health; effects of lifestyle on total health. Decision-making skills to enable health enhancing choices and engage in health enhancing activities to improve and maintain health status. For education majors only.

### CHHS 223. Introduction to Disease Prevention in Community Health and Human Services. 3 Hours.

This course examines the determinants of health and well-being including disease etiology, prevalence, prevention, control and treatment techniques. The course will differentiate between local, state, federal, and international health organizations.

**Prerequisites:** CHHS 141 [Min Grade: C](Can be taken Concurrently) or HE 141 [Min Grade: C]) and KIN 222 [Min Grade: C](Can be taken Concurrently) or PE 222 [Min Grade: C]) or (HPE 200 [Min Grade: C] or CHHS 200 [Min Grade: C])

**CHHS 300. Ethics and Policy in Human Services. 3 Hours.**

This course introduces students to the role of professional ethics and policy implication in the helping professions. Students will focus on the knowledge, skills and values essential for ethical decision-making in responsible practice. Case studies through integrated learning will be utilized for discussion, self-exploration, and skill building for problem solving of ethical issues and dilemmas.

**CHHS 305. Social and Cultural Diversity in Human Services. 3 Hours.**

This course promotes the knowledge and skills needed to explore issues of diversity in a productive, professional and ethical manner. Topics span the discipline of public health and integrate materials, concepts, and frameworks from numerous fields in public health, health promotion, environmental health and health policy.

**CHHS 342. The Health Education/Promotion Specialist. 3 Hours.**

This course conveys the foundations of the Health Education/Promotion profession and the necessary competencies of the Health Education Specialist. Topics include background and history of health education/promotion, philosophical foundations, introduction to theories and planning models, professional ethics, settings and organizations for health education/promotion, application of data, current literature, future trends, and discipline specific careers paths.

**Prerequisites:** (HE 141 [Min Grade: C] or CHHS 141 [Min Grade: C]) (Can be taken Concurrently)

**CHHS 343. Behavioral Theory in Health Education/Promotion. 3 Hours.**

This designated service learning course goes into depth regarding theories for health behavior change with an introduction to basic planning models. Interactive assignments related to theories and community service learning activities are significant aspects of this course.

**Prerequisites:** CHHS 141 [Min Grade: C] and CHHS 342 [Min Grade: C] (Can be taken Concurrently)

**CHHS 350. The Human Services Professional. 4 Hours.**

This course introduces the evolving field of human services. Content will include learning about what "human services" is, the helping process, and the roles and duties of those calling themselves "human service" providers. Coverage will also include learning about a broad range of services, jobs, functions, and roles human service professionals provide. Basic principles, concepts, and theory in the helping field will be covered.

**CHHS 402. Mental Health, Stress Management & Wellness Promotion. 3 Hours.**

This course explains how an individual can manage their internal and external stressors to optimize their mental and emotional well-being. Topics span the discipline of health promotion and wellness, including theoretical models, discussions on the importance of relationships and social support, personality differences and risk of disease, how attitudes and emotions can change body chemistry, heart rates, hormone levels, and immunity against disease.

**CHHS 404. Global Trends in Health Education/Promotion. 3 Hours.**

This course will introduce students to past and current global health issues and health education/promotion priorities around the world. Health education and promotion practices in different countries within various region of the world will be explored.

**CHHS 408. Substance Abuse Prevention and Education. 3 Hours.**

Concept, manifestation, and causes of addiction. Major drug classifications and their effects. Potential of drug education as preventative mechanism.

**CHHS 415. Case Management in Human Services. 3 Hours.**

This course is an introductory course in studying the field of human services. Content will include learning about what "human services" is, the helping process, and the roles and duties of those calling themselves "human service" providers. Coverage will also include learning about a broad range of services, jobs, functions, and roles human service professionals provide in everyday life. Basic principles, concepts, and theory in the helping field will be covered.

**Prerequisites:** EPR 350 [Min Grade: C] or CHHS 350 [Min Grade: C]

**CHHS 420. Helping Skills in Human Services. 3-4 Hours.**

This course promotes skills appropriate for selected health problems, problem solving, and referrals. It also promotes skills to enhance communication with clients, peers, and community members at large.

**CHHS 421. Health Communications & Health Coaching. 3 Hours.**

Skills appropriate for selected health problems, problem solving, and referrals. Skills to enhance communication with clients, peers, and community members at large. Health-related theories, communication theories, and marketing strategies.

**Prerequisites:** (CHHS 141 [Min Grade: C] or HE 141 [Min Grade: C] or HPE 200 [Min Grade: C] or HE 222 [Min Grade: C] or KIN 222 [Min Grade: C]) and (CHHS 342 [Min Grade: C] or HE 342 [Min Grade: C])

**CHHS 423. Human Sexuality. 3 Hours.**

This course provides an overview of biological, sociological, psychological, and ethical aspects of human sexuality as encountered by health education specialists and human services practitioners. Content related to an anatomical overview, sexual decision making process, harm reduction approaches, social norms, societal issues, gender stereotypes, sexual complications, and the sexuality of special populations are emphasized.

**CHHS 425. Community Mobilization in Human Services. 3 Hours.**

This course provides an overview of the need for community change, explores how community change activities relate to the change agent's professional goals, and provides a theoretical framework to deepen the understanding of community mobilization. The focus on successful models of community change, settings and services in which change takes place, and inclusion of diverse community resources provides a strong foundation for community advocacy.

**CHHS 426. Wellness Promotion Peer Educators Part 1. 3 Hours.**

The intent of this course is to provide students with the skills to facilitate group presentations on health-related content to their peers. Students will complete the Certified Peer Education Training a comprehensive, interactive, and skills-based training. Students will learn about the programs and services offered at the UAB Student Health and Wellness Center and will be able to articulate this to new student users. Students will learn basic alcohol and other drug information in preparation for presentation to their peers.

**CHHS 427. SHAPE Peer Education. 3 Hours.**

This course is designed to provide students with the knowledge and skills needed to effectively communicate accurate information related to sexual health and decision-making. The concept of total health and the effects of lifestyle and decision-making on the quality of life will be emphasized. Students will learn decision-making and other skills that will enable them to make healthy choices and engage in healthy activities to improve and maintain an ideal level of quality of life. By the end of this course the student will be able to facilitate workshops on Sexual Decision Making, HIV Awareness, and Healthy Relationships.

**CHHS 428. Wellness Promotion Peer Education Part 2. 3 Hours.**

This course involves students active engagement in the delivery of peer education programs and services to the UAB campus community. The purpose of the Wellness Promotion Peer Education Part 2 course is to provide candidates with a supervised, field-based, work experience in a wellness promotion setting.

**Prerequisites:** CHHS 426 [Min Grade: C]

**CHHS 431. Planning and Implementing Health Education/Promotion Programs. 3 Hours.**

This course emphasizes content and process planning and implementation of health education/promotion programs. Major topics include the foundations and models of the planning process; factors that impact health education/promotion; use and development of basic needs assessment; introduction to measurements; mission statements, goals, and objectives; community organizing/building; resources, and marketing.

**Prerequisites:** (CHHS 141 [Min Grade: C] or HE 141 [Min Grade: C] or HPE 200 [Min Grade: C] or KIN 222 [Min Grade: C] or HE 222 [Min Grade: C]) and (CHHS 342 [Min Grade: C] or HE 342 [Min Grade: C]) and (CHHS 343 [Min Grade: C] or HE 343 [Min Grade: C])

**CHHS 432. Administration of Health Education/Promotion Programs. 3 Hours.**

This course is focused on issues that surround the best practices for administration and management of health education/promotion programs in a variety of settings. Topics include leadership and professionalism, theories, needs assessment, quantitative and qualitative data, fiscal and human resources, delivery of health education/promotion, and communication and advocacy.

**Prerequisites:** (CHHS 141 [Min Grade: C] or HE 141 [Min Grade: C] or HPE 200 [Min Grade: C] or KIN 222 [Min Grade: C] or HE 222 [Min Grade: C]) and (CHHS 342 [Min Grade: C] or HE 342 [Min Grade: C])

**CHHS 452. Evaluation and Grantsmanship in Health Education/Promotion Programs. 3 Hours.**

This course enhances knowledge, competencies and skills required to obtain funding and to evaluate health education/promotion programs for defined health issues and audiences. The course emphasizes elements of evaluating intervention activities at micro- and macro-levels including determining needs and assets, writing realistic goals and measurable objectives, incorporating quantitative and qualitative data, and evaluating behavior change. The course also focuses on grant preparation, including topics such as engaging funders, establishing grant need, planning grant activities, creating a budget, and program sustainability.

**Prerequisites:** (CHHS 342 [Min Grade: C] or HE 342 [Min Grade: C])

**CHHS 455. Fundraising and Philanthropy in Human Services. 3 Hours.**

This course introduces students to the area of fund raising, fund development, special events, annual fund, major gifts, capital campaigns, grant writing, and basic finance in the nonprofit sector. The course provides the foundation and tools necessary to implement fundraising plans.

**CHHS 460. Management of Human Services Organizations. 3 Hours.**

This course provides the opportunity for development of managerial theory and philosophy of the human services professional. Topics covered in the course include understanding organizations and systems perspectives, use of structure to facilitate the organizational mission, job analysis and job design, human resources planning, recruitment and hiring of human services professionals, and maximizing employee potential. Supervision, performance appraisals, use of data for organizational evaluation, and the role board members are other areas of emphasis.

**CHHS 489. Intervention Strategies for Health Education/Promotion. 3 Hours.**

The purpose of this course is to present the interrelationship of intervention planning to promote health behavior change and the selection and use of teaching aids, methods and materials to facilitate helping relationships. Special problems associated with health interventions are discussed. Students will learn ethical, theoretical and practical aspects of health education, teaching techniques, curricular development, organization skills and techniques.

**Prerequisites:** CHHS 223 [Min Grade: C]

**CHHS 490. Special Projects in Health Education. 1-6 Hour.**

Exploration of health-related topic via professional literature or research project.

**CHHS 491. Problems in Health Education. 1-6 Hour.**

Controversial topics in health education or topics identified as state or national priority.

**CHHS 497. Human Services Internship. 3-9 Hours.**

The purpose of the internship is to provide an opportunity for students to apply knowledge and skills they have learned during their course work in human services. The internship offers students the opportunity to gain hands-on experience in a real world setting and under the leadership of an experienced health education or human services professional. This is also the time whereby students are sharpening their skills as a soon-to-be job applicant. Attaining professional development, appropriate credentialing and developing a well-crafted resume and interviewing skills are part of that process.

**CHHS 498. Lifespan Dimensions in Women's Health and Nutrition. 3 Hours.**

Highlights will include health issues specific to women, chronic diseases, body image and eating disorders, health promotion and disease prevention, pregnancy, childbirth and lactation, weight loss/maintenance, menopause and ageing, fitness management and stress management.

**CHHS 499. Community Health Internship. 3-9 Hours.**

Supervised work experience in a pre-approved community health agency/organization.

**Prerequisites:** CHHS 431 [Min Grade: C] or HE 431 [Min Grade: C]

**ECG-Counseling, Human Services Courses****ECG 152. Let's BMEN: How to successfully Navigate the collegiate Experience. 1 Hour.**

This course is design to be an academic tool for participants in the BMEN program. Academic skills, and resources along with male perspectives of color will also be presented.

**ECG 155. Job Search Strategies. 1 Hour.**

Current occupational information, employer information, and job market trends. Relevance of academic preparation to world of work. Job search strategies and resume preparation.

**ECG 300. Career Mapping. 3 Hours.**

Get what you want by identifying and building key skills being sought by employers and graduate school admission committees today. This course provides an interactive exploration into arriving at your destination and having fun along the way. Gain tips and insights from executives in your field into professional development, resume/interviewing, communication, team building, networking (live and virtual), and other key areas necessary to help you present yourself as the applicant of choice. Master these steps and begin to map your journey toward career success.

**ECG 420. Alcoholism. 3 Hours.**

Emotional, intellectual, psychological, and social aspects of alcoholism.

**ECG 422. Strategy for Attitude Devlmt. 3 Hours.**

Dynamics of positive and negative attitudes. Techniques and exercises for improving communication, empathy, and awareness. Techniques for determining personal strengths, setting goals, managing time, and developing strong positive attitudes.

**ECG 423. Strategy Effective Interviewin. 3 Hours.**

Selected interviewing skills described, demonstrated, and practiced in role play with feedback to increase effectiveness in interviewing.

**ECG 424. Constructive Conflict Mgmnt. 3 Hours.**

Strategies of constructive conflict management in multicultural settings. Synthetic culture laboratory organized to practice managing conflict in safe context. Strategies for mediating conflict focus on increased awareness, knowledge, and skills for reframing conflict.

**ECG 438. Interpersonal Skills Develop. 3 Hours.**

Classroom lectures plus experiential, structured exercises in small groups for development of more effective interpersonal communication skills.

**ECG 451. Issues/Helping Professions. 1-3 Hour.**

Discussion of issues in the helping professions.

**ECG 460. Sign Language I: Survival. 3 Hours.**

Beginning course in manual communication. Finger spelling and language of signs to facilitate communication with individuals who have severe hearing impairments.

**ECG 461. Sign Language II: Intermediate. 3 Hours.**

Manual communication; signed English. Finger spelling and language of signs.

**Prerequisites:** ECG 460 [Min Grade: C]

**ECG 462. Sign Language III: Advanced. 3 Hours.**

American Sign Language. Syntax structure for more effective communication with adult deaf persons. Sign concept and concept transmission.

**Prerequisites:** ECG 461 [Min Grade: C]

**ECG 463. Intro Interpreting for Deaf. 3 Hours.**

Basic theories, principles, and practices of interpreting for deaf in general and specialized settings; guidelines appropriate in situational settings. Development of interpreting skills and manual communications skills.

**Prerequisites:** ECG 462 [Min Grade: C]

**ECG 470. Crisis Intervention Techniques. 3 Hours.**

Crisis counseling theory, applications of crisis intervention, and crisis situations.

**ECG 474. Sem Death Dying and Bereav. 3 Hours.**

Attitudes, beliefs, and response to death, dying, and bereavement. Multicultural perspective. Implications for counseling.

**EDF-Foundations of Education Courses****EDF 361. Ethical Issues in Professional Practice. 3 Hours.**

Examines professional ethics and legal issues related to teaching, student supervision, contractual obligation, conditions of employment, and other workplace issues related to conduct and practice in the field of public school teaching. Legal mandates and professional codes of ethics are analyzed. Also addressed are the development of professional judgment and of moral decision making abilities.

**EDF 362. Foundations of Education I: Social, Historical, Philosophical. 3 Hours.**

This course addresses the relationship among educators, schools, and society through seminars, field experiences in schools, and exposure to civic and community organizations. Historical and contemporary perspectives on political, economic, and social issues and problems in education, the role and value of diversity and equity in education, an introduction to professional ethics, and the importance of civic responsibility are significant components of this course.

**Prerequisites:** EDU 200 [Min Grade: C](Can be taken Concurrently)

**EDF 363. Special Topics in Education Foundations. 3 Hours.**

Educational Foundations Special Topics. This course addresses a range of special topics related to educational foundations. Course design and focus will vary and may include service learning and study away formats.

**EPR-Educational Psychology Courses****EPR 214. Introduction to Educational Statistics. 3 Hours.**

This introductory statistics course will cover basic descriptive and inferential statistics, including: Measures of central tendency; measures of variability; frequency distributions; normal curve of distribution; sampling; hypothesis testing, analysis of variance; correlation; regression; and introduction to chi-square.

**EPR 363. Foundations of Education II: Psychological. 3 Hours.**

Psychological principles basic to the understanding of the learner, learning process, and learning situation is covered, as well as all major principles of Human Development.

**Prerequisites:** EDU 200 [Min Grade: C](Can be taken Concurrently)

**EPR 410. Measurement and Evaluation in Education. 3 Hours.**

For early childhood/elementary education majors only. Basic concepts and principles of measurement and evaluation of personal and academic progress in classroom. Formative and summative assessment; Response to Instruction; and PLAN2020. Elementary descriptive statistics and measurement techniques used in student evaluation. Quantitative literacy is a significant component of this course.

**EPR 411. Measurement and Evaluation in Education. 3 Hours.**

For secondary education majors only. Principles of student assessment. Basic concepts and principles of measurement and evaluation of personal and academic progress in classroom; Formative and summative assessment; Response to Instruction; and PLAN2020. Elementary descriptive statistics and measurement techniques used in student evaluation. Quantitative Literacy is a significant component of this course. Admission to TEP required.

**Prerequisites:** EHS 436 [Min Grade: C] or EHS 438 [Min Grade: C] or MU 432 [Min Grade: C] or MU 433 [Min Grade: C]

**EPR 414. Lifespan Human Development. 3 Hours.**

Physical, cognitive, social and moral development across the lifespan and including death and dying from a variety of theories are covered.

**Prerequisites:** PY 101 [Min Grade: C]

**KIN - Kinesiology Courses****KIN 101. Beginning and Advanced Beginning Swimming. 1 Hour.**

This course provides the student with basic aquatic safety skills as well as aquatic survival skills. The strokes include beginner, front crawl, elementary back stroke, breast stroke, back crawl and side stroke. Intermediate or advanced swimmers will be administratively withdrawn from the course.

**KIN 102. Intermediate Swimming/Swimmer Course. 1 Hour.**

The intermediate swim course is part of the American Red Cross "Learn to Swim" Program, which is designed for learning and improving swim strokes. Gaining the knowledge and skills needed in basic water safety is the common theme in providing the information and resources to make participation in aquatics activities a lifetime pursuit. Students must be able to jump in the deep end, recover and tread or float for one minute, then swim 25 yards using crawl stroke or elementary backstroke.

**KIN 103. Lifeguard Training. 1 Hour.**

The American Red Cross Lifeguarding course focuses on training people who are already good swimmers. The course covers the skills and knowledge required for effective lifeguarding at swimming pools and at nonsurf, open-water beaches. Must be able to swim 300 yards continuously and surface dive 7 - 10 feet to retrieve a 10 lb. object.

**KIN 104. Tennis. 1 Hour.**

Course will provide students with the knowledge and skill needed to play the game of tennis.

**KIN 105. Golf. 1 Hour.**

This course includes beginning skills, rules and etiquette for recreational golf.

**KIN 108. Weight Training and Aerobics. 1 Hour.**

This course includes basic weight training and aerobic instruction and workouts.

**KIN 110. Racquetball. 1 Hour.**

Beginning skills, rules, and strategy.

**KIN 111. Outdoor Pursuits Leadership. 1 Hour.**

The course is designed to provide students with an overall view and appreciation for outdoor activities such as hiking, general kayaking/canoeing, and camping/backpacking.

**KIN 112. Dance and Gymnastics. 1 Hour.**

This course provides future teachers background in planning and conducting basic dance and gymnastic instruction. Intended for physical education majors.

**KIN 114. Rec Games/Outdoor Leisure. 1 Hour.**

This course will enable students to experience a wide variety of recreational games and outdoor leisure pursuits.

**KIN 115. Weight Training. 1 Hour.**

Instruction on basic resistance training principles and techniques for beginning and intermediate trainees.

**KIN 116. Ballroom and Latin Dancing. 1 Hour.**

This course includes instruction of the more popular social Latin and Ballroom dances.

**KIN 117. Team Sports. 1 Hour.**

This course will enable students to learn the basic skills of different team sports (such as team handball, football, volleyball, basketball, soccer, speedball, Tchoukball, and rugby). Students will practice those skills to have the ability to gain skill proficiency in playing the sports as well as teaching others to play the sport.

**KIN 118. Sports Using Implements. 1 Hour.**

This course will enable students to learn the basic skills of different sports that require use of an implement (i.e., badminton, cricket, hockey, lacrosse, softball, and tennis). Students will practice those skills to have the ability to gain skill proficiency in playing the sport as well as teaching other to play the sport.

**KIN 119. Football. 1 Hour.**

Basic skills, rules and strategies.

**KIN 120. Volleyball. 1 Hour.**

Basic skills, rules and strategies.

**KIN 121. Soccer. 1 Hour.**

Basic skills, rules and strategies.

**KIN 122. Basketball. 1 Hour.**

Basic skills, rules and strategies.

**KIN 123. Softball. 1 Hour.**

Basic skills, rules and strategies.

**KIN 124. Beginning Whitewater Kayaking. 1 Hour.**

This course is designed to take interested student from zero knowledge to being able to competently maneuver a Kayak in flat water and demonstrate basic paddling safety skills.

**KIN 125. Cheerleaders and Dance Team. 1 Hour.**

Open to members of UAB cheerleading and dance teams only.

**KIN 126. Flying Disc Sports. 1 Hour.**

Students in this class will learn the basic skills of throwing and catching flying discs. They can incorporate these techniques in the popular games including Ultimate and Disc Golf.

**KIN 127. Running and Jogging. 1 Hour.**

This course includes basic running and jogging instruction and training.

**KIN 128. Rock Climbing. 1 Hour.**

Introduction to the fundamentals of rock climbing. Lectures and drills designed to give students an introduction to the skills and knowledge to rock climb safely in a single pitch sport climbing environment.

**KIN 129. Aikido. 1 Hour.**

Series of techniques adapted to respond to a variety of attacks and to multiple attackers.

**KIN 130. Scuba Diving. 1 Hour.**

This course includes physiology, physics, safety issues, and guidelines of recreational scuba diving through lectures, quizzes, and final exams. Students will learn and be able to demonstrate the proper assembly and use of scuba equipment as well as proper swimming and breathing techniques. Students must provide their own snorkel, fins, and mask. Must be able to tread water for 10 minutes and swim 200 yards.

**KIN 131. Aerobics. 1 Hour.**

Opportunity to improve cardiovascular fitness, flexibility, muscular strength and endurance and body composition in a group setting. Improves rhythm and coordination, body and space awareness, energy management appreciation of a healthy lifestyle and mental focus and concentration.

**KIN 132. Group Exercise Leadership. 1 Hour.**

Review and application of exercise science theory to group exercise. Repertoire of exercise for flexibility, strength, aerobic dance, and step training. Practice teaching each segment of a class at end of course will be able to teach a 60 minute group exercise class.

**Prerequisites:** KIN 115 [Min Grade: C] and KIN 131 [Min Grade: C]

**KIN 133. Aerobic Training. 1 Hour.**

The purpose of this course is to provide information and experiences in aerobic exercise training, heart rate monitoring, and fitness assessment.

**KIN 134. The College Athlete: Concerns and Issues. 3 Hours.**

Needs of and demands on college athletes. Time management, study skills and habits, drug use and abuse, drug testing and NCAA rules, use of trainer and training facilities, and nutritional practices. Holistic health with emphasis on keeping athletic experience in perspective.

**KIN 136. Intro to Physical Education Fitness and Sport. 3 Hours.**

Introduction to the field of kinesiology; professional organizations, career opportunities, historical development, and philosophical and scientific foundations.

**KIN 201. Officiating Techniques. 1-2 Hour.**

Knowledge and practical experience in officiating various team and individual sports. Includes officiating UAB intramurals.

**KIN 206. Introduction to Teaching Physical Education. 3 Hours.**

Research on teaching physical education and sociocultural influences on children as learners; development of basic teaching skills.

**KIN 222. Concepts of Health and Fitness. 3 Hours.**

Fitness and related health concepts. Fitness assessment, variety of fitness-related activities, and development of personal fitness program. Nutrition and cardiovascular health.

**KIN 300. Organization and Administration of Physical Education. 3 Hours.**

This course is designed to provide the student with opportunities to increase their knowledge of problems and issues involved in the organization and administration of physical education programs in elementary and secondary schools.

**KIN 301. Teaching Health Education and Physical Education in Elementary Schools. 3 Hours.**

For classroom teachers. Communicating and working with physical education specialists, selecting developmentally appropriate activities, and integrating movement activities and concepts into classroom subjects. Background information and skills to implement health education in grades K-5.

**Prerequisites:** CHHS 141 [Min Grade: C] or HE 141 [Min Grade: C] or CHHS 200 [Min Grade: C] or HPE 200 [Min Grade: C] or KIN 222 [Min Grade: C] or HE 222 [Min Grade: C]

**KIN 305. Motor Development. 3 Hours.**

This course focuses on lifespan motor development and the processes and mechanisms underlying the development of motor skills. Topics include development of motor patterns, perceptual motor abilities, physical growth and maturation, and cognitive and emotional development. The course will engage students through lecture, skill analysis labs, and project-based learning activities. Motor behavior principles will be applied through direct and/or indirect work with young children.

**KIN 307. Applied Kinesiology. 3 Hours.**

Knowledge of anatomical terminology and analysis of internal muscular forces that act on bones resulting in motion at major movable joints. Introduction to the application of biomechanics to comprehend the external and internal forces that occur in human movement.

**Prerequisites:** BY 115 [Min Grade: C] and (MA 105 [Min Grade: C] or MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 109 [Min Grade: C] or MA 110 [Min Grade: C] or MA 125 [Min Grade: C] or MA 126 [Min Grade: C] or MA 225 [Min Grade: C] or MA 226 [Min Grade: C])

**KIN 308. Adapted Physical Education. 3 Hours.**

This methods course provides knowledge and skills for assessing, interpreting, programming, and instructing K-12 students with disabilities in physical education. Topics include the law, inclusion, IEP writing, differentiation, modifications, instructional delivery, and generalities of specific disabilities. The course will engage students through lecture, peer teaching, and problem-based learning activities. Best practices teaching children with disabilities will be applied through clinical experiences in select schools.

**Prerequisites:** ECY 300 [Min Grade: C]

**KIN 311. Elementary School Physical Education. 3 Hours.**

The course will include the nature and content of a developmentally appropriate elementary physical education program.

**KIN 320. Fitness/Motor Skill Acquisition. 3 Hours.**

This course will enable candidates to acquire the knowledge and the skills necessary to analyze and appropriately teach motor skills and design developmentally appropriate fitness activities for middle school students.

**KIN 320L. Sports Skill Proficiency. 1 Hour.**

This course will enable candidates to acquire the knowledge and the skills necessary to teach the critical elements needed to perform all basic sport skills. Candidates will demonstrate skill proficiency in the sport skills as well as the ability to teach others to perform the skills.

**KIN 323. Techniques Teaching Fitness and Nutrition in Schools. 3 Hours.**

This course will enable candidates to learn techniques and strategies for teaching fitness and nutrition in physical education programs. Admission to TEP required.

**KIN 340. Planning/Management of Fitness Facilities. 3 Hours.**

Management, marketing, operational leadership, evaluation, and planning principles of commercial, corporate, clinical, and community health/fitness facilities.

**Prerequisites:** KIN 136 [Min Grade: C] and (HE 141 [Min Grade: C] or CHHS 141 [Min Grade: C])

**KIN 400. Physiology of Exercise. 4 Hours.**

Knowledge of acute and chronic physiological responses to exercise. Includes clinical laboratory experiences.

**Prerequisites:** BY 116 [Min Grade: C]

**KIN 402. Basic Athletic Training. 2 Hours.**

Knowledge and skills in organization and administration, mechanisms of injury, recognition and evaluation of injuries, injury management, general nutritional concerns, medical conditions and taping and bracing techniques.

**Prerequisites:** BY 115 [Min Grade: C](Can be taken Concurrently) and KIN 136 [Min Grade: C](Can be taken Concurrently) and KIN 307 [Min Grade: C]

**KIN 405. Sports Nutrition. 3 Hours.**

Digestion, absorption and metabolism of nutrients and ergogenic aids relative to sports performance.

**Prerequisites:** BY 116 [Min Grade: C]

**KIN 407. Coaching Young Athletes. 3 Hours.**

The course is designed to increase the students' knowledge and understanding of the principles of coaching regarding sport psychology, sport pedagogy, sport physiology, and sport management. This course will include a practicum for hands-on learning opportunities.

**KIN 409. Assessment in Physical Education. 3 Hours.**

This course emphasizes the development, implementation, and analysis of assessments within K-12 physical education programs, including assessment of the cognitive, physical, and psychomotor domains including program assessment.

**KIN 425. Biomechanics. 3 Hours.**

The study of anatomical, mechanical and neurophysiological factors influencing human motion. Emphasis is given to the qualitative and quantitative application of biomechanical principles to analyze human movement.

**Prerequisites:** BY 115 [Min Grade: C] and BY 116 [Min Grade: C] and KIN 307 [Min Grade: C] and (MA 105 [Min Grade: C] or MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 125 [Min Grade: C] or MA 126 [Min Grade: C] or MA 225 [Min Grade: C] or MA 226 [Min Grade: C])

**KIN 440. Principles of Conditioning the Athlete. 3 Hours.**

Isometric, isotonic, eccentric, variable resistance, and isokinetic training; tapering of the athlete; designing endurance and resistance training programs; weight training techniques for specific sports.

**Prerequisites:** BY 115 [Min Grade: C] and KIN 400 [Min Grade: C]

**KIN 450. Physical Activity for Individuals with Disabilities/SL. 3 Hours.**

Knowledge and skills needed to meet the unique fitness and physical activity needs of individuals with various disabilities. Design and implementation of personal training/fitness programs and disability sports/recreation programs for individuals with disabilities based on assessments of health-related strengths and needs. This is a designated service-learning course integrating academic learning, civic learning, and meaningful service to the community.

**Prerequisites:** BY 116 [Min Grade: C] and (HE 141 [Min Grade: C] or CHHS 141 [Min Grade: C])

**KIN 451. Physical Activity for Senior Adults. 3 Hours.**

Knowledge and skills needed to lead physical activity and exercise in older adults.

**Prerequisites:** BY 116 [Min Grade: C] and (HE 141 [Min Grade: C] or CHHS 141 [Min Grade: C])

**KIN 460. Clinical Exercise Physiology. 3 Hours.**

In depth study of the use of exercise as a form of treatment and prevention of chronic disease.

**Prerequisites:** BY 116 [Min Grade: C] and (HE 141 [Min Grade: C] or CHHS 141 [Min Grade: C]) and (KIN 400 [Min Grade: C])

**KIN 470. Advanced Treatment Athletic Training. 3 Hours.**

Seminar in treatment and prevention of athletic injuries.

**Prerequisites:** KIN 402 [Min Grade: C]

**KIN 485. Exercise Testing/Prescription. 3 Hours.**

Knowledge and skills needed to perform pre-exercise health risk and physical fitness assessments, interpret results and develop exercise prescriptions for apparently healthy individuals and individuals with medically controlled diseases (based on 'American College of Sports Medicine' guidelines). This course also includes a high level review of exercise physiology and application of behavioral and motivational strategies to support clients in adopting and maintaining healthy lifestyle behaviors.

**Prerequisites:** BY 115 [Min Grade: C] and BY 116 [Min Grade: C] and (HE 140 [Min Grade: C] or CHHS 140 [Min Grade: C]) and KIN 307 [Min Grade: C] and KIN 400 [Min Grade: C](Can be taken Concurrently)

**KIN 489. Instructional Strategy for Physical Education K-12. 6 Hours.**

This course will focus on information to help potential physical educators attain teaching skills and knowledge necessary to design, implement and evaluate developmentally appropriate K-12 physical education programs. Students will gain hands-on teaching experience with students in school settings.

**KIN 492. Special Projects in Kinesiology. 1-6 Hour.**

Designed as an independent study for students who wish to conduct an in-depth investigation into a Kinesiology related topic.

**KIN 493. Problems in Kinesiology. 3-6 Hours.**

Provides students with current information regarding a selected physical education related issue. Classes taught under this course title are outside the current physical education program requirements.

**KIN 495. Elementary/Secondary Physical Education Student Teaching. 9 Hours.**

Student teaching provides an opportunity for physical education teacher education candidates to synthesize and apply all knowledge and skills acquired during previous coursework. Interns teach for 15 weeks at two levels, elementary and either middle or high school. The candidates must pass edTPA assessments to receive teacher certification.

**KIN 496. Physical Education Internship Seminar. 1-9 Hour.**

Supports and extends efforts of student teaching. Problem solving related to situations such as classroom management, grading, professionalism and ethics, legal issues, teacher rights, and others that occur during internship.

**KIN 499. Kinesiology Internship. 3-6 Hours.**

Takes place in a setting that is related to the degree and major area of emphasis and serves as the culminating experience of the formal education process. Students complete their internship hours with guidance from their agency supervisor.

**Prerequisites:** KIN 485 [Min Grade: C] and KIN 136 [Min Grade: C] and KIN 400 [Min Grade: C] and KIN 307 [Min Grade: C]

# School of Engineering

**Dean:** Jeffrey W. Holmes, MD, PhD

**Associate Dean for Academic Affairs & Graduate Programs:** Gregg M. Janowski, PhD

**Associate Dean for Undergraduate Programs:** Zoe B. Dwyer, PhD

**Associate Dean for Research:** Timothy M. Wick, PhD

The School of Engineering provides professional education in engineering through the Departments of Biomedical Engineering; Civil, Construction, and Environmental Engineering; Electrical and Computer Engineering; Materials Science and Engineering; and Mechanical Engineering. The Bachelor of Science in Biomedical Engineering; Bachelor of Science in Civil Engineering; Bachelor of Science in Electrical Engineering; Bachelor of Science in Materials Engineering; and Bachelor of Science in Mechanical Engineering are accredited by the Engineering Accreditation Commission (EAC) of ABET. The Bachelor of Science in Engineering degree in Engineering Design will seek accreditation from the Engineering Accreditation Commission of ABET as soon as it is eligible to do so.

Each undergraduate curriculum is comprised of four components: the UAB Core Curriculum as specified for engineering majors; mathematics and basic science courses; a series of engineering courses intended to provide a breadth of technical education; and concentrated study in a particular engineering discipline. The curricula are designed to prepare the graduate to practice the profession of engineering and effectively participate as a member of society. Additionally, the School of Engineering participates in UABTeach.

At the graduate level, the School of Engineering offers programs of study leading to the Master of Science in Biomedical Engineering; the Master of Science in Civil Engineering; the Master of Science in Electrical and Computer Engineering; the Master of Science in Materials Engineering; and the Master of Science in Mechanical Engineering. A Master of Engineering degree is offered with concentrations in Advanced Safety Engineering and Management; Construction Engineering Management; Information Engineering and Management; Structural Engineering; and Sustainable Smart Cities. A Master of Science in Engineering Management degree is offered with concentrations in Biomaterials and Tissue Engineering, Design and Commercialization, Environmental Engineering, Manufacturing Engineering, Power Systems Engineering, Software Engineering, and Vehicle and Robotics Engineering. The Doctor of Philosophy degree in Biomedical Engineering and the Doctor of Philosophy degree in Interdisciplinary Engineering are also offered. Joint Doctor of Philosophy degrees are offered in Civil Engineering, Materials/Metallurgical Engineering, and Materials Science. A shared Doctor of Philosophy degree in Computer Engineering is available.

In order to keep pace with accreditation standards as well as educational and technological developments, the School of Engineering reserves the right to make changes in its degree requirements. Changes may be applied to students already enrolled. In such cases, every effort will be made to give the student the benefit of the new educational program without imposing undue hardships.

## Vision

To be nationally and internationally recognized as a top *research-oriented* School of Engineering: a first choice for a quality undergraduate and graduate education

## Mission

To create and apply knowledge for the benefit of society and to prepare engineering graduates to be immediately productive and able to adapt and to lead in a rapidly changing environment

## Goals

- Provide an excellent educational experience for a community of highly capable students that reflect the diversity of our society
- Develop an education and research program that fosters the development of a community of scholars capable of defining and solving problems to benefit society
- Develop an internationally recognized research program focused in distinctive multi-disciplinary areas
- Develop extensive and mutually beneficial relationships that foster understanding, respect, and a sense of common responsibility
- Provide an environment where faculty and staff can achieve their full potential for the mutual benefit of the School and the individual

## Pre-College Preparation

The recommended program of high school preparation for the study of engineering includes four units of English; four units of mathematics (including algebra, geometry, trigonometry, and calculus); four units of science (biology, chemistry, and physics are strongly recommended); and four units of social science (history, psychology, sociology, etc.).

## Admission to the School of Engineering

### First-Term Freshmen

In addition to satisfying the general requirements for admission to UAB listed in the Undergraduate Catalog, individuals must meet the following minimum requirements:

- For admission to the School of Engineering, an ACT Math sub score of 22 (or SAT equivalent) and high school GPA of 3.00. All freshmen students who meet these requirements are admitted as a Pre-Biomedical, Pre-Civil, Pre-Electrical, Pre-Engineering Design, Pre-Materials, or Pre-Mechanical Engineering major based on their intended program. Students who are undecided on an engineering major are admitted as Pre-Engineering students.
- For direct admission as a Biomedical Engineering major, an ACT composite score of 28 (or SAT equivalent) and high school GPA of 3.00. All freshmen students who meet these requirements are admitted to Biomedical Engineering.

Students who do not meet the above criteria are admitted as Undeclared – Interest in Engineering student in the Vulcan Materials University Academic Success Center. Placement into MA 105 Pre-Calculus Algebra or higher in the pre-calculus sequence will allow students to be admitted to the School of Engineering.

### Transfer Students, Re-Admitted Students, Post-Baccalaureate Students, and Change of Major

To be admitted to the School of Engineering as **Pre-Civil, Pre-Electrical, Pre-Engineering Design, Pre-Materials, or Pre-Mechanical Engineering**, students must have a minimum cumulative GPA of 2.20 and, if applicable, a minimum institutional (UAB) GPA of 2.20 in addition to math placement in MA 105 Pre-Calculus Algebra or higher in the pre-

calculus sequence. Students who are undecided on an engineering major are admitted as Pre-Engineering students.

To be admitted to the School of Engineering as **Pre-Biomedical Engineering**, students must have a minimum cumulative GPA of 3.00 and, if applicable, a minimum institutional (UAB) GPA of 3.00 in addition to math placement in MA 105 Pre-Calculus Algebra or higher in the pre-calculus sequence. Students who meet the math requirement with GPAs between 2.20 and 2.99 will be admitted as Pre-Engineering.

Students are admitted to their chosen department upon completion of the minimum requirements listed below.

## Advancing to Civil, Electrical, Engineering Design, Materials, or Mechanical Engineering

In order to advance to an engineering major listed above, students must meet all of the following minimum requirements:

- Sophomore standing
- Completion (C or better) of MA 125 Calculus I and MA 126 Calculus II
- Completion (C or better) of two required science courses with appropriate labs
- Completion of EGR 110 Introduction to Engineering I and EGR 111 Introduction to Engineering II (or EGR 200 Introduction to Engineering)
- ME 102 Engineering Graphics
- A minimum institutional (UAB) GPA of 2.20 (and a minimum cumulative [UAB + transfer] GPA of 2.20 if applicable)

## Advancing to Biomedical Engineering

In order to advance to Biomedical Engineering, students must meet all of the following minimum requirements:

- Sophomore standing
- Completion (C or better) of MA 125 Calculus I and MA 126 Calculus II
- Completion (C or better) of two required science courses with appropriate labs
- Completion of EGR 110 Introduction to Engineering I and EGR 111 Introduction to Engineering II (or EGR 200 Introduction to Engineering)
- ME 102 Engineering Graphics
- A minimum institutional (UAB) GPA of 3.00 (and a minimum cumulative [UAB + transfer] GPA of 3.00 if applicable)

## Dual Degree Program Participants

Dual degree program participants from cooperating four-year institutions must provide the following information to School of Engineering advisors in order to advance to an engineering major:

- A letter or email from the student acknowledging their participation in the Dual Degree Program and intent to complete an Engineering degree at UAB
- A letter from the cooperating institution stating that the student has successfully completed the general education requirements at that institution and will be awarded a degree from the institution upon completion of UAB Engineering requirements

## Change of Major within the School of Engineering

Students changing majors within the School of Engineering should follow procedures outlined under [Declaration of Major](#) in this catalog. Students must meet the requirements listed previously.

## Mandatory Academic Advising

To assure that students are progressing toward graduation, the School of Engineering faculty advisors provide academic advice and planning each term. During advising, students receive a registration access code (RAC) which will allow them to register for courses the following semester. Pre-Engineering students are advised by engineering faculty in the School of Engineering's Dean's Office. Upon admission to Biomedical, Civil, Electrical, Engineering Design, Materials, or Mechanical Engineering, students are advised by engineering faculty within their major.

## Pre-Health Program Option

Any undergraduate program in engineering can be configured to satisfy pre-health requirements but requires additional coursework. Further information on pre-health program options can be obtained from:

[Pre-Health Advising](#) • Dr. Dale S. Feldman • School of Engineering, Pre-Health Program Coordinator • Hoehn Engineering Building • 1075 13th Street South • Room 361 • Birmingham, Alabama 35294-4440

## Core Curriculum as Specified for Engineering Majors

Students in the School of Engineering follow the [University Core Curriculum](#) with the following exceptions and additional specifications:

- Engineering students are required to take 9 hours in Core Curriculum Area II: Humanities and Fine Arts to include a minimum of 3 semester hours in literature and 3 semester hours in the fine arts.
- Engineering students should take the following course to satisfy the Core Curriculum Area III Mathematics requirement: MA 125 Calculus I.
- Engineering students should take the following courses to satisfy the Core Curriculum Area III Natural Science requirement: PH 221 General Physics I and PH 222 General Physics II.
- Engineering students are required to take 9 hours in Core Curriculum Area IV: History, Social and Behavioral Sciences to include a minimum of 3 semester hours in history. Please note: for Core Area IV, students cannot apply more than 6 hours of History. The School of Engineering and the Department of History offers , which also meets this requirement.
- Engineering majors must complete a six-semester-hour sequence in either Area II or Area IV. To be considered a sequence, courses must have the same prefix and must be sequential if possible. Sequences in history, such as HY 106 World History and Technology I and HY 107 World History and Technology II or literature, such as EH 221 British and Irish Literature I: Before 1800 and EH 222 British and Irish Literature II: 1800-Present are common. Two courses in a foreign language such as ARA 101 Introductory Arabic I and ARA 102 Introductory Arabic II or any other sequential language courses offered by UAB. Any two Area II courses in one of the following disciplines: ARH, PHL or THR; or any two Area IV courses in one of the following disciplines: ANTH, EC, PSC, PY, or SOC, can also fulfill this requirement.

## Reasonable Progress

All students in the School of Engineering must continually make reasonable progress toward the completion of their academic programs. Reasonable progress is defined as follows:

- Engineering students must successfully complete two courses applicable to their engineering program within an academic year.
- All required courses offered by the student's specific engineering program failed at UAB must be repeated and successfully completed at UAB for the student to apply the credit to satisfy degree requirements.

If a Pre-Engineering student is not eligible to advance to an engineering major within 64 hours, the student may be dismissed from the School of Engineering.

## Transfer Credit

The School of Engineering follows the [UAB policy for transfer credit](#) with the following stipulations.

The School of Engineering may accept a course for engineering credit from a two-year community college if the following conditions are satisfied:

- The appropriate UAB program has reviewed the course syllabus and determined that it satisfies the key requirements of the equivalent UAB course in terms of content, rigor, and prerequisites;
- The course is equivalent to a freshman or sophomore-level engineering course at UAB. No junior or senior-level courses will be accepted;
- The two-year community college offers engineering courses in partnership with or under the supervision of an ABET-accredited four-year Engineering program.

The School of Engineering accepts transfer credit for EGR 200 Introduction to Engineering from Alabama Community Colleges that offer an equivalent course.

Please note that engineering technology courses are generally not accepted for engineering credit.

## Prerequisite and Transient Requirements

All students must comply with prerequisite and corequisite requirements for all courses in which they enroll. Prerequisites are enforced for engineering courses and must be satisfied prior to starting the course. Students will be administratively withdrawn from engineering courses for which they do not meet prerequisite or corequisite requirements.

Prerequisite requirements must be met for required courses taken at UAB as well as all courses taken as transient with the intent to transfer the credit to UAB under the [UAB transient policy](#). Additionally, a student who has attempted but failed to successfully complete a UAB course offered by their specific engineering program must repeat that course at UAB for credit.

## Transient Students taking UAB Engineering Courses

In addition to guidelines for transient credit outlined in the current [UAB catalog](#), prerequisites are enforced for transient students wishing to register for Engineering courses at UAB.

## Academic Warning, Probation, and Suspension

The School of Engineering follows the UAB Policy for Academic Warning, Probation, and Suspension with the following additions:

- Students in Biomedical Engineering should refer to the BME program overview in this catalog for program-specific requirements.
- Students on Academic Warning or Probation are advised to register for no more than four courses per term.
- Students may register for 100- or 200-level engineering courses or repeat courses for which they previously earned a grade of D or F. The School of Engineering follows the [University's Course Repeat and Forgiveness](#) policies as previously stated in this catalog.
- Students suspended from the University will be removed from the School of Engineering and will be placed in Undeclared - Interest in Engineering in the [Vulcan Materials University Academic Success Center](#).

## Appeal for Reinstatement to the School of Engineering

A student suspended from the School of Engineering must meet the requirements necessary to advance to their intended major before petitioning for reinstatement. The petition should be addressed to the Dean of Engineering and should clearly state the circumstances resulting in the dismissal from the School and include steps taken to resolve the deficiency. The student's petition should be received in the Office of the Dean of Engineering no later than five business days prior to the beginning of the desired semester of re-entry.

## Graduation Requirements

In addition to satisfying the [University's graduation requirements](#), all engineering students must earn a minimum of 128 semester hours in specified coursework and a minimum engineering grade point average (GPA) of 2.00 to graduate. The engineering grade point average includes all engineering coursework applicable to the degree attempted at UAB (after applying the University's grade forgiveness policy, if applicable). BME students must also have an institutional GPA of 2.50 or higher and have earned a grade of C or better in all BME courses to graduate.

## Minors

Students who declare minors in the School of Engineering must develop a program of study in consultation with an academic advisor within the Engineering Dean's Office. Students should exercise care in the selection of courses to meet the requirements of their major as well as concurrently satisfying prerequisite requirements for engineering courses.

Students majoring in engineering may not select a minor offered by their engineering discipline. See minors below for specific restrictions. Engineering majors may not minor in engineering science.

To satisfy the minor requirements, a minimum grade point average of 2.00 is required for all engineering coursework attempted for all programs. Transfer students wishing to earn a minor in engineering must take at least nine (9) semester hours at UAB and earn a minimum GPA of 2.00 in UAB engineering courses attempted. Students who are not majoring in biomedical engineering but wish to enroll in 300- or 400-level BME courses must fulfill course prerequisites, have an institutional (UAB) GPA of at least 3.00, and be approved by the BME Undergraduate Program Director.

Minor in Applied Mechanics

*Offered through the Department of Civil Construction and Environmental Engineering*

*Not available to Civil Engineering Undergraduate Students*

Requirements	Hours
<b>Grade Requirement</b> A minimum GPA of 2.00 is required for all engineering coursework. Transfer students must earn a minimum GPA of 2.00 in UAB engineering courses attempted.	
<b>Required Engineering Courses</b>	
<a href="#">CE 210</a> Statics	3
<a href="#">CE 220</a> Mechanics of Solids	3
<a href="#">CE 360</a> Structural Analysis	3
<a href="#">ME 215</a> Dynamics	3
<b>Civil Engineering Electives</b> Select three of the following courses:	9
<a href="#">CE 420</a> Advanced Mechanics	
<a href="#">CE 460</a> Structural Mechanics	
<a href="#">CE 461</a> Introduction to the Finite Element Method	
<a href="#">CE 462</a> Advanced Structural Analysis	
<a href="#">CE 464</a> Structural Dynamics	
Total Hours	21

Minor in Biomedical Engineering

*Offered through the Department of Biomedical Engineering*

*Not available to Biomedical Engineering Undergraduate Students*

Requirements	Hours
<b>Grade Requirement</b> A minimum GPA of 3.00 is required for all engineering coursework. Transfer students must earn a minimum GPA of 3.00 in UAB engineering courses attempted.	
<b>Required Biomedical Engineering Courses</b>	
<a href="#">BME 210</a> Engineering in Biology	3
<a href="#">BME 401</a> Undergraduate Biomedical Engineering Seminar	1
<b>Required Introduction to Engineering Course(s)</b>	
<a href="#">EGR 110</a> Introduction to Engineering I	2
& <a href="#">EGR 111</a> and Introduction to Engineering II *	
or <a href="#">EGR 200</a> Introduction to Engineering	
<b>Biomedical Engineering Electives</b> Select three of the following courses:	9
<a href="#">BME 310</a> Biomaterials	
<a href="#">BME 312</a> Biocomputing	
<a href="#">BME 313</a> Bioinstrumentation	
<a href="#">BME 333</a> Biomechanics of Solids	
<a href="#">BME 340</a> Bioimaging	

<a href="#">BME 350</a>	Biological Transport Phenomena	
<b>Biomedical Engineering Electives</b>		
Select two of the following courses:		6
<a href="#">BME 420</a>	Implant-Tissue Interactions	
<a href="#">BME 423</a>	Living Systems Analysis and Biostatistics	
<a href="#">BME 435</a>	Tissue Engineering	
<a href="#">BME 443</a>	Medical Image Processing	
<a href="#">BME 450</a>	Computational Neuroscience	
<a href="#">BME 461</a>	Bioelectric Phenomena	
<a href="#">BME 471</a>	Continuum Mechanics of Solids	
Total Hours		21

Minor in Civil Engineering

*Offered through the Department of Civil Construction and Environmental Engineering*

*Not available to Civil Engineering Undergraduate Students*

Requirements	Hours
<b>Grade Requirement</b> A minimum GPA of 2.00 is required for all engineering coursework. Transfer students must earn a minimum GPA of 2.00 in UAB engineering courses attempted.	
<b>Required Civil Engineering Courses</b>	
<a href="#">CE 210</a> Statics	3
<a href="#">CE 220</a> Mechanics of Solids	3
<a href="#">CE 230</a> Plane Surveying	3
<a href="#">CE 236</a> Environmental Engineering	3
<b>Civil Engineering Electives</b> Select three of the following courses:	9
<a href="#">CE 332</a> Soil Engineering	
<a href="#">CE 345</a> Transportation Engineering	
<a href="#">CE 360</a> Structural Analysis	
<a href="#">CE 395</a> Engineering Economics	
<a href="#">CE 450</a> Structural Steel Design	
<a href="#">CE 453</a> Design of Wood Structures	
<a href="#">CE 455</a> Reinforced Concrete Design	
Total Hours	21

Minor in Electrical Engineering

*Offered through the Department of Electrical and Computer Engineering*

*Not available to Electrical Engineering Undergraduate Students*

Requirements	Hours
<b>Grade Requirement</b> A minimum GPA of 2.00 is required for all engineering coursework. Transfer students must earn a minimum GPA of 2.00 in UAB engineering courses attempted.	
<b>Required Electrical Engineering Courses</b>	
<a href="#">EE 210</a> Digital Logic	3
<a href="#">EE 233</a> Engineering Programming Methods	3
<a href="#">EE 300</a> Engineering Problem Solving II	3
<a href="#">EE 314</a> Electrical Circuits	3
<a href="#">EE 316</a> Electrical Networks	4
<a href="#">EE 351</a> Electronics	4
<b>Required Engineering Course</b>	

<u>EGR 150</u>	Computer Methods in Engineering	3
Total Hours		23

## Minor in Engineering Science

*Not Available to Engineering Undergraduate Students*

Requirements		Hours
<b>Grade Requirement</b>		
A minimum GPA of 2.00 is required for all engineering coursework. Transfer students must earn a minimum GPA of 2.00 in UAB engineering courses attempted.		
<b>Required Engineering Courses</b>		
<u>CE 210</u>	Statics	3
<u>EE 312</u>	Electrical Systems	3
<u>ME 241</u>	Thermodynamics I	3
<u>MSE 280</u>	Engineering Materials	3
<b>Required Introduction to Engineering Course(s)</b>		2
<u>EGR 110</u> Introduction to Engineering I & <u>EGR 111</u> and Introduction to Engineering II or <u>EGR 200</u> Introduction to Engineering		
<b>Engineering Electives</b>		
Select two of the following courses:		6-7
<u>EE 210</u>	Digital Logic	
<u>ME 215</u>	Dynamics	
<u>ME 321</u>	Introduction to Fluid Mechanics	
<u>MSE 281</u> & <u>281L</u>	Physical Materials I and Physical Materials I Laboratory	
Total Hours		20-21

## Minor in Engineering World Health

Requirements		Hours
<b>Choose 3 of the following Engineering courses</b>		9
<u>BME 310</u>	Biomaterials	
<u>BME 312</u>	Biocomputing	
<u>BME 313</u>	Bioinstrumentation	
<u>CE 220</u>	Mechanics of Solids	
<u>CE 230</u>	Plane Surveying	
<u>CE 236</u>	Environmental Engineering	
<u>CE 337</u>	Hydraulics	
<u>CE 430</u>	Water Supply/Drainage Design	
<u>CE 433</u>	Solid and Hazardous Wastes Management	
<u>CE 434</u>	Air Quality Modeling and Monitoring	
<u>CE 480</u>	Introduction to Water and Wastewater Treatment	
<u>EE 305</u>	Fundamentals of Electrical Engineering	
<u>EE 490</u>	Special Topics in (Area) (Medical Devices)	
<u>EE 490</u>	Special Topics in (Area) (Big Data in Medicine)	
<u>ME 103</u>	Drawing, Design and Measurement for Industrial Distribution	
<u>ME 251</u>	Introduction to Thermal Sciences	
<u>ME 302</u>	Overview of Mechanical Components	
<u>MSE 350</u>	Introduction to Materials	
<b>Choose 3 of the following Public Health courses</b>		9
<u>GHS 429</u>	Intensive Global Health Training - SIFAT	
<u>PUH 201</u>	The Origins of Epidemics: How Public Health Defines Population and Nations	
<u>PUH 202</u>	Introduction to Global Health	
<u>PUH 302</u>	Epid: Beyond the Outbreak	

<u>PUH 220</u>	Environmental Factors in Public Health	
<u>PUH 250</u>	Biostatistics	
<u>PUH 321</u>	The Workplace Environment and Worker Safety and Health	
<u>PUH 322</u>	Environmental Justice and Ethics	
<u>PUH 333</u>	Food, Water, and Air: the Global Environment and Health	
<u>PUH 421</u>	Nature vs. Nurture: Genes, Environment and Health	
<u>PUH 422</u>	Fundamentals of Toxicology: Poisons and People	
Total Hours		18

## Minor in Environmental Engineering

*Offered through the Department of Civil Construction and Environmental Engineering*

*Not available to Civil Engineering Undergraduate Students*

Requirements		Hours
<b>Grade Requirement</b>		
A minimum GPA of 2.00 is required for all engineering coursework. Transfer students must earn a minimum GPA of 2.00 in UAB engineering courses attempted.		
<b>Required Civil Engineering Courses</b>		
<u>CE 236</u>	Environmental Engineering	3
<u>CE 337</u>	Hydraulics	3
<u>CE 430</u>	Water Supply/Drainage Design	3
<u>CE 480</u>	Introduction to Water and Wastewater Treatment	3
<b>Civil Engineering Electives</b>		
Select three of the following courses:		9
<u>CE 344</u>	Civil Engineering Analysis I	
<u>CE 433</u>	Solid and Hazardous Wastes Management	
<u>CE 434</u>	Air Quality Modeling and Monitoring	
<u>CE 485</u>	Engineering Hydrology	
Total Hours		21

## Minor in Materials Engineering

*Offered through the Department of Materials Science and Engineering*

*Not available to Materials Engineering Undergraduate Students*

Requirements		Hours
<b>Grade Requirement</b>		
A minimum GPA of 2.00 is required for all engineering coursework. Transfer students must earn a minimum GPA of 2.00 in UAB engineering courses attempted.		
<b>Required Materials Engineering Courses</b>		
<u>MSE 280</u>	Engineering Materials	3
<u>MSE 281</u> & <u>281L</u>	Physical Materials I and Physical Materials I Laboratory	4
<u>MSE 380</u>	Thermodynamics of Materials	3
<u>MSE 381</u>	Physical Materials II	3
<u>MSE 382</u>	Mechanical Behavior of Materials	3
<u>MSE 465</u> & <u>465L</u>	Characterization of Materials and Characterization of Materials Laboratory	4
<b>Materials Engineering Electives</b>		
Select one of the following courses:		3-4
<u>MSE 413</u>	Composite Materials	

<a href="#">MSE 430 &amp; 430L</a>	Polymeric Materials and Polymeric Materials Laboratory
<a href="#">MSE 464 &amp; 464L</a>	Metals and Alloys and Metals and Alloys Laboratory
<a href="#">MSE 470</a>	Ceramic Materials
Total Hours	23-24

## Minor in Mechanical Engineering - Thermal Systems

*Offered through the Department of Mechanical Engineering*

*Not available to Mechanical Engineering Undergraduate Students*

Requirements	Hours
<b>Grade Requirement</b>	
A minimum GPA of 2.00 is required for all engineering coursework. Transfer students must earn a minimum GPA of 2.00 in UAB engineering courses attempted.	
<b>Required Engineering Courses</b>	
<a href="#">ME 241</a>	Thermodynamics I 3
<a href="#">ME 242</a>	Thermodynamics II 3
<a href="#">ME 321</a>	Introduction to Fluid Mechanics 3
<a href="#">ME 322</a>	Introduction to Heat Transfer 3
<b>Mechanical Engineering Electives</b>	
Select three courses from the following:	9
<a href="#">ME 361 &amp; 361L</a>	Thermo-Fluids Systems and Thermo-Fluids Systems Laboratory
<a href="#">ME 411</a>	Intermediate Fluid Mechanics
<a href="#">ME 421</a>	Introduction to Computational Fluid Dynamics Basics
<a href="#">ME 445</a>	Combustion
<a href="#">ME 449</a>	Power Generation
<a href="#">ME 455</a>	Thermal-Fluid Systems Design
Total Hours	21

## Minor in Mechanical Engineering - Mechanical Systems

*Offered through the Department of Mechanical Engineering*

*Not available to Mechanical Engineering Undergraduate Students*

Requirements	Hours
<b>Grade Requirement</b>	
A minimum GPA of 2.00 is required for all engineering coursework. Transfer students must earn a minimum GPA of 2.00 in UAB engineering courses attempted.	
<b>Required Engineering Courses</b>	
<a href="#">CE 210</a>	Statics 3
<a href="#">CE 220</a>	Mechanics of Solids 3
<a href="#">ME 215</a>	Dynamics 3
<a href="#">ME 370</a>	Kinematics and Dynamics of Machinery 3
<a href="#">ME 371</a>	Machine Design 3
<b>Engineering Electives</b>	
Select two of the following courses:	6
<a href="#">ME 464</a>	Introduction to Finite Element Method
<a href="#">ME 475</a>	Mechanical Vibrations
<a href="#">MSE 401</a>	Materials Processing
Total Hours	21

## Minor in Software Engineering

*Offered through the Department of Electrical and Computer Engineering*

*Not available to Electrical Engineering Undergraduate Students*

Requirements	Hours
<b>Grade Requirement</b>	
A minimum GPA of 2.00 is required for all engineering coursework. Transfer students must earn a minimum GPA of 2.00 in UAB engineering courses attempted.	
<b>Required Electrical Engineering Courses</b>	
<a href="#">EE 210</a>	Digital Logic 3
<a href="#">EE 233</a>	Engineering Programming Methods 3
<a href="#">EE 333</a>	Engineering Programming Using Objects 3
<a href="#">EE 337</a>	Introduction to Microprocessors 4
<a href="#">EE 432</a>	Introduction to Computer Networking 3
<b>Required Engineering Course</b>	
<a href="#">EGR 150</a>	Computer Methods in Engineering 3
<b>Electrical Engineering Electives</b>	
Select one of the following courses:	3
<a href="#">EE 433</a>	Engineering Software Solutions
<a href="#">EE 444</a>	Real-Time Process & Protocols
<a href="#">EE 447</a>	Internet/Intranet Application Development
<a href="#">EE 452</a>	Digital Systems Design
Total Hours	22

## Minor in Neuroengineering

*Offered through the Department of Biomedical Engineering*

Requirements	Hours
<b>Grade Requirement</b>	
A minimum GPA of 2.00 is required for all engineering coursework. Transfer students must earn a minimum GPA of 2.00 in UAB engineering courses attempted.	
<a href="#">EGR 150</a>	Computer Methods in Engineering 3
<a href="#">BME 312</a>	Biocomputing 3
<a href="#">NBL 355</a>	Synapses, Neurons and Brains 3
<a href="#">NBL 356</a>	Mechanisms of Sensation, Movement & Cognition 3
<a href="#">BME 450</a>	Computational Neuroscience 3
<b>Select one of the following:</b>	<b>3</b>
<a href="#">NBL 425</a>	Methods in Human Neuroimaging 3
<a href="#">NBL 454</a>	Mind/Brain Course 3

## Business Administration Minor for Non-Business Majors

Engineering students may choose to pursue a Minor in Business Administration. This minor combined with an undergraduate engineering degree and co-op/internship experience provides a powerful and highly sought-after combination in today's competitive economy. Engineering students interested in exploring the Business Administration Minor should contact the academic advisor in the School of Engineering at (205) 934-8400.

## Honors in Engineering

### Purpose

The honors programs are intended to enrich educational opportunities for talented students in the School of Engineering.

### Benefits

Students who complete an engineering honors program will have earned nine credit hours in honors coursework. Honors research beyond the required six hours may be applied as graduate credit. Three credit hours of honors research may be applied as an undergraduate elective according to departmental policy. Students who complete an honors program in engineering with a minimum cumulative GPA of 3.0 will receive a bachelor's degree "with Honors" in addition to any University honors designations.

### Eligibility

In order to be eligible to participate in departmental honors programs, students must meet the following:

- Minimum institutional (UAB) GPA of 3.25 and minimum cumulative GPA of 3.00 (BME students must earn a minimum institutional (UAB) GPA and cumulative GPA of 3.75)
- Completion of MA 227 Calculus III or EGR 265 Math Tools for Engineering Problem Solving with a C or better
- Enrollment as a full-time UAB student for a minimum of one semester
- Departmental endorsement

Invitations are extended by the Dean's office.

### Requirements

Honors programs require nine credit hours of honors coursework.

- Students enroll in EGR 301 Honors Research I, a one-hour course, during the fall term following acceptance into departmental honors. Students participating in the Science and Technology Honors program are not required to take EGR 301.
- Students enroll in two one-hour seminars which can be taken at any time in their course of study.
- Students complete six hours of credit in departmental honors research.
- Individual programs may vary in the way credit is awarded. For information regarding departmental requirements, contact the departmental program director listed below.

### Contact

Honors Programs are offered by all undergraduate degree programs in the School of Engineering.

- Biomedical Engineering (Dr. Dale Feldman ( [dfeldman@uab.edu](mailto:dfeldman@uab.edu)))
- Civil Engineering (Andy Sullivan, MSCE ( [asullivan@uab.edu](mailto:asullivan@uab.edu)))
- Electrical Engineering (p. 553) (Dr. L ( [klinga@uab.edu](mailto:klinga@uab.edu))) Leon Jololian ( [leon@uab.edu](mailto:leon@uab.edu)))
- Materials and Science Engineering (Dr. Manoj Mahapatra ( [mkmanoj@uab.edu](mailto:mkmanoj@uab.edu)))
- Mechanical Engineering (Dr. Pasquale Cinnella ( [pc1@uab.edu](mailto:pc1@uab.edu)))

## BME-Biomedical Engineering Courses

### BME 011. Undergraduate Coop/Internship in BME. 0 Hours.

Engineering workplace experience in preparation for the student's intended career.

### BME 210. Engineering in Biology. 3 Hours.

Application of engineering to the study of biology on the cellular and molecular level. Engineering solutions in genomics, proteomics, and nanotechnology to investigate cellular and molecular process.

**Prerequisites:** BY 123 [Min Grade: C] and PH 222 [Min Grade: C](Can be taken Concurrently)

### BME 221. Clinical Innovation I. 3 Hours.

The goals of this class are to develop an understanding of the concept of clinical innovation and develop skills in written and oral communication of innovation in the context of a business proposal/presentation.

### BME 289. Undergraduate Research in Biomedical Engineering I. 1 Hour.

Undergraduate research experiences in biomedical engineering. Must have sophomore standing.

**Prerequisites:** EGR 200 [Min Grade: C] or EGR 111 [Min Grade: C] or HC 111 [Min Grade: C] or HC 120 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and PH 221 [Min Grade: C](Can be taken Concurrently)

### BME 310. Biomaterials. 3 Hours.

Introduction to wide range of materials used for biomedical applications. Physical, chemical and mechanical properties of biomaterials.

**Prerequisites:** MSE 280 [Min Grade: C] and BME 210 [Min Grade: C]

### BME 311. Biomaterials for Non-Majors. 3 Hours.

Wide range of materials used for biomedical applications. Physical, chemical and mechanical properties of biomaterials.

**Prerequisites:** MSE 280 [Min Grade: C]

### BME 312. Biocomputing. 3 Hours.

Introduction to computational techniques used in biomedical engineering.

**Prerequisites:** EGR 150 [Min Grade: C] and EGR 265 [Min Grade: C] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C]) and MA 260 [Min Grade: C](Can be taken Concurrently)

### BME 313. Bioinstrumentation. 3 Hours.

An introduction to instrumentation used to make biological and physiological measurements. Techniques include acquisition and analysis of bioelectric signals and instrument control.

**Prerequisites:** EE 312 [Min Grade: C] and (MA 227 [Min Grade: C] and MA 252 [Min Grade: C] or EGR 265 [Min Grade: C])

### BME 333. Biomechanics of Solids. 3 Hours.

Application of mechanics of solids principles to biomedical engineering problems; stress-strain of bone, viscoelasticity and constitutive equations of tissues, mechanics of the cell, introduction to molecular mechanics.

**Prerequisites:** EGR 265 [Min Grade: C] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C]) and ME 215 [Min Grade: C](Can be taken Concurrently)

**BME 350. Biological Transport Phenomena. 3 Hours.**

Basic mechanisms and mathematical analysis of transport processes with biological and biomedical applications. Analysis of flow, transport and reaction processes for biological fluids and biological molecules with applications towards development of artificial organs, drug delivery systems and tissue engineering products.

**Prerequisites:** EGR 265 [Min Grade: C] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C]) and BME 210 [Min Grade: C] and BY 409 [Min Grade: C](Can be taken Concurrently) and ME 215 [Min Grade: C](Can be taken Concurrently)

**BME 370. Integrated Physiology. 3 Hours.**

Integrated Physiology will introduce undergraduate students to mathematical models of major physiological systems. Basic anatomy will be reviewed in pre-recorded videos to be watched prior to coming to synchronous lectures. Lectures will include discussions, derivations of relevant equations, and development of models to demonstrate understanding of biological systems. In-class activities will be used as means to provide interactive content that will be assessed via Assignments and Exams. The course will culminate in a final project where teams of students select a pathological condition and model it in Matlab, including comparing to normal conditions and with currently-available clinical interventions. Open to junior and senior level Biomedical Engineering students.

**Prerequisites:** EGR 150 [Min Grade: C] and BME 210 [Min Grade: C]

**BME 389. Undergraduate Research in Biomedical Engineering II. 1 Hour.**

Undergraduate research experiences in biomedical engineering. Must have junior standing.

**Prerequisites:** BME 210 [Min Grade: C]

**BME 401. Undergraduate Biomedical Engineering Seminar. 1 Hour.**

Undergraduate seminar.

**BME 420. Implant-Tissue Interactions. 3 Hours.**

An overview of implant biocompatibility including tissue histology, histopathology of implant response and the regulatory process for medical devices. Emphasis placed on ethical issues related to design, development, and implementation of biomedical implants. Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** BME 310 [Min Grade: C] or BME 311 [Min Grade: C]

**BME 423. Living Systems Analysis and Biostatistics. 3 Hours.**

Basic concepts and techniques of measurement processing and analysis of data from living systems. Statistics, analysis of variance and regression analysis. Emphasis is placed on data analysis and presentation of group projects.

**Prerequisites:** BME 312 [Min Grade: C]

**BME 424. Current Topics in Stem Cell Engineering. 3 Hours.**

This course is designed for students interested in the field of stem cells, regenerative medicine, and tissue engineering using stem cells and stem cell derived cells. The course will introduce the role of stem cells in tissue growth and development, the theory behind the design and in vitro construction of tissue and organ replacements, and the applications of biomedical engineering principles to the treatment of tissue-specific diseases. Students will have hands on experience on culturing and analyzing stem cells, stem cell differentiation, analysis of functional and physiological properties of differentiated cells, and fabricating basic engineered-tissues.

**Prerequisites:** BY 123 [Min Grade: C] and (BY 210 [Min Grade: C] or BY 212 [Min Grade: C] or BY 115 [Min Grade: C])

**BME 435. Tissue Engineering. 3 Hours.**

Principles underlying strategies for regenerative medicine such as stem-cell based therapy, scaffold design, proteins or genes delivery, roles of extracellular matrix, cell-materials interactions, angiogenesis, tissue transplantation, mechanical stimulus and nanotechnology.

**Prerequisites:** BME 310 [Min Grade: C] or BME 311 [Min Grade: C]

**BME 443. Medical Image Processing. 3 Hours.**

Fundamental topics of medical image processing to practical applications using conventional computer software.

**Prerequisites:** BME 312 [Min Grade: C](Can be taken Concurrently) and PH 222 [Min Grade: C]

**BME 444. Machine Learning for Biomedical Engineering Applications. 3 Hours.**

This course provides the introduction to the practical aspects of machine learning such that the students can apply some basic machine learning techniques in simple biomedical engineering problems. The course also provides the principle of machine learning 'thinking process' for the next machine learning – AI courses and more in-depth machine learning studies. By 'thinking process', at the beginning, it is better to view machine learning like human learning. Students who have experience with Data Mining may further understand the fundamental differences between Machine Learning and Data Mining, although these two fields share many concepts and techniques. Also, the student will learn fundamental theories in machine learning to be able to develop new machine learning techniques and research machine learning in biomedical engineering.

**Prerequisites:** EGR 150 [Min Grade: C]

**BME 450. Computational Neuroscience. 3 Hours.**

This course examines the computational principles used by the nervous system. Topics include: biophysics of axon and synapse, sensory coding (with an emphasis on vision and audition), planning and decision-making, and synthesis of motor responses. There will be an emphasis on systems approach throughout. Homework includes simulations.

**Prerequisites:** BME 312 [Min Grade: C]

**BME 461. Bioelectric Phenomena. 3 Hours.**

Quantitative methods in electrophysiology with focus on using simulations to examine responses in electrically excitable cell types.

**Prerequisites:** BME 312 [Min Grade: C]

**BME 462. Cardiac Electrophysiology. 3 Hours.**

Experimental and computational method on cardiac electrophysiology, ionic current, action potentials, electrical propagation, the electrocardiogram, electromechanical coupling, cardiac arrhythmias, effects of electric fields in cardiac tissue, defibrillation and ablation.

**Prerequisites:** BME 312 [Min Grade: C]

**BME 471. Continuum Mechanics of Solids. 3 Hours.**

Matrix and tensor mathematics, fundamentals of stress, momentum principles, Cauchy and Piola-Kirchoff stress tensors, static equilibrium, invariance, measures of strain, Lagrangian and Eulerian formulations, Green and Almansi strain, deformation gradient tensor, infinitesimal strain, constitutive equations, finite strain elasticity, strain energy methods, 2-D Elasticity, Airy Method, viscoelasticity, mechanical behavior of polymers.

**Prerequisites:** EGR 265 [Min Grade: C] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C]) and (BME 333 [Min Grade: C] or CE 220 [Min Grade: C])

**BME 472. Industrial Bioprocessing and Biomanufacturing. 3 Hours.**

This course will introduce students to the growing industries related to biomedical, biopharmaceutical and biotechnology. It is targeted to offer the students marketable skills to work in a vital area of economic growth and also convey some of the challenges and opportunities awaiting.

**Prerequisites:** BME 310 [Min Grade: C](Can be taken Concurrently) or BY 330 [Min Grade: C](Can be taken Concurrently) or CH 460 [Min Grade: C](Can be taken Concurrently)

**BME 489. Undergraduate Research in Biomedical Engineering III. 1-2 Hour.**

Undergraduate research experiences in biomedical engineering. Must have senior standing.

**Prerequisites:** BME 210 [Min Grade: C]

**BME 490. Special Topics in Biomedical Engineering. 1-3 Hour.**

Special Topic in Biomedical Engineering.

**BME 491. Individual Study in Biomedical Engineering. 1-6 Hour.**

Individual Study in Biomedical Engineering.

**BME 494. Honors Research I. 1-3 Hour.**

Research experiences for undergraduates enrolled in the departmental honors program. The student should write a proposal and make a presentation based on the proposal.

**Prerequisites:** EGR 301 [Min Grade: C] or STH 201 [Min Grade: C]

**BME 495. Honors Research II. 1-3 Hour.**

Research opportunities for undergraduate students in the Biomedical Engineering Honors Program. Research areas include cardiac electrophysiology, brain imaging, biomedical implants, and tissue engineering.

**Prerequisites:** BME 494 [Min Grade: C]

**BME 496. Biomedical Engineering Honors Seminar. 1 Hour.**

Must be enrolled in an Honors Program.

**BME 498. Capstone Design I Product Development. 3 Hours.**

Design and development of medical-products. Through experiential learning, students go through the early phases of engineering design innovation for medical products, starting with clinical immersion to determine a critical health-care need. Engineering students work in multi-disciplinary teams that include students from the School of Business to develop design concepts for both a client-based prototype and a commercializable version. Designs take into account client needs as well as legal, regulatory, and marketing requirements. Business ethics are also covered. Emphasis is placed on communication in both oral and written format to targeted audiences.

**Prerequisites:** (BME 310 [Min Grade: C] and BME 312 [Min Grade: C]) or (BME 310 [Min Grade: C] and BME 313 [Min Grade: C]) or (BME 310 [Min Grade: C] and BME 333 [Min Grade: C]) or (BME 310 [Min Grade: C] and BME 350 [Min Grade: C]) or (BME 312 [Min Grade: C] and BME 313 [Min Grade: C]) or (BME 312 [Min Grade: C] and BME 333 [Min Grade: C]) or (BME 312 [Min Grade: C] and BME 350 [Min Grade: C]) or (BME 313 [Min Grade: C] and BME 333 [Min Grade: C]) or (BME 313 [Min Grade: C] and BME 350 [Min Grade: C]) or (BME 333 [Min Grade: C] and BME 350 [Min Grade: C])

**BME 499. Capstone Design II. 3 Hours.**

Capstone design project; a continuation of BME 498. Through experiential learning, student teams complete the engineering design process for their client-based prototype incorporating engineering standards and realistic constraints. Student teams develop a business plan to present to potential business partners and product development teams from established companies. Additional skills learned in this part of the design process include: development of business proposals, project planning and scheduling, project execution and resource scheduling, communication of design, and interim and final design reviews. Emphasis is placed on communication of design and design justification in both an oral and written format to targeted audiences.

**Prerequisites:** BME 498 [Min Grade: C] and BME 310 [Min Grade: C] and BME 312 [Min Grade: C] and BME 313 [Min Grade: C] and BME 333 [Min Grade: C](Can be taken Concurrently) and BME 350 [Min Grade: C] (Can be taken Concurrently) and BME 423 [Min Grade: C](Can be taken Concurrently)

**CE-Civil Engineering Courses****CE 011. UG Coop/Internship in CE. 0 Hours.**

Engineering workplace experience in preparation for the student's intended career.

**CE 200. Engineering Geology. 2 Hours.**

Fundamentals and advanced topics of geology including plate tectonics, mineral formation, sedimentary / igneous / metamorphic rocks, structural deformations, weathering and erosion, groundwater migration, and slope stability.

**CE 210. Statics. 3 Hours.**

Newton's laws of motion. Scalar and vector quantities, vector algebra, and the concepts of position and moment vectors. Two-dimensional systems: forces, moments, couples, and resultants. Three-dimensional systems and equivalent force systems, free body diagrams, and equations of equilibrium. Construction of shear force and bending moment diagrams. Analysis of pin-connected beams, plane trusses, and frames: method of joints and method of sections. Friction and properties of surfaces. Center of mass, center of gravity, and area moment of inertia. Quantitative Literacy is a significant component of this course.

**Prerequisites:** EGR 200 [Min Grade: C](Can be taken Concurrently) or HC 111 [Min Grade: C] or EGR 111 [Min Grade: C](Can be taken Concurrently) and (MA 126 [Min Grade: C] or MA 126 [Min Grade: P] or MA 226 [Min Grade: C]) and (PH 221 [Min Grade: C] or PH 221 [Min Grade: P])

**CE 220. Mechanics of Solids. 3 Hours.**

Variation of stress at a point. Equilibrium requirements and body force concepts. Variation of strain at a point. Stress-strain relationships. Stress transformation and Mohr's Circle for plane stress. Analysis of axially loaded bars, circular shafts in torsion, shear and bending of beams, and buckling of columns. Analysis of simple, statically determinate and indeterminate structures.

**Prerequisites:** CE 210 [Min Grade: C]

**CE 221. Mechanics of Solids Laboratory. 1 Hour.**

Standard tensile, torsion, bending, and column tests. Installation and applications of strain gages and rosettes. Measurement of forces, displacements, strains, and other variables. Writing is a significant component of this course.

**Prerequisites:** CE 220 [Min Grade: D](Can be taken Concurrently)

**CE 222. Civil Engineering Materials Laboratory. 1 Hour.**

Testing properties of construction materials such as cement, aggregate, concrete, and asphalt. Design of Portland cement concrete mixes. Writing is a significant component of this course.

**Prerequisites:** CE 220 [Min Grade: D](Can be taken Concurrently)

**CE 230. Plane Surveying. 3 Hours.**

Fundamental topics of surveying including care and use of surveying instruments, surveying methods, error theory, traversing, stadia, mapping techniques, circular and parabolic curves, areas, and volumes. CE 230L must be taken concurrently.

**Prerequisites:** MA 125 [Min Grade: C] or MA 225 [Min Grade: C]

**CE 230L. Plane Surveying Laboratory. 0 Hours.**

Principles of land measurement, the instruments and techniques used in surveying, theory of errors and mathematical precision in engineering analysis and design. Introduction to route surveying and the principles of horizontal and vertical curves. Companion to CE 230 and must be taken concurrently.

**CE 236. Environmental Engineering. 3 Hours.**

Introduction to environmental engineering principles. Air and water pollution, solid waste, quality of environment, environmental health, regulations and legal considerations, and ethics and civic responsibility. Design of testing protocols.

**Prerequisites:** MA 125 [Min Grade: C](Can be taken Concurrently) or MA 225 [Min Grade: C](Can be taken Concurrently) and CH 117 [Min Grade: C]

**CE 236L. Environmental Engineering Laboratory. 0 Hours.**

Laboratory equipment and methods. Chemical and physical tests to determine characteristics of water and wastewater. Companion lab to CE 236 and must be taken concurrently.

**CE 332. Soil Engineering. 4 Hours.**

Soil identification and properties, stress concepts, permeability settlement analysis, soil compaction, bearing capacity, shear strength of soil, and slope stability. CE 332L must be taken concurrently.

**Prerequisites:** CE 200 [Min Grade: D] and CE 220 [Min Grade: D]

**CE 332L. Soil Engineering Laboratory. 0 Hours.**

Soil classification, strength and shear tests, and permeability and consolidation tests. Companion to CE 332 and must be taken concurrently.

**CE 337. Hydraulics. 3 Hours.**

Fundamentals of hydraulics including properties of water, hydrostatic forces and pressures, flow, head losses, and related phenomena in pipes. Other topics include river hydrograph routing, statistical hydrology, flow in open channels, culvert design, and applied hydraulic modeling. Must earn a grade of C or better to satisfy BSCE degree requirements.

**Prerequisites:** MA 126 [Min Grade: C] or MA 226 [Min Grade: C]

**CE 344. Civil Engineering Analysis I. 3 Hours.**

Inspection and treatment of data using exploratory data analysis. Descriptive statistics. Introduction to probability and commonly used distributions. Basic data analysis using regression analysis, hypothesis testing, and analysis of variance. Quantitative literacy is a significant component of this course.

**Prerequisites:** MA 126 [Min Grade: C] or MA 226 [Min Grade: C]

**CE 345. Transportation Engineering. 3 Hours.**

Principles of transportation engineering and urban transportation planning. Traffic flow characteristics, traffic control, capacity analysis of basic highway sections and intersections, geometric design, and travel demand forecasting.

**Prerequisites:** (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and PH 221 [Min Grade: C]

**CE 360. Structural Analysis. 3 Hours.**

Reactions, shears, moments, and axial forces in determinate and indeterminate structures. Influence lines; moment area and energy methods of computing deflections; methods of truss and frame analysis. Computer applications.

**Prerequisites:** CE 220 [Min Grade: D]

**CE 371. Engineering Communication. 2 Hours.**

Introduces communication skills necessary for professional development. Topics include forms of technical writing and oral communication, report writing and organization, plan reading, professional practice, and ethics.

**Prerequisites:** EH 102 [Min Grade: C] and (EGR 111 [Min Grade: C] or EGR 200 [Min Grade: C])

**CE 395. Engineering Economics. 3 Hours.**

Fundamental concepts of engineering economy. Introduction to cost and revenue estimating and cash flow analysis for engineering projects. Choosing between alternatives taking into account the time value of money, depreciation, inflation, income taxes and risk factors.

**Prerequisites:** MA 125 [Min Grade: C] or MA 225 [Min Grade: C]

**CE 410. FE Review for Civil Engineers. 0 Hours.**

Review concepts of the engineering core and civil engineering in preparation for the Fundamentals of Engineering (FE) exam.

**CE 415. Building Information Modeling (BIM). 3 Hours.**

Introduction to virtual design and construction using AutoCAD and Revit software. An emphasis is placed on the use of these tools and their practical applications to real world engineering and design projects. Students are provided with the software required to complete a multi-step project.

**Prerequisites:** ME 102 [Min Grade: C]

**CE 420. Advanced Mechanics. 3 Hours.**

Variation of stress at point including determination of principal and maximum shear stresses. Strain gages and rosettes. Failure theories. Inelastic stress-strain behavior of axially loaded bars. Torsion of noncircular sections and plastic torque. Curved beams. Elastic and plastic analysis for unsymmetrical bending. Shear center. Beams on elastic foundations.

**Prerequisites:** CE 220 [Min Grade: D]

**CE 426. Foundation Engineering. 3 Hours.**

Design of foundations including bearing capacity and settlement of spread footings, mats, single piles, and pile groups. Site investigation and evaluation of data from field and tests. Estimation of stresses in soil masses, lateral resistance of piles and pile groups. Design of retaining walls, sheet piles, and cofferdams.

**Prerequisites:** CE 332 [Min Grade: D] and CE 455 [Min Grade: D]

**CE 430. Water Supply/Drainage Design. 3 Hours.**

Water requirements; wastewater characteristics. Hydraulics and design of sewers; distribution and reuse of water. Development of water supplies; design considerations.

**Prerequisites:** CE 337 [Min Grade: C]

**CE 431. Energy Resources. 3 Hours.**

Overview of primary energy resources, including oil, natural gas, coal, nuclear, hydro, solar, geothermal, biomass, wind, and tidal. Resources are discussed in terms of supply, distribution, recovery and conversion, environmental impacts, economics, policy, and technology. Concepts and opportunities for energy conservation are examined, including electric power generation, transportation applications, and energy use in developing countries.

**Prerequisites:** CE 236 [Min Grade: C]

**CE 433. Solid and Hazardous Wastes Management. 3 Hours.**

Overview of waste characterizations, regulations, and management options. Fundamentals of landfill design, recycling, incineration, emerging disposal technologies, federal and state laws, hazardous waste treatment, and ultimate disposal of hazardous waste.

**Prerequisites:** CE 236 [Min Grade: C]

**CE 434. Air Quality Modeling and Monitoring. 3 Hours.**

Overview of atmospheric pollutant effects, reactions, and sources. Introduction to air dispersion modeling and ambient air quality monitoring.

**Prerequisites:** ME 251 [Min Grade: C]

**CE 440. Civil Engineering Honors Research. 3 Hours.**

Departmental honors students work closely with faculty researchers and graduate students in departmental concentration specialties to develop research skills. Enrollment is limited to undergraduate students enrolled in CCEE Departmental Honors Program.

**CE 441. Civil Engineering Honors Seminar. 1 Hour.**

Seminar focusing on student research and guest presentations of various topics of interest to civil and environmental engineering students.

**CE 443. Pavement Design and Construction. 3 Hours.**

Analysis of stresses and strains in pavement systems. Design and construction of flexible and rigid pavements, base courses, and subgrades. Effects of loading on pavement life.

**Prerequisites:** CE 345 [Min Grade: D]

**CE 445. Engineering the Built Environment. 3 Hours.**

This service learning course explores the effects the built environment has on urban function, connectivity, community health, and the well-being of its residents. Students work directly in local neighborhoods learning how to assess components of the built environment, including transportation, green spaces, lighting, and blight, and to estimate their impacts on community health and well-being. Students propose engineering solutions, develop cost estimates, assess potential benefits, and develop implementation plans. Registration restricted to Junior or Senior standing.

**CE 446. Green Infrastructure and Transportation. 3 Hours.**

Policy and technical issues related to sustainable transportation. Examines the concepts, viewpoints, and fundamentals essential for understanding sustainable transportation planning and the tools used to assess sustainability of transportation facilities and neighborhoods. Design options in support of green infrastructure and transportation, including livable street design and traffic calming applications. Registration restricted to Junior or Senior standing.

**CE 447. Principles of Sustainable Development. 3 Hours.**

Concepts, viewpoints, and fundamentals essential for understanding the urban sustainable development agenda. Review of basic earth sciences to better evaluate the impact of anthropogenic activities on the natural environment and how to minimize adverse future outcomes. Case studies of sustainable developments are used to illustrate the value, challenges, and limitations of this concept.

**Prerequisites:** CE 236 [Min Grade: C]

**CE 450. Structural Steel Design. 3 Hours.**

Tension members, columns, beams, and beam columns. Simple connections. Load Resistance Factor Design (LRFD) approaches.

**Prerequisites:** CE 221 [Min Grade: C] and CE 360 [Min Grade: C]

**CE 453. Design of Wood Structures. 3 Hours.**

Properties of structural wood materials, both sawn lumber and engineered wood materials. Design of wood structures including beams, columns, connections, roof diaphragms, and shear walls. The requirements of the National Design Specification for Wood Structures will be addressed.

**Prerequisites:** CE 360 [Min Grade: C]

**CE 454. Design of Masonry Structures. 3 Hours.**

Design and detailing of masonry structures. Nomenclature, properties, and specifications for components. Design of assemblages, simple masonry structures, unreinforced and reinforced elements, and complex masonry structures.

**Prerequisites:** CE 360 [Min Grade: C]

**CE 455. Reinforced Concrete Design. 3 Hours.**

Behavior, strength, and design of reinforced concrete structural members (beams, columns, one-way slabs, and continuous beams) subjected to moment, shear, and axial forces according to the American Concrete Institute Building Code Requirements for Structural Concrete (ACI 318). Crack control and serviceability considerations. Introduction to the design of reinforced concrete structures.

**Prerequisites:** CE 222 [Min Grade: C] and CE 360 [Min Grade: C]

**CE 456. Prestressed Concrete Design. 3 Hours.**

Principles and concepts of design in prestressed concrete including elastic and ultimate strength analyses for flexural, shear, bond, and deflection. Principles of concordance and linear transformation for indeterminate prestressed structures.

**Prerequisites:** CE 455 [Min Grade: D]

**CE 460. Structural Mechanics. 3 Hours.**

Elastic beam deflections, beam columns, lateral torsional buckling, column stability, plastic design, plate bending, and yield line theory.

**Prerequisites:** CE 360 [Min Grade: C]

**CE 461. Introduction to the Finite Element Method. 3 Hours.**

Concepts and applications of finite element method (FEM). Review of statics, equilibrium, compatibility, and constitutive relations. Direct stiffness method, principle of virtual work, concept of stiffness, and matrix methods: planar trusses, beams, and planar frames. Support settlements, three-dimensional systems; development and application of basic finite elements. Software use.

**Prerequisites:** CE 360 [Min Grade: C]

**CE 462. Advanced Structural Analysis. 3 Hours.**

Analysis of indeterminate structures utilizing both classical and matrix methods. Use of computer structural analysis programs.

**Prerequisites:** CE 360 [Min Grade: C]

**CE 464. Structural Dynamics. 3 Hours.**

Closed form and numerical solutions to single-degree-of-freedom structural models. Analysis of multistory frames. Response of single and multiple degree of freedom models to harmonic, periodic, impulse and arbitrary time-dependent loads. Computer applications and seismic analysis. Techniques of modal analysis.

**Prerequisites:** CE 360 [Min Grade: C] and ME 215 [Min Grade: C]

**CE 465. CE Construction Documents. 3 Hours.**

Introduction to Civil Engineering design and construction documents including drawings, specifications, contracts, and testing reports. Overview of civil infrastructure and project types, including the civil engineer's role in the preparation, certification, and use of construction documents. Construction topics include measurement, quantity estimating, and engineering budgets.

**CE 467. Wind and Seismic Loads. 3 Hours.**

Methods for calculating loads on structures caused by extreme winds and earthquakes. Calculation of wind loads on various types of structures according to theory and codes. Determination of earthquake loads on structures using structural dynamics and codes.

**Prerequisites:** CE 360 [Min Grade: C]

**CE 468. Bridge Engineering. 3 Hours.**

Bridge loads, steel beam bridges, composite beam bridges, bridge bearings, reinforced and prestressed concrete slab and T-beam bridges, bridge evaluations and ratings, and upgrade methodologies; computer applications.

**Prerequisites:** CE 450 [Min Grade: D] and CE 455 [Min Grade: D](Can be taken Concurrently)

**CE 470. International Research Experience. 3 Hours.**

The International Research Experience for Students (IRES) program provides the opportunity for undergraduate and graduate students to participate in hands-on engineering research in an international setting. Students perform research on an approved topic related to civil engineering design in an international environment. Students perform a detailed literature review and work with mentors from UAB and the international host institution to develop research objectives and a detailed research plan. The course will culminate in a 6-8 week visit to the international host institution, during which time students will conduct hands-on research with their mentors and prepare final reports.

**CE 475. Construction Safety and Health Management. 3 Hours.**

This course covers various causes of construction accidents and the adopted strategies to prevent worksite injuries and illnesses. Other topics covered include workers' compensation, OSHA standards for the construction industry, economics of construction safety management, temporary structures, system safety, ergonomic applications, health hazards, and the development of a safety program.

**Prerequisites:** CE 344 [Min Grade: C]

**CE 480. Introduction to Water and Wastewater Treatment. 3 Hours.**

Examination of chemical/biological unit processes for water and wastewater treatment. Design of wastewater treatment facilities and unit processes. Treatment and disposal of sludge.

**Prerequisites:** CE 236 [Min Grade: C]

**CE 485. Engineering Hydrology. 3 Hours.**

Hydrologic principles including the hydrologic cycle, precipitation data and stream-flow measurements. Applications to engineering problems: stream-flow analysis, and watershed management.

**Prerequisites:** CE 337 [Min Grade: C]

**CE 489. Undergraduate Engineering Research. 0 Hours.**

Undergraduate research experiences in civil, construction and/or environmental engineering.

**Prerequisites:** (EGR 110 [Min Grade: C] and EGR 111 [Min Grade: C]) or EGR 200 [Min Grade: C] or HC 111 [Min Grade: C] or EGR 100 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and PH 221 [Min Grade: C](Can be taken Concurrently)

**CE 490. Special Topics in Civil Engineering. 1-3 Hour.**

Special Topics in Civil Engineering.

**CE 491. Individual Study in Civil Engineering. 1-6 Hour.**

Individual Study in Civil Engineering.

**CE 497. Construction Engineering Management. 3 Hours.**

Study of construction management services including project planning, scheduling, estimating, budgeting, contract administration, agreements, and ethics. Emphasis is on the management of manpower, materials, money, and machinery.

**Prerequisites:** CE 395 [Min Grade: D]

**CE 499. Capstone Design Project. 3 Hours.**

Students work in teams to solve a complex engineering problem that incorporates the major aspects of civil engineering design including structural, geotechnical, environmental, transportation, and construction management components. The course also includes lectures and assignments related to professionalism including engineering ethics, leadership, and management. Normally taken during last term before graduation.

**Prerequisites:** CE 332 [Min Grade: D] and CE 337 [Min Grade: C] and CE 345 [Min Grade: D] and (CE 450 [Min Grade: D] or CE 455 [Min Grade: D]) and CE 430 [Min Grade: D](Can be taken Concurrently) and CE 497 [Min Grade: D](Can be taken Concurrently)

**EE-Electrical Computer Egr Courses****EE 011. Coop/Internship in EE. 0 Hours.**

The Co-op/Internship is a short-term engineering workplace learning experience in preparation for the student's intended career.

**EE 210. Digital Logic. 3 Hours.**

This course introduces the basic principles of how computers do computations using digital components. Topics include: the number systems, Boolean algebra, circuit minimization of multi-level logic, K-Maps, combinational and sequential logic circuit design, clocked latches, flip-flops, registers, and finite state machines. In class lab.

**Prerequisites:** MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 125 [Min Grade: C](Can be taken Concurrently)

**EE 233. Engineering Programming Methods. 3 Hours.**

This course covers fundamentals of computer programming including coding and design elements. Topics include: the software development method, logic and algorithm development, C language coding, debugging, documentation, file input and output, an introduction to data structures, development environments, and command line tools.

**Prerequisites:** EGR 150 [Min Grade: C]

**EE 254. Applied Numerical Methods. 3 Hours.**

This course covers applications of numerical mathematical techniques and theories laid out in prior courses. Topics include: Euler's Method, numerical integration and differentiation methods, root finding methods, accuracy versus precision and its relationship to data storage and algorithm efficiency.

**Prerequisites:** EGR 265 [Min Grade: C] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C]) and EGR 150 [Min Grade: C]

**EE 300. Engineering Problem Solving II. 3 Hours.**

This course covers fundamental mathematical background on complex functions, linear algebra, and the theory of probability and statistics which are indispensable in many electrical and computer engineering sub-fields such as signal and image processing, circuit design, and control systems.

**Prerequisites:** EGR 265 [Min Grade: D] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C])

**EE 305. Fundamentals of Electrical Engineering. 3 Hours.**

This course provides a survey of topics fundamental to field of electrical engineering. For non-engineering majors. Not available for credit toward engineering major.

**Prerequisites:** MA 109 [Min Grade: C]

**EE 312. Electrical Systems. 3 Hours.**

This course introduces how electrical circuits work and how to analyze them. Topics include: introduction to DC circuit analysis, AC steady-state analysis, first-order transient analysis, ideal transformers, and electrical safety. For non-EE majors.

**Prerequisites:** MA 126 [Min Grade: C] or MA 226 [Min Grade: C] and PH 221 [Min Grade: C]

**EE 314. Electrical Circuits. 3 Hours.**

This course covers electrical circuits and their analysis. Topics include: DC circuit analysis, AC steady-state analysis, first-order transient analysis, and electrical safety. For EE Majors.

**Prerequisites:** (MA 126 [Min Grade: C] or MA 226 [Min Grade: C]) and PH 221 [Min Grade: C]

**EE 314R. Electrical Circuits Recitation. 0 Hours.**

A problem-solving course designed to reinforce concepts in EE 314.

**Prerequisites:** (MA 226 [Min Grade: C] or MA 126 [Min Grade: C]) and PH 221 [Min Grade: C]

**EE 316. Electrical Networks. 4 Hours.**

This course expands the Electrical Circuits course with advanced circuits and teaches how to report the results of experiments (emphasis on quantitative literacy). Topics include: Analysis of circuits using classical differential/integral techniques; Laplace transforms; Two-port network parameters; Ideal operational amplifiers; Circuit solution using simulation.

**Prerequisites:** EE 314 [Min Grade: C] and EH 101 [Min Grade: C] and EGR 265 [Min Grade: D] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C])(Can be taken Concurrently)

**EE 316L. Electrical Networks Laboratory. 0 Hours.**

Electrical Networks laboratory component.

**EE 318. Signals and Systems. 3 Hours.**

This course provides fundamental mathematical background for extraction of useful information from signals and for modeling dynamic systems in the frequency domain. Topics include: time-domain and frequency-domain methods for modeling and analyzing continuous-time and discrete-time signals and systems, Fourier, Laplace, and Z transform methods.

**Prerequisites:** EE 300 [Min Grade: D] and EE 316 [Min Grade: D]

**EE 333. Engineering Programming Using Objects. 3 Hours.**

This course covers object-oriented thinking and applies it to creating software for engineering applications. Topics include: objected-oriented design and programming in an object-oriented language, graphical user interface framework, project management skills, written and oral communication, Team work, introduction to ethics and intellectual property issues.

**Prerequisites:** EE 233 [Min Grade: D]

**EE 337. Introduction to Microprocessors. 4 Hours.**

This course covers computer hardware, interfaces, and programming in assembly and C languages with applications of microcomputers to engineering problems, such as data acquisition and control. Topics include: CPU architecture, assembly language, Input/output interfacing.

**Prerequisites:** EE 210 [Min Grade: C] and EE 233 [Min Grade: D]

**EE 337L. Introduction to Microprocessors Laboratory. 0 Hours.**

Introduction to Microprocessors laboratory component.

**EE 341. Electromagnetics. 3 Hours.**

This course introduces mathematical techniques used to solve problems in antenna design, high-frequency circuit design, and communications. Topics include: Maxwell equations, dynamic and static problems, electromagnetic wave propagation.

**Prerequisites:** EE 300 [Min Grade: C](Can be taken Concurrently) and EE 316 [Min Grade: C]

**EE 351. Electronics. 4 Hours.**

This course covers fundamentals of solid-state electronics, PN junction diode and diode circuits, bipolar junction transistor (BJT) and field-effect transistor (FET) properties, biasing, frequency response, amplifier configurations, single and multistage amplifier circuits. Students will work on projects in areas such as Internet-of-Things (IoT), and sensor instrumentation.

**Prerequisites:** EE 210 [Min Grade: C] and EE 316 [Min Grade: C]

**EE 351L. Electronics Laboratory. 0 Hours.**

Electronics laboratory component.

**EE 361. Machinery I. 4 Hours.**

This course covers single and multi-phase electrical machines with an introduction to industrial applications. Topics include: Fundamentals and applications of polyphase circuits; magnetic circuits; transformers; polyphase synchronous and asynchronous machines.

**Prerequisites:** EE 316 [Min Grade: C]

**EE 361L. Machinery I Laboratory. 0 Hours.**

Machinery I laboratory component.

**EE 412. Practical Computer Vision. 3 Hours.**

This course covers fundamentals and applications of image analysis. Topics include: image preprocessing, detection, segmentation, classification and recognition, visual tracking, and deep learning.

**Prerequisites:** EE 318 [Min Grade: C]

**EE 418. Wireless Communications. 3 Hours.**

This course covers the principles and current applications of wireless technology. Topics include propagation models, modulation, multiple access, and channel and signal coding. Applications of wireless for cellular and Internet of Things (IoT) will also be covered.

**Prerequisites:** EE 316 [Min Grade: C]

**EE 421. Communication Systems. 3 Hours.**

This course covers the mathematics of modulation and demodulation of radio signals to transmit and receive information. It focuses on various forms of amplitude modulation (AM), phase and frequency modulation (FM). This course builds on the mathematics from signals and systems course to study how to represent and manipulate these signals in both time and frequency domain. It also studies the effects of sampling, and how these systems operate in the presence of noise.

**Prerequisites:** EE 318 [Min Grade: C]

**EE 423. Digital Signal Processing. 3 Hours.**

This course covers the theory and practice of using computers to process and analyze signals. The topics include Digital filter analysis and design; Fast Fourier Transform (FFT) algorithms; Applications of digital signal processing in engineering problems such as data acquisition and control.

**Prerequisites:** EE 318 [Min Grade: C]

**EE 426. Control Systems. 3 Hours.**

This course covers modeling and control of mechanisms or circuits to satisfy stability and performance criteria. Topics include: theory of linear feedback control systems using complex frequency techniques, block diagram manipulation, performance measures, stability, analysis and design using root locus, and Z-transform methods.

**Prerequisites:** EE 318 [Min Grade: C]

**EE 427. Controls and Automation. 3 Hours.**

This course covers power control devices and applications, relay logic and translation to other forms, programmable logic controllers (PLCs), proportional-integral-derivative (PID) and other methods for process control, modern laboratory instrumentation, and human-machine interface (HMI) software.

**Prerequisites:** EE 233 [Min Grade: C] and EE 318 [Min Grade: C] and EE 351 [Min Grade: C]

**EE 431. Analog Integrated Electronics. 4 Hours.**

This course covers advanced analysis and design using op-amps, differential amplifier, half-circuit analysis, error analysis and compensation. Applications include signal conditioning for instrumentation, instrumentation amplifiers, nonlinear and computational circuits, analog filter design, voltage regulator design, oscillators, and circuit configurations for A-to-D and D-to-A conversion methods. Laboratory exercises emphasize design techniques for projects in areas such as Internet-of-Things (IoT).

**Prerequisites:** EE 318 [Min Grade: C] and EE 351 [Min Grade: C]

**EE 432. Introduction to Computer Networking. 3 Hours.**

This course covers the fundamentals of modern computer networks including current applications such as Internet of Things (IoT). Topics Include: hardware and software level network protocols, network architecture and topology including WANs and LANs, client-server relationships, distributed computing, data transfer, security, virtualization of hardware, multi-tier network configuration examples, and certifications will be addressed.

**Prerequisites:** EE 233 [Min Grade: C]

**EE 433. Engineering Software Solutions. 3 Hours.**

This course covers the fundamentals of software design, architecture, and implementation for future software engineers. Topics include: customer-focused requirements gathering, project planning, team tools, architectural patterns, environment and component selection, quality assurance, sustainability, versioning. Various development methodologies are discussed with a project demonstrating at least one release cycle.

**Prerequisites:** EE 333 [Min Grade: C]

**EE 434. Power Semiconductor Electronics. 3 Hours.**

Fundamentals of integrated circuit design for radio-frequency and power converter circuits. Course contents include basics of RF circuit theory, matching networks, high frequency MOS model, low-noise-amplifier, voltage controlled oscillator, fundamentals of power electronics, power semiconductor switches, steady-state equivalent circuit modeling, DC transformer model, basic AC equivalent circuit modeling, linearization and perturbation, etc. Students will require accomplishing a computer aided design, simulation and chip layout of an integrated circuit design project.

**Prerequisites:** EE 316 [Min Grade: C] and EE 318 [Min Grade: D] and EE 351 [Min Grade: D]

**EE 437. Introduction to Embedded Systems. 3 Hours.**

This course provides an applied introduction to the design of embedded systems, including hardware and software aspects. Topics include: various embedded hardware platforms, interfacing industrial bus systems, sensors, actuators, low-power wireless communication, and application of Internet-of-Things (IoT).

**Prerequisites:** EE 314 [Min Grade: D] and EE 337 [Min Grade: D]

**EE 438. Computer Architecture. 3 Hours.**

Advanced microprocessor topics including cache design, pipelining, superscalar architecture, design of control units, microcoding, and parallel processors. Comparison of advanced, contemporary microprocessors from Intel and IBM. EE 337 (Introduction to Microprocessors) is a recommended prerequisite for this course.

**Prerequisites:** EE 210 [Min Grade: C] and EE 233 [Min Grade: D] and EE 337 [Min Grade: D]

**EE 444. Real-Time Process & Protocols. 3 Hours.**

Hands-on laboratory course covering topics in real-time computer systems such as algorithms, state-machine implementations, communication protocols, instrumentation, and hardware interfaces.

**Prerequisites:** EE 233 [Min Grade: D] and EE 337 [Min Grade: D]

**EE 447. Internet/Intranet Application Development. 3 Hours.**

This course covers development of software models and applications using Internet/Intranet technologies. Topics include: web client-server relationships, multi-tier design models, scripting and validation, basic TCP/IP networking, separation of concerns, markup and data description languages. Projects will allow the opportunity for the use of a range of tools and development platforms.

**Prerequisites:** EE 233 [Min Grade: C]

**EE 448. Software Engineering Projects. 3 Hours.**

This course covers practical applications of software engineering including development of applications for Internet of Things (IoT). Topics include: requirements gathering, design matrices, environment selection, relevant architectural patterns, networking basics, databases, service endpoints, embedded systems selection and security. Projects with a software emphasis will be utilized to demonstrate principles of IoT applications.

**Prerequisites:** EE 333 [Min Grade: C]

**EE 452. Digital Systems Design. 3 Hours.**

This course covers the design of customized complex digital systems using Field Programmable Gate Array (FPGA) based platforms, using modern design tools for simulation, synthesis, and implementation. Topics include hardware design and development languages such as Verilog or VHDL.

**Prerequisites:** EE 337 [Min Grade: C] and EE 351 [Min Grade: C]

**EE 458. Medical Instrumentation. 3 Hours.**

This course covers the fundamental operating principles, applications, safety, and design of electronic instrumentation used in the measurement of physiological parameters.

**Prerequisites:** EE 351 [Min Grade: C]

**EE 461. Machinery II. 3 Hours.**

Physical principles of DC machines. Mathematical analysis of generator designs using equivalent circuits and magnetization curves. Calculation of motor speed, torque, power, efficiency, and starting requirements. Solid-state speed control systems.

**Prerequisites:** EE 361 [Min Grade: D]

**EE 467. Brain Machine Interface. 3 Hours.**

This course explores the brain-machine interfaces, particularly the technologies that directly stimulate and/or record neural activity. This course is divided into three major components: 1) neuroscience and electrode interfaces, 2) brain recording and stimulating front-end circuits, and 3) circuit modeling, simulating, and optimization.

**Prerequisites:** EE 233 [Min Grade: C] and EE 351 [Min Grade: C]

**EE 471. Power Systems I. 3 Hours.**

Components of power systems. Performance of modern interconnected power systems under normal and abnormal conditions. Calculation of inductive and capacitive reactances of three-phase transmission lines in steady state.

**Prerequisites:** EE 361 [Min Grade: D]

**EE 472. Power Systems II. 3 Hours.**

Modeling of generators, transformers, and transmission lines for system studies. Introduction to symmetrical components. Calculation of short-circuit currents due to balanced and unbalanced faults. Determination of interrupting ratings of circuit breakers. Transient stability of power systems. Derivation of swing equation and solution by numerical method. Equal area criterion.

**Prerequisites:** EE 471 [Min Grade: D]

**EE 473. Protective Relaying of Power Systems. 3 Hours.**

Operating principles of protective relays. Protection of transmission lines, generators, motors, transformers, and buses.

**Prerequisites:** EE 361 [Min Grade: D]

**EE 485. Engineering Operations. 3 Hours.**

This course covers the principles and standards of engineering design from ideation to final design. Topics include: product development process, problem definition and need identification, embodiment and detail design, design for specific criterion, modeling and cost evaluation. Emphasis is placed on ethics and civil responsibilities in design including environmental, social, liable, sustainability and reliability through the lens of engineering design.

**Prerequisites:** (EGR 111 [Min Grade: C] or EGR 200 [Min Grade: C]) and EE 210 [Min Grade: D] and (EE 314 [Min Grade: D] or EE 312 [Min Grade: D])

**EE 489. Undergraduate Engineering Research. 0 Hours.**

Undergraduate research experiences in electrical and computer engineering under faculty guidance.

**Prerequisites:** EGR 111 [Min Grade: C] or EGR 200 [Min Grade: C]

**EE 490. Special Topics in Electrical Engineering. 1-3 Hour.**

This course covers contemporary topics in Electrical Engineering selected by faculty.

**EE 491. Individual Study in Electrical Engineering. 1-6 Hour.**

Faculty-guided self-study of special topic in electrical and computer engineering.

**EE 492. Honors Research I. 4 Hours.**

Departmental honors students work closely with faculty to develop research skills.

**Prerequisites:** EGR 301 [Min Grade: C](Can be taken Concurrently)

**EE 493. Honors Research II. 4 Hours.**

Departmental honors students work closely with faculty to develop research skills.

**Prerequisites:** EGR 492 [Min Grade: C]

**EE 498. Team Design Project I. 3 Hours.**

This course is the first part of a two-semester team design project. The deliverables include: detailed design, documentation, and project plan for completion in EE 499. Design projects are chosen from analog/digital systems, machine learning, embedded systems, signal processing, Internet of Things (IoT), and others. Course taken during the student's final year of the program.

**Prerequisites:** EE 318 [Min Grade: D] and EE 337 [Min Grade: D] and EE 485 [Min Grade: D](Can be taken Concurrently) and EE 351 [Min Grade: D](Can be taken Concurrently)

**EE 499. Team Design Project II. 3 Hours.**

This course is the second part of a two-semester team design project focusing on project implementation. Teams are required to complete a written design report and a final oral and poster presentation. Course is taken the during the student's final year of the program, in the term immediately after successfully completing EE 498.

**Prerequisites:** EE 498 [Min Grade: C]

**EGR-Engineering Courses****EGR 011. Undergraduate Coop/Internship in Engineering. 0 Hours.**

Engineering workplace experience in preparation for the student's intended career.

**EGR 102. Engineering LLC Seminar. 0 Hours.**

The Engineering Living Learning Community (LLC) is designed to strengthen students' first year of college while fostering a sense of community. The living-learning community extends learning from the classroom into the residence hall where students participate in structured programs built around academics, common interests, and shared goals. This program will provide scholars with a solid foundation for the successful completion of an engineering degree. Programming within the LLC is a partnership between the Office of Student Housing and Residence Life and the UAB School of Engineering.

**EGR 110. Introduction to Engineering I. 1 Hour.**

Introduction to engineering as a profession, ethics and safety, engineering specialties, educational requirements, and team work; and present and future societal demands on profession. This is the first course in a two-course sequence for first-year students.

**Prerequisites:** MA 105 [Min Grade: C](Can be taken Concurrently) or MA 106 [Min Grade: C](Can be taken Concurrently) or MA 107 [Min Grade: C](Can be taken Concurrently) or MA 125 [Min Grade: C] (Can be taken Concurrently) or MA 225 [Min Grade: C](Can be taken Concurrently)

**EGR 111. Introduction to Engineering II. 1 Hour.**

Introduction to engineering specialties; career opportunities in engineering; introduction to engineering design, technical communication, and team work; and present and future societal demands on profession. This is the second course in a two-course sequence for first-year students.

**Prerequisites:** EGR 110 [Min Grade: C]

**EGR 117. Engineering Innovation I: Design Thinking. 3 Hours.**

Learn to produce great designs, be a more effective engineer, and communicate with high emotional and intellectual impact. This project based course gives students the ability to understand, contextualize, and analyze engineering designs and systems. By learning and applying design thinking, students will more effectively solve problems in any domain. Lectures focus on teaching a tested, iterative design process as well as techniques to sharpen creative analysis. Guest lectures from all disciplines illustrate different approaches to design thinking. This course develops students' skills to conceive, organize, lead, implement, and evaluate successful projects in any engineering discipline. Additionally, students learn how to give compelling in-person presentations.

**Prerequisites:** MA 106 [Min Grade: C](Can be taken Concurrently) and (EGR 110 [Min Grade: C] or EGR 200 [Min Grade: C])(Can be taken Concurrently)

**EGR 150. Computer Methods in Engineering. 3 Hours.**

An introduction to engineering computation using MATLAB language and Excel. Basic programming skills using built-in functions is emphasized. Generation and manipulation of vectors and matrices, operations on vectors/matrices, plotting, iterations calculations. If/else and other logical constructs, and data input/output are covered. Engineering applications are used throughout the course.

**Prerequisites:** (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**EGR 200. Introduction to Engineering. 2 Hours.**

Introduction to the profession of engineering, ethics and safety, engineering specialties, career opportunities, and educational requirements; introduction to engineering design, team work, and technical communication; and present and future societal demands on profession.

**Prerequisites:** (MA 102 [Min Grade: C] or MA 105 [Min Grade: C] (Can be taken Concurrently) or MA 106 [Min Grade: C](Can be taken Concurrently) or MA 107 [Min Grade: C](Can be taken Concurrently) or MA 125 [Min Grade: C](Can be taken Concurrently) or MA 225 [Min Grade: C](Can be taken Concurrently)

**EGR 217. EGR Design & Innovation II: EGR Design Prototyping. 3 Hours.**

Students will learn to design and prototype physical system components and devices that meet design criteria of the intended user. Students will learn how and when to use paper and other low-fidelity prototyping techniques as well as more advanced techniques such as additive manufacturing, machining, and programming.

**Prerequisites:** EGR 117 [Min Grade: C] and ME 102 [Min Grade: C]

**EGR 265. Math Tools for Engineering Problem Solving. 4 Hours.**

Designed to allow engineering majors to utilize the terminology and problem-solving approaches inherent to engineering, while completing their mathematical preparation.

**Prerequisites:** MA 126 [Min Grade: C] or MA 226 [Min Grade: C]

**EGR 301. Honors Research I. 1 Hour.**

Introduces students to research methodology, ethics, data analysis, and technical communication. Students must be invited into program in order to enroll.

**Prerequisites:** (MA 227 [Min Grade: C] or EGR 265 [Min Grade: C])

**EGR 317. Engineering Innovation III: Project Lab. 3 Hours.**

Student teams engineer devices based on client needs. The project team will collaborate with the client to establish an appropriate engineering design to meet user needs. Students are trained in product development, product design, engineering validation and will develop training and documentation market analysis, business plan and a go-to-market strategy as appropriate for the project.

**Prerequisites:** EGR 217 [Min Grade: C] and (EGR 265 [Min Grade: C] or MA 227 [Min Grade: C]) and (CE 210 [Min Grade: C] or EE 312 [Min Grade: C] or EE 314 [Min Grade: C] or MSE 280 [Min Grade: C])

**EGR 481. Interdisciplinary Project Lab. 3 Hours.**

Multidisciplinary student teams (engineering, business, arts) engineer devices based on client needs. The project team will collaborate with the client to establish an appropriate engineering design to meet user needs. Students are trained in product development, product design, engineering validation and will develop training and documentation market analysis, business plan and a go-to-market strategy as appropriate for the project.

**Prerequisites:** (ME 102 [Min Grade: C] and CE 210 [Min Grade: C] and EE 312 [Min Grade: C]) or CE 360 [Min Grade: C] or (EE 337 [Min Grade: D] and EE 351 [Min Grade: D]) or (ME 322 [Min Grade: C] and ME 371 [Min Grade: C]) or MSE 281 [Min Grade: D]

**EGR 490. Special Topics in Engineering. 1-3 Hour.**

Special Topics in Engineering.

**EGR 491. Individual Study in Engineering. 1-6 Hour.**

Individual Study in Engineering.

**EGR 494. Undergraduate Honors Research in Engineering I. 1-3 Hour.**

Research opportunities for undergraduate students in the Biomedical Engineering Honors Program. Research areas include cardiac electrophysiology, brain imaging, biomedical implants, and tissue engineering.

**Prerequisites:** EGR 301 [Min Grade: C] or STH 201 [Min Grade: C]

**EGR 495. Undergraduate Honors Research in Engineering II. 1-3 Hour.**

Research opportunities for undergraduate students in the Biomedical Engineering Honors Program. Research areas include cardiac electrophysiology, brain imaging, biomedical implants, and tissue engineering.

**Prerequisites:** EGR 494 [Min Grade: C]

**EGR 498. Capstone Design I. 3 Hours.**

Through experiential learning, students go through the early phases of engineering design innovation. Engineering students will work in multi-disciplinary teams to develop design concepts for both a client-based prototype and a commercializable version. Designs take into account client needs as well as legal, regulatory, and marketing requirements. Business ethics are also covered. Emphasis is placed on communication to targeted audiences in both oral and written formats.

**Prerequisites:** EGR 317 [Min Grade: C] and (EE 312 [Min Grade: C] or EE 314 [Min Grade: C]) and MSE 280 [Min Grade: C] and ME 215 [Min Grade: C] and CE 220 [Min Grade: C]

**EGR 499. Capstone Design II. 3 Hours.**

Capstone design project; a continuation of EGR 498. Through experiential learning, student teams complete the engineering design process for their client-based prototype incorporating engineering standards and realistic constraints. Student teams develop a business plan to present to potential business partners and product development teams from established companies. Additional skills learned in this part of the design process include: development of business proposals, project planning and scheduling, project execution and resource scheduling, communication of design, and interim and final design reviews. Emphasis is placed on communication of design and design justification in both an oral and written format to targeted audiences.

**Prerequisites:** EGR 498 [Min Grade: C]

## ME-Mechanical Engineering Courses

**ME 011. Coop/Internship in ME. 0 Hours.**

Engineering workplace experience in preparation for the student's intended career.

**ME 102. Engineering Graphics. 2 Hours.**

Basic concepts in technical sketching, computer-aided drawing and design, projections, sections, and dimensioning.

**Prerequisites:** MA 105 [Min Grade: C](Can be taken Concurrently) or MA 106 [Min Grade: C](Can be taken Concurrently) or MA 107 [Min Grade: C](Can be taken Concurrently) or MA 125 [Min Grade: C](Can be taken Concurrently) or MA 225 [Min Grade: C]

**ME 103. Drawing, Design and Measurement for Industrial Distribution. 3 Hours.**

Technical sketching and reading of engineering drawings and analysis of systems involving human performance. For non-engineering majors. Not available for credit toward engineering major.

**ME 215. Dynamics. 3 Hours.**

Kinematics of particles in Cartesian, cylindrical, and polar coordinates. Simple relative motion. Second law application in rectilinear translation. Projectile motion. Energy and momentum principles for particles and for rigid bodies in plane motion. Impact and conservation of linear momentum.

**Prerequisites:** CE 210 [Min Grade: C]

**ME 215R. Dynamics Recitation. 0 Hours.**

An application-based course designed to reinforce concepts from ME 215.

**ME 241. Thermodynamics I. 3 Hours.**

Thermodynamic definitions, properties of a pure substance, ideal, and real gases, work, and heat. Fundamental laws of thermodynamics, entropy, reversible cycles, and irreversibility.

**Prerequisites:** PH 221 [Min Grade: C] and (CH 115 [Min Grade: C] or CH 125 [Min Grade: C]) and (CH 116 [Min Grade: C] or CH 126 [Min Grade: C]) and MA 126 [Min Grade: C](Can be taken Concurrently) or MA 226 [Min Grade: C](Can be taken Concurrently)

**ME 241R. Thermodynamics Recitation. 0 Hours.**

An application-based course designed to reinforce concepts from ME 241.

**ME 242. Thermodynamics II. 3 Hours.**

Application of thermodynamic principles to engineering systems; vapor power cycles; gas turbine cycles; Otto and Diesel cycles; refrigeration cycles; mixtures of ideal gases; psychrometrics.

**Prerequisites:** ME 241 [Min Grade: C] and (BME 150 [Min Grade: C] or EGR 150 [Min Grade: C]) and (MA 126 [Min Grade: C] or MA 226 [Min Grade: C])

**ME 251. Introduction to Thermal Sciences. 2 Hours.**

Introduction to thermodynamics and heat transfer for non-mechanical engineering majors.

**Prerequisites:** (MA 126 [Min Grade: C] or MA 226 [Min Grade: C]) and PH 221 [Min Grade: C]

**ME 302. Overview of Mechanical Components. 3 Hours.**

An introduction to statics, dynamics, strength of materials, and engineering design. Transformation of energy, thermodynamics, heat transfer, and fluid mechanics. For non-engineering majors. Not available for credit toward engineering major.

**ME 321. Introduction to Fluid Mechanics. 3 Hours.**

Fluid properties, fluid statics, fluid in motion (control volume method), pressure variation in flowing fluids (Bernoulli equation), principles of momentum and energy transport, dimensional analysis and similitude, internal flow and external flow.

**Prerequisites:** ME 241 [Min Grade: C] and (MA 227 [Min Grade: C] and MA 252 [Min Grade: C] or EGR 265 [Min Grade: C]) and CE 210 [Min Grade: C] and (BME 150 [Min Grade: C] or EGR 150 [Min Grade: C])

**ME 322. Introduction to Heat Transfer. 3 Hours.**

Fundamentals of heat transfer and their application to practical problems, including steady and transient heat conduction, external and internal forced convection, natural convection and radiation.

**Prerequisites:** ME 321 [Min Grade: C]

**ME 360. Introduction to Mechatronic Systems Engineering. 3 Hours.**

Control systems, feedback, and transfer function concepts. Laplace transform of mechatronic systems. Stability, steady state, and transient response. Systems modeling and analysis in time and frequency domain. Root locus and Nyquist Bode plots. Actuators, sensors, and controllers for various engineering applications. Fundamentals of mechanical and electrical/electronic component integration with controls and mechatronic system design.

**Prerequisites:** ME 215 [Min Grade: C] and ME 364 [Min Grade: C]

**ME 361. Thermo-Fluids Systems. 3 Hours.**

Pressure, temperature, fluid flow, and heat transfer instrumentation and their application to measurements of mass, heat, and momentum transport, flow characterization, heat engine and refrigeration cycles, and other thermal-fluids experiments. Experimental uncertainty analysis. Writing proficiency is required. ME 361L must be taken concurrently.

**Prerequisites:** ME 242 [Min Grade: C](Can be taken Concurrently) and ME 322 [Min Grade: C](Can be taken Concurrently)

**ME 361L. Thermo-Fluids Systems Laboratory. 0 Hours.**

Lab component for ME 361 Thermo-Fluids Systems. ME 361 must be taken concurrently.

**ME 364. Linear Algebra and Numerical Methods. 3 Hours.**

Linear equations and matrices, real vector bases, matrix decompositions, linear transformations; determinants, eigenvalues, eigenvectors; numerical methods for linear systems of equations, integration, ordinary differential equations; approximation, interpolation, least squares fits.

**Prerequisites:** (MA 227 [Min Grade: C] and MA 252 [Min Grade: C] or EGR 265 [Min Grade: C]) and (BME 150 [Min Grade: C] or EGR 150 [Min Grade: C])

**ME 370. Kinematics and Dynamics of Machinery. 3 Hours.**

Displacement, velocity and acceleration analysis, synthesis and design of linkages and mechanisms for various engineering applications on the basis of motion requirements. Static and dynamic force analysis of linkages, balancing of rotors and reciprocating machines. Significant consideration is given to designing geometry of gear sets: spur, helical, worm, and bevel gears. Analysis of planetary gear sets and drivetrains completes the course. Computer workshops support the learning process of main technical components.

**Prerequisites:** ME 102 [Min Grade: C] and ME 215 [Min Grade: C]

**ME 371. Machine Design. 3 Hours.**

Body stress, deflection and fatigue strength of machine components. Failure theories, safety factors and reliability, surface damage. Application to the design of gears, shafts, bearings, welded joints, threaded fasteners, belts and chains, keys, pins, springs, as well as mechanical design and selection of other machine components. Software applications, design projects, and exposure to hardware and systems are used to reinforce concepts.

**Prerequisites:** CE 220 [Min Grade: C] and (BME 150 [Min Grade: C] or EGR 150 [Min Grade: C]) and ME 215 [Min Grade: C]

**ME 411. Intermediate Fluid Mechanics. 3 Hours.**

Applications of fluid dynamic principles to engineering flow problems such as turbo-machinery flow and one-dimensional compressible flow. Vorticity, potential flow, viscous flow, Navier-Stokes solutions, and boundary layers.

**Prerequisites:** ME 321 [Min Grade: C] and ME 364 [Min Grade: C]

**ME 421. Introduction to Computational Fluid Dynamics Basics. 3 Hours.**

Governing equations for fluid flows, classifications of flow regimes, and approaches to analyze fluid flow problems. Introduction to Computational Fluid Dynamics (CFD), mesh generation, boundary conditions, numerical solution of equations governing fluid flows, and visualization. Hands-on exercises using a commercial CFD solver.

**Prerequisites:** ME 321 [Min Grade: C]

**ME 430. Vehicular Dynamics. 3 Hours.**

Introduction to the fundamentals of mechanics and analytical methods for modeling vehicle dynamics and performance. Topics include tire-road interaction modeling, vehicle longitudinal dynamics and traction performance, lateral dynamics, handling, stability of motion and rollover, as well as contribution of the drivetrain system, steering system and suspension configurations to the dynamics of a vehicle. Software applications, projects, and exposure to hardware and systems are used to reinforce concepts.

**Prerequisites:** ME 215 [Min Grade: C]

**ME 431. Introduction to Vehicle Drive Systems Engineering. 3 Hours.**

Engineering fundamentals of mechanical and mechatronic, hybrid-electric, and electric drive systems. Applications to passenger cars and commercial vehicles. Drive system and component design, including main clutches and torque converters, transmissions, transfer cases, and drive axles. Introduction to plug-in hybrid-electric vehicles.

**Prerequisites:** ME 215 [Min Grade: C] and ME 370 [Min Grade: C](Can be taken Concurrently)

**ME 432. Introduction to Electric and Hybrid Vehicle Engineering. 3 Hours.**

Introduction to fully electric and hybrid vehicle engineering. Mechatronic system and component design. Batteries and energy storage devices. Plug-in hybrid electric vehicles.

**Prerequisites:** ME 215 [Min Grade: C] and ME 360 [Min Grade: C](Can be taken Concurrently)

**ME 445. Combustion. 3 Hours.**

Evaluation of the impact of fuel characteristics and operating conditions on the performance of coal-fired electric utility steam-raising plant and the prospects for continued reliance on coal as fuel for electric power generation. The phenomena emphasized are the behavior of turbulent jets; ignition, devolatilization and combustion of coal particles; radiative heat transfer and the effect of ash deposits on heat transfer; formation of air pollutants and their removal from combustion products; integrated gasification combined cycle; and capture and sequestration of carbon dioxide.

**Prerequisites:** ME 242 [Min Grade: C] and ME 322 [Min Grade: C]

**ME 447. Internal Combustion Engines. 3 Hours.**

Fundamentals of reciprocating internal combustion engines: engine types, engine components, engine design and operating parameters, thermochemistry of fuel-air mixtures, properties of working fluids, ideal models of engine cycles, engine operating characteristics, gas-exchange processes, fuel metering, charge motion within the cylinder, combustion in spark-ignition and compression ignition engines.

**Prerequisites:** ME 215 [Min Grade: C] and ME 242 [Min Grade: C]

**ME 449. Power Generation. 3 Hours.**

Application of thermodynamics, fluid mechanics, and heat transfer to conversion of useful energy. Includes terrestrial and thermodynamic limitations, fossil fuel power plants, renewable energy sources, and direct energy conversion.

**Prerequisites:** ME 242 [Min Grade: C]

**ME 454. Heating, Ventilating and Air Conditioning. 3 Hours.**

Fundamentals and practice associated with heating, ventilating, and air conditioning; study of heat and moisture flow in structures, energy consumption, and design of practical systems.

**Prerequisites:** ME 242 [Min Grade: C] and ME 322 [Min Grade: C]

**ME 455. Thermal-Fluid Systems Design. 3 Hours.**

Comprehensive design problems requiring engineering decisions and code/Standard compliance. Emphasis on energy system components: piping networks, pumps, heat exchangers. Includes fluid transients and system modeling.

**Prerequisites:** ME 242 [Min Grade: C] and ME 322 [Min Grade: C]

**ME 456. Building Energy Modeling and Analysis. 3 Hours.**

Computer modeling of energy use and thermal comfort in buildings using several software tools. Interpretation and analysis of the results. Implementing energy efficiency measures in the model and studying the effects on energy use.

**Prerequisites:** ME 242 [Min Grade: C] and ME 322 [Min Grade: C]

**ME 461. Mechanical Systems. 3 Hours.**

This course concentrates on main technical principles and aspects of mechanical systems design. The course also provides fundamental knowledge on test equipment and experimental techniques for experimenting on main technical principles of mechanical design. This course discusses data acquisition systems and signal conditioning, and design of experiments. Writing proficiency is required. ME 461L must be taken concurrently.

**Prerequisites:** CE 220 [Min Grade: C] and ME 215 [Min Grade: C]

**ME 461L. Mechanical Systems Laboratory. 0 Hours.**

Lab Component of ME 461 Mechanical Systems. ME 461 must be taken concurrently.

**ME 464. Introduction to Finite Element Method. 3 Hours.**

Concepts and applications of finite element method. Development and applications of basic elements used in engineering mechanics. Use of finite element analysis software. Application of finite element concept to several areas of mechanics.

**Prerequisites:** CE 220 [Min Grade: C]

**ME 475. Mechanical Vibrations. 3 Hours.**

Development of equations of motion for free and forced single-degree-of-freedom (SDOF) systems. Multi-degree-of-freedom systems. Transient response, support motion and vibration isolation for SDOFs. Vibration absorbers, generalized mass and stiffness, orthogonality of normal modes, and root solving and Gauss elimination procedures. Cholesky decomposition and Jacobi diagonalization methods.

**Prerequisites:** (MA 227 [Min Grade: C] and MA 252 [Min Grade: C] or EGR 265 [Min Grade: C]) and ME 215 [Min Grade: C]

**ME 477. Systems Engineering. 3 Hours.**

Exposure to the field of systems engineering, mission design, requirements development, trade studies, project life cycle, system hierarchy, risk analysis, cost analysis, team organization, design fundamentals, work ethics, compare and evaluate engineering alternatives, systems thinking. Registration is restricted to junior or higher standing.

**ME 478. Automated Manufacturing. 3 Hours.**

Introduction to automated manufacturing technology. Components of automated systems (controllers, sensors and actuators) and automated manufacturing sub-systems (3D printer, CNC, robot and computer vision) will be studied in a lecture/lab environment with hands on activities.

**Prerequisites:** ME 102 [Min Grade: C] and EGR 150 [Min Grade: C]

**ME 480. Instrumentation and Measurements. 3 Hours.**

Thorough exploration of fundamental measurement concepts and techniques for data acquisition and validation. Explanation of important selection criteria for the identification and configuration of commercially available data acquisition devices. Students will get hands-on experience following best practices for data acquisition (high speed vs low speed) relevant to their field of study or career. Many types of sensors, their underlying technology, and measurement techniques will be discussed (i.e. accelerometers, load cells, Digital Image Correlation, etc.) to demonstrate best practices for sensor selection for a wide range of specialized applications. Registration is restricted to junior or higher standing.

**ME 489. Undergraduate Research in Mechanical Engineering. 1-6 Hour.**

Undergraduate research experiences in mechanical engineering.

**Prerequisites:** EGR 200 [Min Grade: C] or (EGR 110 [Min Grade: C] and EGR 111 [Min Grade: C]) or HC 111 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and PH 221 [Min Grade: C](Can be taken Concurrently)

**ME 490. Special Topics in Mechanical Engineering. 1-3 Hour.**

Special Topics in Mechanical Engineering.

**ME 491. Individual Study in Mechanical Engineering. 1-6 Hour.**

Individual Study in Mechanical Engineering.

**ME 494. Mechanical Engineering Seminar. 1 Hour.**

Required for ME undergraduate Honors Program students. Presentations by students, faculty, and guests regarding current research.

**ME 496. Honors Research. 1-6 Hour.**

Research opportunities for undergraduate students in the Mechanical Engineering Honors Program.

**Prerequisites:** EGR 301 [Min Grade: C]

**ME 498. Capstone Design Project I. 3 Hours.**

Capstone design project: interdisciplinary design teams, ethics, materials selection, design process, development of proposal, project planning and scheduling, project execution and resource scheduling, and communication of design.

**Prerequisites:** (ME 322 [Min Grade: C] and ME 360 [Min Grade: C]) or (ME 322 [Min Grade: C] and ME 370 [Min Grade: C]) or (ME 322 [Min Grade: C] and ME 371 [Min Grade: C]) or (ME 360 [Min Grade: C] and ME 370 [Min Grade: C]) or (ME 360 [Min Grade: C] and ME 371 [Min Grade: C]) or (ME 370 [Min Grade: C] and ME 371 [Min Grade: C]) and MSE 401 [Min Grade: C](Can be taken Concurrently)

**ME 499. Capstone Design Project II. 3 Hours.**

Continuation of ME 498. Capstone interim and final design reviews with written and oral reports. ME 498 must be taken the term immediately before ME 499.

**Prerequisites:** (ME 322 [Min Grade: C] or ME 360 [Min Grade: C] or ME 370 [Min Grade: C] or ME 371 [Min Grade: C]) and (ME 322 [Min Grade: C] or ME 360 [Min Grade: C] or ME 370 [Min Grade: C] or ME 371 [Min Grade: C]) and (ME 322 [Min Grade: C] or ME 360 [Min Grade: C] or ME 370 [Min Grade: C] or ME 371 [Min Grade: C]) and ME 498 [Min Grade: C]

**MSE-Material Science Egr Courses****MSE 011. Coop/Internship in MSE. 0 Hours.**

Engineering workplace experience in preparation for the student's intended career.

**MSE 280. Engineering Materials. 3 Hours.**

Fundamentals of materials engineering, including terminology, mechanical testing and behavior, heat treating, and processing of metals, ceramics, polymers, and composites. Degradation of materials and criteria for materials selection. Course requires completion of 4 credits of Area III Science.

**MSE 281. Physical Materials I. 4 Hours.**

Structure of metals, ceramics and polymers; crystal bonding; phase diagrams, diffusion, dislocations and grain boundaries. Applications to the iron-carbon system, including heat treatment. MSE 281L must be taken concurrently.

**Prerequisites:** (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and MSE 280 [Min Grade: D]

**MSE 281L. Physical Materials I Laboratory. 0 Hours.**

Laboratory component of MSE 281 and must be taken concurrently with MSE 281.

**MSE 350. Introduction to Materials. 3 Hours.**

Concepts and applications, crystal structure of materials, formation of microstructures, and selected structure-property relationships. Not available for credit toward engineering major. For non-engineering majors only.

**MSE 380. Thermodynamics of Materials. 3 Hours.**

First, second, and third laws of thermodynamics. Gibbs free energy, heat capacity, enthalpy, entropy, and relationships between thermodynamic functions. Free-energy versus composition relationships; behavior of ideal and non-ideal solutions; concept of thermodynamic activity of components in solution. Applications to materials systems.

**Prerequisites:** CH 117 [Min Grade: D] and CH 118 [Min Grade: D] and (MA 126 [Min Grade: C] or MA 226 [Min Grade: C]) and MSE 280 [Min Grade: D]

**MSE 381. Physical Materials II. 3 Hours.**

Microstructural changes in response to temperature and time; vacancies, annealing, diffusion, nucleation and growth kinetics. Equilibrium and non-equilibrium microstructures. Applications to precipitation hardening and solidification of metals.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 382. Mechanical Behavior of Materials. 3 Hours.**

Microscopic deformation mechanisms in materials leading to macroscopic properties of fatigue; creep; ductile, transitional, and brittle fracture; friction; and wear. CE 220 (Mechanics of Solids) is recommended as a prerequisite for this course.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 401. Materials Processing. 3 Hours.**

Processing of metals, ceramics, polymers, and composites. Casting, forging, rolling, welding, powder processing, 3D printing, compression molding, and other advanced methods. Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** MSE 280 [Min Grade: D] and CE 220 [Min Grade: D]

**MSE 405. Frontiers of Automotive Materials. 3 Hours.**

Advanced lightweight automotive materials, manufacturing and modeling techniques. Technology advancements in cost-effective carbon, glass and related reinforcements; "green" and sustainable materials, crashworthiness and injury protection of occupants and pedestrians, metal castings, heavy truck, mass transit, fuel cell and hybrid vehicles.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 408. Nanobiomaterials. 3 Hours.**

Basic tools of nanotechnology, building blocks of nanostructured materials. Behavior of materials with nanoscale structures and their technological applications, including automotive, medical, and electronic applications. Introduction to biomaterials and nanobiomaterials, concepts in tissue engineering with special focus on nanoscaffolds for tissue engineering, nanoparticles in drug delivery and safety and toxicity of nanomaterials.

**Prerequisites:** MSE 280 [Min Grade: D]

**MSE 409. Principles of Metal Casting. 3 Hours.**

Engineering theory and practice on the production of cast ferrous (gray iron, ductile iron, steel) and non-ferrous metals (brass, bronze, aluminum). Producer requirements/responsibilities such as part and mold design, material specifications, and testing requirements are discussed. Laboratory on common testing and production methods and analysis and handling techniques required to produce high quality castings.

**Prerequisites:** MSE 280 [Min Grade: D]

**MSE 409L. Principles of Metal Casting Laboratory. 0 Hours.**

Laboratory component of MSE 409 and must be taken concurrently with MSE 409.

**MSE 413. Composite Materials. 3 Hours.**

Processing, structure, and properties of metal-, ceramic-, and polymer-matrix composite materials. Roles of interfacial bond strength, reinforcement type and orientation, and matrix selection in physical and mechanical properties of composite materials. MSE 382 (Mechanical Behavior of Materials) is recommended as a prerequisite for this course. Writing is a significant component of this course.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 425. Statistics and Quality. 3 Hours.**

This course is arranged to reflect the sequential steps an engineer or scientist take to assess process capability and implement process improvement studies. There is a focus on connecting the theoretical equations to practical examples as well as interpreting and communicating of statistical results.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 430. Polymeric Materials. 3 Hours.**

Processing methods, structure/engineering/property relationships, and applications of polymeric materials.

**Prerequisites:** MSE 281 [Min Grade: D] and (CH 117 [Min Grade: D] or CH 127 [Min Grade: D]) and (CH 118 [Min Grade: D] or CH 128 [Min Grade: D])

**MSE 430L. Polymeric Materials Laboratory. 0 Hours.**

Laboratory component of MSE 430 and must be taken concurrently with MSE 430.

**MSE 433. Nondestructive Evaluation of Materials. 3 Hours.**

This course reviews the principles, history, applications, and strengths/weaknesses of the five primary NDE techniques (RT, UT, EC, MP, and LP) with an emphasis on the fundamentals and techniques of each testing method. Importance of NDE on part performance and engineering design is also discussed.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 445. The Evolution of Engineering Materials. 3 Hours.**

Past, present and future of engineering materials; how new materials and processing methods have impacted human society, from the Stone Age until today. Taught as a 3-week study abroad course in Germany, with visits to universities, industrial facilities, research labs, museums and selected cultural sites.

**Prerequisites:** MSE 280 [Min Grade: D]

**MSE 462. Composites Manufacturing. 3 Hours.**

Principles of manufacturing and processing of polymeric matrix composites. Production techniques including filament winding, pultrusion, and liquid infusion techniques combined with design, environmental and manufacturing issues of polymer matrix composites.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 464. Metals and Alloys. 4 Hours.**

Microstructures, properties, heat treatment, and processing of ferrous and nonferrous materials.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 464L. Metals and Alloys Laboratory. 0 Hours.**

Laboratory component of MSE 464 and must be taken concurrently with MSE 464.

**MSE 465. Characterization of Materials. 4 Hours.**

Theory and practice of materials characterization, with emphasis on optical metallography, quantitative metallography, scanning electron microscopy, crystallography, and x-ray diffraction. Specific applications in metals and ceramics considered. MSE 465L must be taken concurrently.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 465L. Characterization of Materials Laboratory. 0 Hours.**

Laboratory component of MSE 465 and must be taken with MSE 465.

**MSE 470. Ceramic Materials. 4 Hours.**

Structure, processing, properties, and uses of ceramic compounds and glasses. Mechanical, thermal, and electrical behavior of ceramic materials in terms of microstructure and processing variables.

**Prerequisites:** MSE 281 [Min Grade: D] and CH 117 [Min Grade: D] and CH 118 [Min Grade: D]

**MSE 470L. Ceramic Materials Laboratory. 0 Hours.**

Laboratory component of MSE 470 and must be taken concurrently with MSE 470.

**MSE 474. Metals and Alloys II. 3 Hours.**

Production and physical metallurgy of ferrous and non-ferrous alloys including: steel alloys, inoculation and production of ductile, gray, compacted and malleable iron; advanced heat treatments of steel and iron; conventional and ultra-high strength aluminum alloys; wrought and cast copper alloys; wrought and cast magnesium alloys.

**Prerequisites:** MSE 281 [Min Grade: D] and MSE 464 [Min Grade: D]

**MSE 489. Undergraduate Research in MSE. 0 Hours.**

Undergraduate research experiences in materials science and/or engineering.

**Prerequisites:** (EGR 110 [Min Grade: C] and EGR 111 [Min Grade: C]) or EGR 200 [Min Grade: C] or HC 111 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and PH 221 [Min Grade: C](Can be taken Concurrently)

**MSE 490. Special Topics in Materials Engineering. 1-6 Hour.**

Special Topics in Materials Engineering.

**MSE 491. Individual Study in Materials Engineering. 1-6 Hour.**

Individual Study in Materials Engineering.

**MSE 496. MSE Honors Seminar. 1 Hour.**

Research presentations by faculty, students, and invited guests on topics related to Materials Science and Engineering.

**MSE 497. MSE Honors Research. 2-6 Hours.**

Honor students develop materials engineering research skills by working closely with faculty and graduate students.

**Prerequisites:** EGR 301 [Min Grade: C](Can be taken Concurrently)

**MSE 498. Capstone Design Project I. 3 Hours.**

Capstone design project: interdisciplinary design teams, ethics, materials selection, design process, development of proposal, project planning and scheduling, project execution and resource scheduling, and communication of design. Writing is a significant component of this course.

**Prerequisites:** MSE 401 [Min Grade: D](Can be taken Concurrently) and (MSE 413 [Min Grade: D] or MSE 430 [Min Grade: D] or MSE 465 [Min Grade: D] or MSE 470 [Min Grade: D])

**MSE 499. Capstone Design Project II. 3 Hours.**

Continuation of MSE 498 which must be taken in the previous term. Interim and final design reviews with written and oral reports. Writing is a significant component of this course.

**Prerequisites:** MSE 498 [Min Grade: D]

## Department of Biomedical Engineering

**Chair:** Jianyi Zhang, MD, PhD

**Associate Chair of Education:** Alan Eberhardt, PhD

Degree Offered	Bachelor of Science in Biomedical Engineering
Accreditation	The Bachelor of Science in Biomedical Engineering degree program is accredited by the Engineering Accreditation Commission of ABET, <a href="http://www.abet.org">http://www.abet.org</a> .
Website	<a href="https://www.uab.edu/engineering/bme/undergraduate">https://www.uab.edu/engineering/bme/undergraduate</a>
Program Director	Alan Eberhardt, PhD
Email	<a href="mailto:aeberhar@uab.edu">aeberhar@uab.edu</a>
Phone	205-934-8420

Biomedical engineering (BME) is the application of engineering principles and technology to the solution of problems in the life sciences and medicine. Biomedical engineers create knowledge and develop technologies that improve healthcare delivery and patient outcomes with an emphasis on reducing healthcare costs. Graduates create and apply knowledge at the interface of life sciences and engineering for the benefit of society. The BME undergraduate program prepares graduates to be immediately productive and able to adapt to a rapidly changing environment. The curriculum includes engineering core courses, mathematics, calculus-based physics, biology, chemistry, humanities, social and behavioral sciences, biomedical engineering core courses and electives. The curriculum culminates in a capstone design experience where interdisciplinary teams apply knowledge to solve real-world engineering problems. A bachelor's degree in BME from UAB provides a foundation in medical devices, biomedical implants, biomaterials, and biomedical instrumentation to compete in an increasingly technical medical field, and also prepares students for graduate school, medical school, or professional school.

### Admission

Freshmen with an ACT score of 28 or higher (or SAT equivalent) and a high school GPA of 3.00 or higher may be admitted directly to the Biomedical Engineering program. Please refer to the School of Engineering overview for policies regarding admission; change of major;

transfer credit; transient status; dual degree programs; reasonable progress; academic warning, probation, and suspension; reinstatement appeals; and graduation requirements.

### Academic Warning, Probation, and Readmission

BME students must maintain an institutional (UAB) GPA of at least 2.50. First-term BME freshmen students who have an institutional GPA below 2.50 will be placed on academic warning in BME. If their institutional GPA is not at least 2.50 after the next term enrolled, they will be placed on academic probation in BME. BME undergraduates (other than first-term freshmen) who do not have an institutional GPA of at least 2.50 will be placed on BME academic probation. If at the end of the next term in which they enroll, their institutional GPA is not at least 2.50, they will be reclassified as Pre-Engineering. To be re-admitted to the BME program, a student must have an institutional GPA of at least 3.00 and make a formal application for readmission.

### Program and Graduation Requirements

BME students must have an institutional GPA of at least 2.50 and have completed at least 64 hours of coursework applicable to their degree before they may register for 300-level and 400-level BME courses. BME students must also have an institutional GPA of 2.50 or higher and have earned a grade of C or better in all BME courses to graduate.

Please note the Residency Requirement on the Majors tab.

### Non-Majors Enrolled in BME Coursework

In addition to fulfilling course prerequisites, non-BME students (including pre-BME students and students seeking a BME minor) who wish to enroll in 300-level and 400-level BME courses must have an institutional (UAB) GPA of at least 3.00 or permission of the BME Undergraduate Advisor. Non-BME majors may not enroll in BME 423, BME 498, or BME 499.

### BME Minors

Please refer to the Minors tab on the School of Engineering's Overview page in this catalog for information specific to BME minors.

### Vision

To be an internationally recognized, research-oriented Department of Biomedical Engineering: a top choice for undergraduate and graduate education.

### Mission

The Department of Biomedical Engineering provides leadership in teaching the principles of engineering and biology and in conducting research that will translate new discoveries in biological engineering science to the fields of public health and clinical medicine. These efforts will enable us to identify new solutions to critical challenges in health care and the life sciences.

### Program Educational Objectives

Graduates of the Biomedical Engineering undergraduate program will have:

1. Gained admission to graduate or professional school, or gained employment in engineering and/or health related professions and

2. Pursued opportunities for professional growth, development, and service

## Student Outcomes

Upon completion of the BSBME degree program, our graduates will have:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

## Bachelor of Science in Biomedical Engineering

### Major in Biomedical Engineering

Requirements		Hours
<b>Core Curriculum as Specified for Engineering Majors</b>		<b>36</b>
Area I: Written Composition (6 hrs)		
Area II: Humanities and Fine Arts (9 hrs)		
Area III: Natural Sciences and Mathematics (12 hrs)		
MA 125	Calculus I	
PH 221 & 221L & 221R	General Physics I and General Physics Laboratory I and General Physics I Recitation	
PH 222 & 222L & 222R	General Physics II and General Physics Laboratory II and General Physics II - Recitation	
Area IV: History, Social, and Behavioral Sciences (9 hrs)		
<b>Other Required Courses</b>		<b>77</b>
BME 310	Biomaterials	
BME 210	Engineering in Biology	
BME 312	Biocomputing	
BME 313	Bioinstrumentation	
BME 333	Biomechanics of Solids	
BME 350	Biological Transport Phenomena	
BME 401	Undergraduate Biomedical Engineering Seminar	
BME 423	Living Systems Analysis and Biostatistics	
BME 498	Capstone Design I Product Development	
BME 499	Capstone Design II	
BY 123 & 123L	Introductory Biology I and Introductory Biology I Laboratory	

BY 409 & 409L	Principles of Human Physiology and Principles of Human Physiology Laboratory
BY 212	Genetics for Biomedical Engineers
BY 212L	Genetics for Biomedical Engineers - Laboratory
or BY 115 Human Anatomy	
CH 115 & 115R & CH 116	General Chemistry I and General Chemistry I Recitation and General Chemistry I Laboratory
CH 117 & 117R & CH 118	General Chemistry II and General Chemistry II Recitation and General Chemistry II Laboratory
EE 312	Electrical Systems
EGR 110 & EGR 111	Introduction to Engineering I and Introduction to Engineering II
or EGR 200 Introduction to Engineering	
EGR 150	Computer Methods in Engineering
EGR 265	Math Tools for Engineering Problem Solving <sup>5</sup>
MA 126	Calculus II
MA 260	Introduction to Linear Algebra
ME 102	Engineering Graphics
ME 215 & 215R	Dynamics and Dynamics Recitation
MSE 280	Engineering Materials
<b>Biomedical Engineering Electives</b>	
9	
BME 221	Clinical Innovation I
BME 289	Undergraduate Research in Biomedical Engineering I <sup>1</sup>
BME 389	Undergraduate Research in Biomedical Engineering II <sup>1</sup>
BME 420	Implant-Tissue Interactions
BME 435	Tissue Engineering
BME 443	Medical Image Processing
BME 450	Computational Neuroscience
BME 461	Bioelectric Phenomena
BME 462	Cardiac Electrophysiology
BME 471	Continuum Mechanics of Solids
BME 472	Industrial Bioprocessing and Biomanufacturing
BME 489	Undergraduate Research in Biomedical Engineering III <sup>1</sup>
BME 490	Special Topics in Biomedical Engineering
BME 491	Individual Study in Biomedical Engineering <sup>2</sup>
BME 494	Honors Research I <sup>2, 3</sup>
<b>Engineering/Math/Science Electives <sup>4</sup></b>	
6	
Select six credit hours from the following or from the list of Biomedical Engineering electives above	
BY 271 & 271L	Biology of Microorganisms and Biology of Microorganisms Laboratory
BY 311	Molecular Genetics
BY 330	Cell Biology
BY 362	Neurobiology
CE 337	Hydraulics
CE 345	Transportation Engineering
CE 360	Structural Analysis
CE 395	Engineering Economics
CE 420	Advanced Mechanics
CE 433	Solid and Hazardous Wastes Management
CH 235 & 235R	Organic Chemistry I and Organic Chemistry I Recitation
CH 237 & 237R	Organic Chemistry II and Organic Chemistry II Recitation
CH 355	Quantitative Analysis

CH 460	Fundamentals of Biochemistry	
MA 313	Patterns, Functions and Algebraic Reasoning	
MA 360	Scientific Programming	
MA 361	Mathematical Modeling	
MA 453	Fourier Analysis	
MA 485	Probability	
ME 360	Introduction to Mechatronic Systems Engineering	
ME 370	Kinematics and Dynamics of Machinery	
ME 371	Machine Design	
ME 464	Introduction to Finite Element Method	
MSE 281 & 281L	Physical Materials I and Physical Materials I Laboratory	
MSE 380	Thermodynamics of Materials	
MSE 401	Materials Processing	
MSE 430 & 430L	Polymeric Materials and Polymeric Materials Laboratory	
PH 475	Introduction to Biophysics I	
PH 487	Nanoscale Science and Applications	
RHB 400	Introduction to Rehabilitation Science	
Total Hours		128

- <sup>1</sup> A maximum of 3 hours of combined credit from BME 289, BME 389, and/or BME 489 may be applied to the degree
- <sup>2</sup> With approval of the BME Undergraduate Program Director; a maximum of 3 hours of BME 491 or BME 494 may be used for elective credit
- <sup>3</sup> Student must be enrolled in BME Honors Program
- <sup>4</sup> Other elective courses may be selected with the approval of the BME Undergraduate Program Director
- <sup>5</sup> Students may also replace [EGR 265](#) and a math/science elective with [MA 227](#) and [MA 252](#).

## Residency Requirement

In addition to UAB's residency requirement, to earn a bachelor of science in biomedical engineering from UAB, the BME department requires that students complete the following courses at UAB:

Requirements	Hours
BME 423 Living Systems Analysis and Biostatistics	3
Additional 400-level BME Elective	3
BME 498 Capstone Design I Product Development	3
BME 499 Capstone Design II	3
Total Hours	12

## Concentration in Biomechanics

Students seeking the degree of BSBME may add a concentration in Biomechanics by appropriate selection of their Mathematics/Science/Engineering Electives (3 credit hours), Engineering Elective (3 credit hours), and BME Electives (6 credit hours).

Requirements	Hours
BME 471 Continuum Mechanics of Solids	3
BME 617 Engineering Analysis	3
ME 464 Introduction to Finite Element Method	3
RHB 490 Quantitative Biomechanics of Injury and Rehabilitation	3
Total Hours	12

## Concentration in Biomaterials/Tissue Engineering

Students seeking the degree of BSBME may add a concentration in Biomaterials/Tissue Engineering by appropriate selections of their Mathematics/Science/Engineering Elective (3 credit hours), Engineering Elective (3 credit hours), and BME Electives (6 credit hours).

Requirements	Hours
<b>Required Courses</b>	
<u>BME 420</u> Implant-Tissue Interactions	3
<u>BME 435</u> Tissue Engineering	3
<u>MSE 281</u> Physical Materials I	4
<b>Elective Courses</b>	<b>3</b>
Select one of the following:	
<u>BY 311</u> Molecular Genetics	
<u>BY 330</u> Cell Biology	
<u>BY 431</u> Principles of DNA Technology	
<u>MSE 381</u> Physical Materials II	
<u>MSE 382</u> Mechanical Behavior of Materials	
<u>MSE 401</u> Materials Processing	
<u>MSE 408</u> Nanobiomaterials	
<u>MSE 413</u> Composite Materials	
<u>MSE 430</u> Polymeric Materials	
<u>MSE 464</u> Metals and Alloys	
<u>MSE 470</u> Ceramic Materials	
<u>MSE 484</u> Electronic, Magnetic, and Thermal Prop of Materials	
<u>PH 487</u> Nanoscale Science and Applications	
<hr/>	
Total Hours	13

**Please refer to the School of Engineering Overview for School policies related to admission, academic progress, reasonable progress toward degree, and graduation.**

## Curriculum for the Bachelor of Science in Biomedical Engineering (BSBME)

Freshman			
First Term	Hours	Second Term	Hours
<a href="#">CH 115</a> & <a href="#">115R</a> & <a href="#">CH 116</a>	4	<a href="#">BY 123</a> & <a href="#">123L</a>	4
<a href="#">EGR 110</a> <sup>1</sup>	1	<a href="#">CH 117</a> & <a href="#">117R</a> & <a href="#">CH 118</a>	4
<a href="#">EH 101</a>	3	<a href="#">EGR 111</a> <sup>1</sup>	1
<a href="#">MA 125</a>	4	<a href="#">EH 102</a>	3
<a href="#">ME 102</a>	2	<a href="#">MA 126</a>	4
	14		16
Sophomore			
First Term	Hours	Second Term	Hours
<a href="#">BY 212</a> & <a href="#">212L</a>	4	<a href="#">EGR 150</a>	3
<a href="#">EGR 265</a> <sup>2</sup>	4	<a href="#">BME 210</a>	3
<a href="#">PH 221</a> & <a href="#">221L</a> & <a href="#">221R</a>	4	<a href="#">CE 210</a>	3
<a href="#">MA 260</a>	3	<a href="#">EE 312</a>	3

<u>MSE 280</u>	3	<u>PH 222</u> & <u>222L</u> & <u>222R</u>	4
	18		16
<b>Junior</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
<u>BME 310</u>	3	<u>BME 333</u>	3
<u>BME 312</u>	3	<u>BME 350</u>	3
<u>BME 313</u>	3	<u>BME 423</u>	3
<u>ME 215</u>	3	Biomedical Engineering Elective	3
BME 3XX Integrated Physiology <sup>6</sup>	3	Core Curriculum Area II: Humanities and Fine Art <sup>4</sup>	3
		Core Curriculum Area IV: History, Social, and Behavioral Science <sup>4</sup>	3
	15		18
<b>Senior</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
<u>BME 498</u>	3	<u>BME 499</u>	3
<u>BME 401</u> <sup>5</sup>	1	Biomedical Engineering Elective	3
BME/Engineering/Math/Science Elective <sup>2,3</sup>	3	Core Curriculum Area II: Humanities and Fine Art <sup>4</sup>	3
BME/Engineering/Math/Science Elective <sup>2,3</sup>	3	Core Curriculum Area IV: History, Social, and Behavioral Science <sup>4</sup>	3
Core Curriculum Area II: Humanities and Fine Art <sup>4</sup>	3	Core Curriculum Area IV: History, Social, and Behavioral Science <sup>4</sup>	3
BME Elective	3		
	16		15

Total credit hours: 128

- <sup>1</sup> Transfer students may substitute EGR 200 for EGR 110 and EGR 111.
- <sup>2</sup> May substitute MA 227 and MA 252 for EGR 265 and one BME/Engineering/Math/Science Elective.
- <sup>3</sup> Students using this curriculum as a pre-health professional program (pre-med, pre-dental, or pre-optometry) may use CH 235 or CH 237 or CH 460 for this elective.
- <sup>4</sup> Please refer to the Core Curriculum as specified for engineering majors.
- <sup>5</sup> Seminar may be taken during any semester.
- <sup>6</sup> Pending final approval

## Courses

### **BME 011. Undergraduate Coop/Internship in BME. 0 Hours.**

Engineering workplace experience in preparation for the student's intended career.

### **BME 210. Engineering in Biology. 3 Hours.**

Application of engineering to the study of biology on the cellular and molecular level. Engineering solutions in genomics, proteomics, and nanotechnology to investigate cellular and molecular process.

**Prerequisites:** BY 123 [Min Grade: C] and PH 222 [Min Grade: C](Can be taken Concurrently)

### **BME 221. Clinical Innovation I. 3 Hours.**

The goals of this class are to develop an understanding of the concept of clinical innovation and develop skills in written and oral communication of innovation in the context of a business proposal/presentation.

### **BME 289. Undergraduate Research in Biomedical Engineering I. 1 Hour.**

Undergraduate research experiences in biomedical engineering. Must have sophomore standing.

**Prerequisites:** EGR 200 [Min Grade: C] or EGR 111 [Min Grade: C] or HC 111 [Min Grade: C] or HC 120 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and PH 221 [Min Grade: C](Can be taken Concurrently)

### **BME 310. Biomaterials. 3 Hours.**

Introduction to wide range of materials used for biomedical applications. Physical, chemical and mechanical properties of biomaterials.

**Prerequisites:** MSE 280 [Min Grade: C] and BME 210 [Min Grade: C]

### **BME 311. Biomaterials for Non-Majors. 3 Hours.**

Wide range of materials used for biomedical applications. Physical, chemical and mechanical properties of biomaterials.

**Prerequisites:** MSE 280 [Min Grade: C]

### **BME 312. Biocomputing. 3 Hours.**

Introduction to computational techniques used in biomedical engineering.

**Prerequisites:** EGR 150 [Min Grade: C] and EGR 265 [Min Grade: C] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C]) and MA 260 [Min Grade: C](Can be taken Concurrently)

### **BME 313. Bioinstrumentation. 3 Hours.**

An introduction to instrumentation used to make biological and physiological measurements. Techniques include acquisition and analysis of bioelectric signals and instrument control.

**Prerequisites:** EE 312 [Min Grade: C] and (MA 227 [Min Grade: C] and MA 252 [Min Grade: C] or EGR 265 [Min Grade: C])

### **BME 333. Biomechanics of Solids. 3 Hours.**

Application of mechanics of solids principles to biomedical engineering problems; stress-strain of bone, viscoelasticity and constitutive equations of tissues, mechanics of the cell, introduction to molecular mechanics.

**Prerequisites:** EGR 265 [Min Grade: C] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C]) and ME 215 [Min Grade: C](Can be taken Concurrently)

### **BME 350. Biological Transport Phenomena. 3 Hours.**

Basic mechanisms and mathematical analysis of transport processes with biological and biomedical applications. Analysis of flow, transport and reaction processes for biological fluids and biological molecules with applications towards development of artificial organs, drug delivery systems and tissue engineering products.

**Prerequisites:** EGR 265 [Min Grade: C] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C]) and BME 210 [Min Grade: C] and BY 409 [Min Grade: C](Can be taken Concurrently) and ME 215 [Min Grade: C](Can be taken Concurrently)

**BME 370. Integrated Physiology. 3 Hours.**

Integrated Physiology will introduce undergraduate students to mathematical models of major physiological systems. Basic anatomy will be reviewed in pre-recorded videos to be watched prior to coming to synchronous lectures. Lectures will include discussions, derivations of relevant equations, and development of models to demonstrate understanding of biological systems. In-class activities will be used as means to provide interactive content that will be assessed via Assignments and Exams. The course will culminate in a final project where teams of students select a pathological condition and model it in Matlab, including comparing to normal conditions and with currently-available clinical interventions. Open to junior and senior level Biomedical Engineering students.

**Prerequisites:** EGR 150 [Min Grade: C] and BME 210 [Min Grade: C]

**BME 389. Undergraduate Research in Biomedical Engineering II. 1 Hour.**

Undergraduate research experiences in biomedical engineering. Must have junior standing.

**Prerequisites:** BME 210 [Min Grade: C]

**BME 401. Undergraduate Biomedical Engineering Seminar. 1 Hour.**

Undergraduate seminar.

**BME 420. Implant-Tissue Interactions. 3 Hours.**

An overview of implant biocompatibility including tissue histology, histopathology of implant response and the regulatory process for medical devices. Emphasis placed on ethical issues related to design, development, and implementation of biomedical implants. Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** BME 310 [Min Grade: C] or BME 311 [Min Grade: C]

**BME 423. Living Systems Analysis and Biostatistics. 3 Hours.**

Basic concepts and techniques of measurement processing and analysis of data from living systems. Statistics, analysis of variance and regression analysis. Emphasis is placed on data analysis and presentation of group projects.

**Prerequisites:** BME 312 [Min Grade: C]

**BME 424. Current Topics in Stem Cell Engineering. 3 Hours.**

This course is designed for students interested in the field of stem cells, regenerative medicine, and tissue engineering using stem cells and stem cell derived cells. The course will introduce the role of stem cells in tissue growth and development, the theory behind the design and in vitro construction of tissue and organ replacements, and the applications of biomedical engineering principles to the treatment of tissue-specific diseases. Students will have hands on experience on culturing and analyzing stem cells, stem cell differentiation, analysis of functional and physiological properties of differentiated cells, and fabricating basic engineered-tissues.

**Prerequisites:** BY 123 [Min Grade: C] and (BY 210 [Min Grade: C] or BY 212 [Min Grade: C] or BY 115 [Min Grade: C])

**BME 435. Tissue Engineering. 3 Hours.**

Principles underlying strategies for regenerative medicine such as stem-cell based therapy, scaffold design, proteins or genes delivery, roles of extracellular matrix, cell-materials interactions, angiogenesis, tissue transplantation, mechanical stimulus and nanotechnology.

**Prerequisites:** BME 310 [Min Grade: C] or BME 311 [Min Grade: C]

**BME 443. Medical Image Processing. 3 Hours.**

Fundamental topics of medical image processing to practical applications using conventional computer software.

**Prerequisites:** BME 312 [Min Grade: C](Can be taken Concurrently) and PH 222 [Min Grade: C]

**BME 444. Machine Learning for Biomedical Engineering Applications. 3 Hours.**

This course provides the introduction to the practical aspects of machine learning such that the students can apply some basic machine learning techniques in simple biomedical engineering problems. The course also provides the principle of machine learning 'thinking process' for the next machine learning – AI courses and more in-depth machine learning studies. By 'thinking process', at the beginning, it is better to view machine learning like human learning. Students who have experience with Data Mining may further understand the fundamental differences between Machine Learning and Data Mining, although these two fields share many concepts and techniques. Also, the student will learn fundamental theories in machine learning to be able to develop new machine learning techniques and research machine learning in biomedical engineering.

**Prerequisites:** EGR 150 [Min Grade: C]

**BME 450. Computational Neuroscience. 3 Hours.**

This course examines the computational principles used by the nervous system. Topics include: biophysics of axon and synapse, sensory coding (with an emphasis on vision and audition), planning and decision-making, and synthesis of motor responses. There will be an emphasis on systems approach throughout. Homework includes simulations.

**Prerequisites:** BME 312 [Min Grade: C]

**BME 461. Bioelectric Phenomena. 3 Hours.**

Quantitative methods in electrophysiology with focus on using simulations to examine responses in electrically excitable cell types.

**Prerequisites:** BME 312 [Min Grade: C]

**BME 462. Cardiac Electrophysiology. 3 Hours.**

Experimental and computational method on cardiac electrophysiology, ionic current, action potentials, electrical propagation, the electrocardiogram, electromechanical coupling, cardiac arrhythmias, effects of electric fields in cardiac tissue, defibrillation and ablation.

**Prerequisites:** BME 312 [Min Grade: C]

**BME 471. Continuum Mechanics of Solids. 3 Hours.**

Matrix and tensor mathematics, fundamentals of stress, momentum principles, Cauchy and Piola-Kirchoff stress tensors, static equilibrium, invariance, measures of strain, Lagrangian and Eulerian formulations, Green and Almansi strain, deformation gradient tensor, infinitesimal strain, constitutive equations, finite strain elasticity, strain energy methods, 2-D Elasticity, Airy Method, viscoelasticity, mechanical behavior of polymers.

**Prerequisites:** EGR 265 [Min Grade: C] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C]) and (BME 333 [Min Grade: C] or CE 220 [Min Grade: C])

**BME 472. Industrial Bioprocessing and Biomanufacturing. 3 Hours.**

This course will introduce students to the growing industries related to biomedical, biopharmaceutical and biotechnology. It is targeted to offer the students marketable skills to work in a vital area of economic growth and also convey some of the challenges and opportunities awaiting.

**Prerequisites:** BME 310 [Min Grade: C](Can be taken Concurrently) or BY 330 [Min Grade: C](Can be taken Concurrently) or CH 460 [Min Grade: C](Can be taken Concurrently)

**BME 489. Undergraduate Research in Biomedical Engineering III. 1-2 Hour.**

Undergraduate research experiences in biomedical engineering. Must have senior standing.

**Prerequisites:** BME 210 [Min Grade: C]

**BME 490. Special Topics in Biomedical Engineering. 1-3 Hour.**

Special Topic in Biomedical Engineering.

**BME 491. Individual Study in Biomedical Engineering. 1-6 Hour.**

Individual Study in Biomedical Engineering.

**BME 494. Honors Research I. 1-3 Hour.**

Research experiences for undergraduates enrolled in the departmental honors program. The student should write a proposal and make a presentation based on the proposal.

**Prerequisites:** EGR 301 [Min Grade: C] or STH 201 [Min Grade: C]

**BME 495. Honors Research II. 1-3 Hour.**

Research opportunities for undergraduate students in the Biomedical Engineering Honors Program. Research areas include cardiac electrophysiology, brain imaging, biomedical implants, and tissue engineering.

**Prerequisites:** BME 494 [Min Grade: C]

**BME 496. Biomedical Engineering Honors Seminar. 1 Hour.**

Must be enrolled in an Honors Program.

**BME 498. Capstone Design I Product Development. 3 Hours.**

Design and development of medical-products. Through experiential learning, students go through the early phases of engineering design innovation for medical products, starting with clinical immersion to determine a critical health-care need. Engineering students work in multi-disciplinary teams that include students from the School of Business to develop design concepts for both a client-based prototype and a commercializable version. Designs take into account client needs as well as legal, regulatory, and marketing requirements. Business ethics are also covered. Emphasis is placed on communication in both oral and written format to targeted audiences.

**Prerequisites:** (BME 310 [Min Grade: C] and BME 312 [Min Grade: C]) or (BME 310 [Min Grade: C] and BME 313 [Min Grade: C]) or (BME 310 [Min Grade: C] and BME 333 [Min Grade: C]) or (BME 310 [Min Grade: C] and BME 350 [Min Grade: C]) or (BME 312 [Min Grade: C] and BME 313 [Min Grade: C]) or (BME 312 [Min Grade: C] and BME 333 [Min Grade: C]) or (BME 312 [Min Grade: C] and BME 350 [Min Grade: C]) or (BME 313 [Min Grade: C] and BME 333 [Min Grade: C]) or (BME 313 [Min Grade: C] and BME 350 [Min Grade: C]) or (BME 333 [Min Grade: C] and BME 350 [Min Grade: C])

**BME 499. Capstone Design II. 3 Hours.**

Capstone design project; a continuation of BME 498. Through experiential learning, student teams complete the engineering design process for their client-based prototype incorporating engineering standards and realistic constraints. Student teams develop a business plan to present to potential business partners and product development teams from established companies. Additional skills learned in this part of the design process include: development of business proposals, project planning and scheduling, project execution and resource scheduling, communication of design, and interim and final design reviews. Emphasis is placed on communication of design and design justification in both an oral and written format to targeted audiences.

**Prerequisites:** BME 498 [Min Grade: C] and BME 310 [Min Grade: C] and BME 312 [Min Grade: C] and BME 313 [Min Grade: C] and BME 333 [Min Grade: C](Can be taken Concurrently) and BME 350 [Min Grade: C] (Can be taken Concurrently) and BME 423 [Min Grade: C](Can be taken Concurrently)

## Department of Civil, Construction, and Environmental Engineering

**Interim Chair:** Wesley C. Zech, PhD

Degree Offered	Bachelor of Science in Civil Engineering (BSCE)
Accreditation	The Bachelor of Science in Civil Engineering degree program is accredited by the Engineering Accreditation Commission of ABET, <a href="http://www.abet.org">http://www.abet.org</a> .
Website	<a href="https://www.uab.edu/engineering/civil/undergraduate">https://www.uab.edu/engineering/civil/undergraduate</a>
Program Director	Andrew Sullivan
Email	<a href="mailto:asullivan@uab.edu">asullivan@uab.edu</a>
Phone	205-934-8430

The Department of Civil, Construction, and Environmental Engineering offers a broad education in civil engineering, which covers mechanics and structures, soils, surveying, transportation, water resources, environmental engineering, and construction engineering management. Computer applications are emphasized in all areas. The program is based on a strong foundation of mathematics, physical sciences, humanities, and social sciences and is supported by a series of basic courses from other engineering disciplines. The primary objective of the program is to prepare students for entry into the civil engineering profession as design engineers.

Electives in the academic program may be selected from courses in construction engineering management, environmental engineering, structural engineering, and transportation engineering. These courses allow students to emphasize a particular area in their undergraduate academic program. Judicious selection of these electives may be used as additional preparation for a specific design career or for entry into a specialized civil engineering certificate or engineering graduate program.

Qualified, motivated undergraduate students may also participate in the Departmental Honors Program.

Please refer to the School of Engineering overview for policies regarding admission; change of major; transfer credit; transient status; dual degree programs; reasonable progress; academic warning, probation, and suspension; reinstatement appears; and graduation requirements.

## Vision

To be a nationally and internationally recognized, research-oriented Department of Civil, Construction, & Environmental Engineering: a top choice for civil engineering students, faculty, and industry partners.

## Mission

To prepare graduates to be immediately productive, to be able to adapt to a rapidly changing environment, and to become leaders who will create and apply knowledge for the benefit of society.

## Program Educational Objectives

Three to five years after graduation, our graduates will have:

1. Achieved a level of technical competency that allows them to advance in civil engineering practice.
2. Practiced civil engineering with ethical, social, and environmental responsibility, aiming at the sustainable development of society.

3. Complemented their education through graduate studies, professional development and continuing education courses, and through involvement in professional societies.

## Student Outcomes

Upon completion of the BSCE degree program, our graduates will have:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

## Experiential Learning

The Department of Civil, Construction, and Environmental Engineering strongly encourages students to participate in experiential learning opportunities, such as industry co-ops, engineering internships, and research with department faculty. These opportunities greatly enhance a student's education and provide the real-world experience employers look for after graduation. The department has partnerships in place with many local engineering employers and will work with students to tailor programs of study that will allow them to participate in these experiences while completing their degrees in a timely manner. The School of Engineering also has a dedicated staff member to assist students in finding and applying to these opportunities.

## Bachelor of Science in Civil Engineering

Requirements	Hours
<b>Core Curriculum as Specified for Engineering Majors</b>	<b>36</b>
Area I: Written Composition (6 credit hours)	
Area II: Humanities and Fine Arts (9 credit hours)	
Area III: Natural Sciences and Mathematics (12 credit hours)	
MA 125      Calculus I	
PH 221      General Physics I	
& 221L      and General Physics Laboratory I	
& 221R      and General Physics I Recitation	
PH 222      General Physics II	
& 222L      and General Physics Laboratory II	
& 222R      and General Physics II - Recitation	
Area IV: History, Social, and Behavioral Sciences (9 credit hours)	
<b>Other Required Courses</b>	<b>83</b>
CE 200      Engineering Geology	
CE 210      Statics	

CE 220	Mechanics of Solids
CE 221	Mechanics of Solids Laboratory
CE 222	Civil Engineering Materials Laboratory
CE 230 & 230L	Plane Surveying and Plane Surveying Laboratory
CE 236 & 236L	Environmental Engineering and Environmental Engineering Laboratory
CE 332 & 332L	Soil Engineering and Soil Engineering Laboratory
CE 337	Hydraulics
CE 344	Civil Engineering Analysis I
CE 345	Transportation Engineering
CE 360	Structural Analysis
CE 371	Engineering Communication
CE 395	Engineering Economics
CE 426	Foundation Engineering
CE 430	Water Supply/Drainage Design
CE 450	Structural Steel Design
CE 455	Reinforced Concrete Design
CE 497	Construction Engineering Management
CE 499	Capstone Design Project
CH 115 & 115R & CH 116	General Chemistry I and General Chemistry I Recitation and General Chemistry I Laboratory
CH 117 & 117R & CH 118	General Chemistry II and General Chemistry II Recitation and General Chemistry II Laboratory
EGR 110 & EGR 111	Introduction to Engineering I and Introduction to Engineering II
	or EGR 2(Introduction to Engineering
EGR 150	Computer Methods in Engineering
EGR 265	Math Tools for Engineering Problem Solving <sup>2</sup>
MA 126	Calculus II
ME 102	Engineering Graphics
ME 215 & 215R	Dynamics and Dynamics Recitation
ME 251	Introduction to Thermal Sciences

### Civil Engineering Electives 9

Select 9 credit hours from Civil Engineering (CE) elective courses. <sup>1</sup>

#### Construction Engineering Management Electives

CE 415	Building Information Modeling (BIM)
CE 475	Construction Safety and Health Management
CECM 670	Construction Estimating and Bidding
CECM 671	Construction Liability & Contracts
CECM 672	Construction Methods and Equipment
CECM 676	Construction Project Risk Management

#### Environmental Engineering Electives

CE 431	Energy Resources
CE 433	Solid and Hazardous Wastes Management
CE 434	Air Quality Modeling and Monitoring
CE 480	Introduction to Water and Wastewater Treatment
CE 485	Engineering Hydrology

#### Structural Engineering Electives

CE 415	Building Information Modeling (BIM)
CE 420	Advanced Mechanics
CE 453	Design of Wood Structures
CE 454	Design of Masonry Structures
CE 456	Prestressed Concrete Design

CE 460	Structural Mechanics
CE 461	Introduction to the Finite Element Method
CE 462	Advanced Structural Analysis
CE 464	Structural Dynamics
CE 467	Wind and Seismic Loads
CE 468	Bridge Engineering
<b>Transportation Engineering Electives</b>	
CE 443	Pavement Design and Construction
CE 446	Green Infrastructure and Transportation
Total Hours	
128	

<sup>1</sup> Students wishing to enroll in graduate level courses (500 and above) must submit an Undergraduate Student Enrollment in Graduate Level Coursework permission form.

<sup>2</sup> Students may also replace EGR 265 and a civil engineering elective with MA 227 and MA 252.

## Residency Requirement

In addition to UAB's residency requirement, to earn a bachelor of science in civil engineering from UAB, students must successfully complete 15 credit hours of civil engineering courses at the 400- or higher level at UAB. These 15 credit hours must include CE 499 Capstone Design Project.

## Concentration in Sustainable Engineering Design and Construction

Students seeking the degree of BSCE may add a concentration in Sustainable Engineering and Construction by appropriate selection of their Civil Engineering Electives courses (9 credit hours total).

Requirements	Hours
Select three of the following courses:	9
<u>CE 431</u> Energy Resources	
<u>CE 433</u> Solid and Hazardous Wastes Management	
<u>CE 434</u> Air Quality Modeling and Monitoring	
<u>CE 600</u> Sustainable Construction	
<u>CE 608</u> Green Building Design	
Total Hours	9

**Please refer to the School of Engineering Overview for School policies related to admission, academic progress, reasonable progress toward degree, and graduation.**

## Curriculum for the Bachelor of Science in Civil Engineering (BSCE)

Freshman			
First Term	Hours	Second Term	Hours
CH 115 & 115R & CH 116		4 CH 117 & 117R & CH 118	4
EGR 110 <sup>1</sup>		1 EGR 111 <sup>1</sup>	1
EH 101		3 EH 102	3
ME 102		2 MA 126	4

MA 125	4	PH 221 & 221L & 221R	4
		14	16

### Sophomore

First Term	Hours	Second Term	Hours
CE 210		3 CE 220	3
PH 222 & 222L & 222R		4 CE 236 & 236L	3
EGR 265 <sup>2</sup>		4 ME 215 & 215R	3
Core Curriculum Area II: Humanities and Fine Art <sup>3</sup>		3 Core Curriculum Area II: Humanities and Fine Art <sup>3</sup>	3
EGR 150		3 CE 200	2
		CE 221	1
		17	15

### Junior

First Term	Hours	Second Term	Hours
CE 230 & 230L		3 CE 222	1
CE 337		3 CE 360	3
CE 332 & 332L		4 CE 395	3
ME 251		2 Core Curriculum Area IV: History, Social, and Behavioral Science <sup>3</sup>	3
CE 344		3 CE 345	3
CE 371		2 CE 430	3
		17	16

### Senior

First Term	Hours	Second Term	Hours
CE 455		3 CE 426	3
CE 497		3 CE 450	3
Civil Engineering Elective <sup>4</sup>		3 CE 499	3
Civil Engineering Elective <sup>4</sup>		3 Civil Engineering Elective <sup>4</sup>	3
Core Curriculum Area II: Humanities and Fine Art <sup>3</sup>		3 Core Curriculum Area IV: History, Social, and Behavioral Science <sup>3</sup>	3
Core Curriculum Area IV: History, Social, and Behavioral Science <sup>3</sup>		3	
		18	15

Total credit hours: 128

<sup>1</sup> Transfer students may substitute EGR 200 for EGR 110 and EGR 111.

<sup>2</sup> Students may also replace EGR 265 and a CE elective with MA 227 and MA 252.

<sup>3</sup> Please refer to the Core Curriculum as specified for Engineering majors.

<sup>4</sup> Any 400+ level CE course not included as a requirement for the CE major may be selected.

Category A certificates are offered by the Department of Civil, Construction, and Environmental Engineering. Any undergraduate or graduate student in good standing who is pursuing a Civil Engineering degree (BSCE, MSCE, or PhD) may elect to simultaneously complete the requirements of his or her degree program and the Certificate Program.

These certificates are listed on student transcripts and in the university commencement program. Certificates can be earned in:

- [Construction Engineering Management](#)
- [Environmental Engineering](#)
- [Geotechnical Engineering](#)
- [Structural Engineering](#)
- [Sustainable Engineering](#)
- [Transportation Engineering](#)

Civil Engineering (BSCE) graduates who complete the Certificate Program will have greater depth in a specific technical area. The certificates also allow a means for practicing engineers to acquire expertise beyond a Bachelor's degree, and have it formally recognized without completing a program leading to a Master's degree. This technical expertise will enhance their proficiency and marketability. Up to 12 graduate level credit hours taken for a certificate may be applied toward the MSCE degree.

The requirements are as follows:

- Students must be admitted to the Department as either undergraduate (BSCE) or graduate (MSCE) students in Civil, Construction, and Environmental Engineering or hold a BS in Civil Engineering or a closely related field from an accredited institution.
- Certificates require a minimum of 15 credit hours consisting of one required undergraduate course (which will also count toward the BSCE degree at UAB) and four graduate level elective courses in the area of specialization. Certificates for undergraduate students will be awarded upon completion of the BSCE degree.
- Graduate level elective courses may be applied to the certificate as well as a MSCE degree.
- One course, up to three semester hours, may be transferred from another institution.
- Graduate courses taken from University of Alabama, University of South Alabama, and University of Alabama in Huntsville via IITS may be applied to certificates with prior approval of the graduate program director.
- Elective courses may be taken at the 500, 600, or 700 level. Special topics courses (CE 590, CE 690, or CE 790) may be applied to certificates with prior approval of the graduate program director.

## Certificate in Construction Engineering Management

Requirements	Hours
<b>Required Course</b>	
CE 497 Construction Engineering Management	3
<b>Electives</b>	
Select 12 credit hours from the following:	
CE 575 Construction Safety and Health Management	
CE 600 Sustainable Construction	
CECM 669 Advanced Project Management	
CECM 670 Construction Estimating and Bidding	
CECM 671 Construction Liability & Contracts	
CECM 672 Construction Methods and Equipment	
CECM 673 Project Planning and Control	

CECM 674	Green Building Design/Construction
CECM 675	Advanced Construction and Engineering Economics
CECM 676	Construction Project Risk Management
CECM 688	Construction Management and Leadership Challenges in the Global Environment
CECM 689	Building Information Modeling (BIM) Techniques

## Certificate in Environmental Engineering

Requirements	Hours
<b>Required Course</b> <sup>1</sup>	
CE 236 Environmental Engineering (or equivalent)	3
<b>Electives</b>	
Select 12 credit hours from the following:	
CE 530 Water Supply/Drainage Design	
CE 533 Solid and Hazardous Wastes Management	
CE 534 Air Quality Modeling and Monitoring	
CE 580 Introduction to Water and Wastewater Treatment	
CE 608 Green Building Design	
CE 640 Wastewater Treatment Engineering	
CE 685 Engineering Hydrology	
CESC 600 Principles of Sustainable Development	
CESC 602 Introduction to Sustainable Smart Cities	

<sup>1</sup> Only one of these courses can be applied to this certificate

## Certificate in Geotechnical Engineering

Requirements	Hours
<b>Required Course</b>	
CE 332 Soil Engineering (or equivalent)	4
<b>Electives</b>	
Select 12 credit hours from the following:	
CE 526 Foundation Engineering	
CE 690 Special Topics in (Area) <sup>1</sup>	
CECM 669 Advanced Project Management	
CECM 671 Construction Liability & Contracts	

<sup>1</sup> must be approved by Certificate Director

## Certificate in Structural Engineering

Requirements	Hours
<b>Required Course</b>	
CE 360 Structural Analysis	3
<b>Electives</b>	
Select 12 credit hours from the following:	
CE 516 Mechanical Vibrations	
CE 520 Advanced Mechanics	
CE 526 Foundation Engineering	
CE 553 Design of Wood Structures	
CE 556 Prestressed Concrete Design	
CE 561 Introduction to the Finite Element Method	
CE 562 Advanced Structural Analysis	
CE 564 Structural Dynamics	
CE 567 Wind and Seismic Loads	
CE 568 Bridge Engineering	
CE 600 Sustainable Construction	
CE 650 Advanced Structural Steel	

CE 655	Advanced Reinforced Concrete
CESC 602	Introduction to Sustainable Smart Cities <sup>1</sup>
CESC 608	Green Infrastructure and Transportation <sup>1</sup>
CESC 614	Smart Cities Technologies <sup>1</sup>
CESE 653	Wood and Masonry Design
CESE 656	Advanced Mechanics of Materials for Structural Engineering
CESE 659	Advanced Reinforced Concrete
CESE 660	Prestressed Concrete Behavior and Design
CESE 662	Advanced Structural Analysis
CESE 664	Bridge Engineering
CESE 665	Structural Dynamics and Earthquake Engineering
CESE 676	Design of Structural Steel Connections

<sup>1</sup> Only one of these courses can be applied to this certificate

## Certificate in Sustainable Engineering

Requirements		Hours
<b>Required Course</b>		
CE 497	Construction Engineering Management	3
<b>Electives</b>		
Select 12 credit hours from the following:		
CE 600	Sustainable Construction	
CE 608	Green Building Design	
CESC 600	Principles of Sustainable Development	
CESC 602	Introduction to Sustainable Smart Cities	
CESC 608	Green Infrastructure and Transportation	
CESC 610	Health and Livability	
CESC 614	Smart Cities Technologies	
CESC 616	Big Data and Smart Cities	

## Certificate in Transportation Engineering

Requirements		Hours
<b>Required Course</b>		
CE 345	Transportation Engineering	3
<b>Electives</b>		
Select 12 credit hours from the following:		
CE 543	Pavement Design & Construction	
CE 622	Traffic Flow Theory	
CE 623	Non-Motorized Transportation Design and Planning	
CE 624	Simulation Models for Transportation Applications	
CE 625	Intelligent Transportation Systems	
CE 646	Traffic Engineering Operations	
CE 648	Urban and Transportation Planning	
CE 690	Special Topics in (Area) <sup>1</sup>	
CECM 669	Advanced Project Management <sup>2</sup>	
CECM 671	Construction Liability & Contracts	
CESC 600	Principles of Sustainable Development <sup>2</sup>	
CESC 602	Introduction to Sustainable Smart Cities <sup>2</sup>	
CESC 608	Green Infrastructure and Transportation <sup>2</sup>	

<sup>1</sup> Must be approved by Certificate Director

<sup>2</sup> Only one of these courses may be applied to this certificate.

## Courses

### CE 011. UG Coop/Internship in CE. 0 Hours.

Engineering workplace experience in preparation for the student's intended career.

### CE 200. Engineering Geology. 2 Hours.

Fundamentals and advanced topics of geology including plate tectonics, mineral formation, sedimentary / igneous / metamorphic rocks, structural deformations, weathering and erosion, groundwater migration, and slope stability.

### CE 210. Statics. 3 Hours.

Newton's laws of motion. Scalar and vector quantities, vector algebra, and the concepts of position and moment vectors. Two-dimensional systems: forces, moments, couples, and resultants. Three-dimensional systems and equivalent force systems, free body diagrams, and equations of equilibrium. Construction of shear force and bending moment diagrams. Analysis of pin-connected beams, plane trusses, and frames: method of joints and method of sections. Friction and properties of surfaces. Center of mass, center of gravity, and area moment of inertia. Quantitative Literacy is a significant component of this course.

**Prerequisites:** EGR 200 [Min Grade: C](Can be taken Concurrently) or HC 111 [Min Grade: C] or EGR 111 [Min Grade: C](Can be taken Concurrently) and (MA 126 [Min Grade: C] or MA 126 [Min Grade: P] or MA 226 [Min Grade: C]) and (PH 221 [Min Grade: C] or PH 221 [Min Grade: P])

### CE 220. Mechanics of Solids. 3 Hours.

Variation of stress at a point. Equilibrium requirements and body force concepts. Variation of strain at a point. Stress-strain relationships. Stress transformation and Mohr's Circle for plane stress. Analysis of axially loaded bars, circular shafts in torsion, shear and bending of beams, and buckling of columns. Analysis of simple, statically determinate and indeterminate structures.

**Prerequisites:** CE 210 [Min Grade: C]

### CE 221. Mechanics of Solids Laboratory. 1 Hour.

Standard tensile, torsion, bending, and column tests. Installation and applications of strain gages and rosettes. Measurement of forces, displacements, strains, and other variables. Writing is a significant component of this course.

**Prerequisites:** CE 220 [Min Grade: D](Can be taken Concurrently)

### CE 222. Civil Engineering Materials Laboratory. 1 Hour.

Testing properties of construction materials such as cement, aggregate, concrete, and asphalt. Design of Portland cement concrete mixes. Writing is a significant component of this course.

**Prerequisites:** CE 220 [Min Grade: D](Can be taken Concurrently)

### CE 230. Plane Surveying. 3 Hours.

Fundamental topics of surveying including care and use of surveying instruments, surveying methods, error theory, traversing, stadia, mapping techniques, circular and parabolic curves, areas, and volumes. CE 230L must be taken concurrently.

**Prerequisites:** MA 125 [Min Grade: C] or MA 225 [Min Grade: C]

### CE 230L. Plane Surveying Laboratory. 0 Hours.

Principles of land measurement, the instruments and techniques used in surveying, theory of errors and mathematical precision in engineering analysis and design. Introduction to route surveying and the principles of horizontal and vertical curves. Companion to CE 230 and must be taken concurrently.

**CE 236. Environmental Engineering. 3 Hours.**

Introduction to environmental engineering principles. Air and water pollution, solid waste, quality of environment, environmental health, regulations and legal considerations, and ethics and civic responsibility. Design of testing protocols.

**Prerequisites:** MA 125 [Min Grade: C](Can be taken Concurrently) or MA 225 [Min Grade: C](Can be taken Concurrently) and CH 117 [Min Grade: C]

**CE 236L. Environmental Engineering Laboratory. 0 Hours.**

Laboratory equipment and methods. Chemical and physical tests to determine characteristics of water and wastewater. Companion lab to CE 236 and must be taken concurrently.

**CE 332. Soil Engineering. 4 Hours.**

Soil identification and properties, stress concepts, permeability settlement analysis, soil compaction, bearing capacity, shear strength of soil, and slope stability. CE 332L must be taken concurrently.

**Prerequisites:** CE 200 [Min Grade: D] and CE 220 [Min Grade: D]

**CE 332L. Soil Engineering Laboratory. 0 Hours.**

Soil classification, strength and shear tests, and permeability and consolidation tests. Companion to CE 332 and must be taken concurrently.

**CE 337. Hydraulics. 3 Hours.**

Fundamentals of hydraulics including properties of water, hydrostatic forces and pressures, flow, head losses, and related phenomena in pipes. Other topics include river hydrograph routing, statistical hydrology, flow in open channels, culvert design, and applied hydraulic modeling. Must earn a grade of C or better to satisfy BSCE degree requirements.

**Prerequisites:** MA 126 [Min Grade: C] or MA 226 [Min Grade: C]

**CE 344. Civil Engineering Analysis I. 3 Hours.**

Inspection and treatment of data using exploratory data analysis. Descriptive statistics. Introduction to probability and commonly used distributions. Basic data analysis using regression analysis, hypothesis testing, and analysis of variance. Quantitative literacy is a significant component of this course.

**Prerequisites:** MA 126 [Min Grade: C] or MA 226 [Min Grade: C]

**CE 345. Transportation Engineering. 3 Hours.**

Principles of transportation engineering and urban transportation planning. Traffic flow characteristics, traffic control, capacity analysis of basic highway sections and intersections, geometric design, and travel demand forecasting.

**Prerequisites:** (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and PH 221 [Min Grade: C]

**CE 360. Structural Analysis. 3 Hours.**

Reactions, shears, moments, and axial forces in determinate and indeterminate structures. Influence lines; moment area and energy methods of computing deflections; methods of truss and frame analysis. Computer applications.

**Prerequisites:** CE 220 [Min Grade: D]

**CE 371. Engineering Communication. 2 Hours.**

Introduces communication skills necessary for professional development. Topics include forms of technical writing and oral communication, report writing and organization, plan reading, professional practice, and ethics.

**Prerequisites:** EH 102 [Min Grade: C] and (EGR 111 [Min Grade: C] or EGR 200 [Min Grade: C])

**CE 395. Engineering Economics. 3 Hours.**

Fundamental concepts of engineering economy. Introduction to cost and revenue estimating and cash flow analysis for engineering projects. Choosing between alternatives taking into account the time value of money, depreciation, inflation, income taxes and risk factors.

**Prerequisites:** MA 125 [Min Grade: C] or MA 225 [Min Grade: C]

**CE 410. FE Review for Civil Engineers. 0 Hours.**

Review concepts of the engineering core and civil engineering in preparation for the Fundamentals of Engineering (FE) exam.

**CE 415. Building Information Modeling (BIM). 3 Hours.**

Introduction to virtual design and construction using AutoCAD and Revit software. An emphasis is placed on the use of these tools and their practical applications to real world engineering and design projects. Students are provided with the software required to complete a multi-step project.

**Prerequisites:** ME 102 [Min Grade: C]

**CE 420. Advanced Mechanics. 3 Hours.**

Variation of stress at point including determination of principal and maximum shear stresses. Strain gages and rosettes. Failure theories. Inelastic stress-strain behavior of axially loaded bars. Torsion of noncircular sections and plastic torque. Curved beams. Elastic and plastic analysis for unsymmetrical bending. Shear center. Beams on elastic foundations.

**Prerequisites:** CE 220 [Min Grade: D]

**CE 426. Foundation Engineering. 3 Hours.**

Design of foundations including bearing capacity and settlement of spread footings, mats, single piles, and pile groups. Site investigation and evaluation of data from field and tests. Estimation of stresses in soil masses, lateral resistance of piles and pile groups. Design of retaining walls, sheet piles, and cofferdams.

**Prerequisites:** CE 332 [Min Grade: D] and CE 455 [Min Grade: D]

**CE 430. Water Supply/Drainage Design. 3 Hours.**

Water requirements; wastewater characteristics. Hydraulics and design of sewers; distribution and reuse of water. Development of water supplies; design considerations.

**Prerequisites:** CE 337 [Min Grade: C]

**CE 431. Energy Resources. 3 Hours.**

Overview of primary energy resources, including oil, natural gas, coal, nuclear, hydro, solar, geothermal, biomass, wind, and tidal. Resources are discussed in terms of supply, distribution, recovery and conversion, environmental impacts, economies, policy, and technology. Concepts and opportunities for energy conservation are examined, including electric power generation, transportation applications, and energy use in developing countries.

**Prerequisites:** CE 236 [Min Grade: C]

**CE 433. Solid and Hazardous Wastes Management. 3 Hours.**

Overview of waste characterizations, regulations, and management options. Fundamentals of landfill design, recycling, incineration, emerging disposal technologies, federal and state laws, hazardous waste treatment, and ultimate disposal of hazardous waste.

**Prerequisites:** CE 236 [Min Grade: C]

**CE 434. Air Quality Modeling and Monitoring. 3 Hours.**

Overview of atmospheric pollutant effects, reactions, and sources. Introduction to air dispersion modeling and ambient air quality monitoring.

**Prerequisites:** ME 251 [Min Grade: C]

**CE 440. Civil Engineering Honors Research. 3 Hours.**

Departmental honors students work closely with faculty researchers and graduate students in departmental concentration specialties to develop research skills. Enrollment is limited to undergraduate students enrolled in CCEE Departmental Honors Program.

**CE 441. Civil Engineering Honors Seminar. 1 Hour.**

Seminar focusing on student research and guest presentations of various topics of interest to civil and environmental engineering students.

**CE 443. Pavement Design and Construction. 3 Hours.**

Analysis of stresses and strains in pavement systems. Design and construction of flexible and rigid pavements, base courses, and subgrades. Effects of loading on pavement life.

**Prerequisites:** CE 345 [Min Grade: D]

**CE 445. Engineering the Built Environment. 3 Hours.**

This service learning course explores the effects the built environment has on urban function, connectivity, community health, and the well-being of its residents. Students work directly in local neighborhoods learning how to assess components of the built environment, including transportation, green spaces, lighting, and blight, and to estimate their impacts on community health and well-being. Students propose engineering solutions, develop cost estimates, assess potential benefits, and develop implementation plans. Registration restricted to Junior or Senior standing.

**CE 446. Green Infrastructure and Transportation. 3 Hours.**

Policy and technical issues related to sustainable transportation. Examines the concepts, viewpoints, and fundamentals essential for understanding sustainable transportation planning and the tools used to assess sustainability of transportation facilities and neighborhoods. Design options in support of green infrastructure and transportation, including livable street design and traffic calming applications. Registration restricted to Junior or Senior standing.

**CE 447. Principles of Sustainable Development. 3 Hours.**

Concepts, viewpoints, and fundamentals essential for understanding the urban sustainable development agenda. Review of basic earth sciences to better evaluate the impact of anthropogenic activities on the natural environment and how to minimize adverse future outcomes. Case studies of sustainable developments are used to illustrate the value, challenges, and limitations of this concept.

**Prerequisites:** CE 236 [Min Grade: C]

**CE 450. Structural Steel Design. 3 Hours.**

Tension members, columns, beams, and beam columns. Simple connections. Load Resistance Factor Design (LRFD) approaches.

**Prerequisites:** CE 221 [Min Grade: C] and CE 360 [Min Grade: C]

**CE 453. Design of Wood Structures. 3 Hours.**

Properties of structural wood materials, both sawn lumber and engineered wood materials. Design of wood structures including beams, columns, connections, roof diaphragms, and shear walls. The requirements of the National Design Specification for Wood Structures will be addressed.

**Prerequisites:** CE 360 [Min Grade: C]

**CE 454. Design of Masonry Structures. 3 Hours.**

Design and detailing of masonry structures. Nomenclature, properties, and specifications for components. Design of assemblages, simple masonry structures, unreinforced and reinforced elements, and complex masonry structures.

**Prerequisites:** CE 360 [Min Grade: C]

**CE 455. Reinforced Concrete Design. 3 Hours.**

Behavior, strength, and design of reinforced concrete structural members (beams, columns, one-way slabs, and continuous beams) subjected to moment, shear, and axial forces according to the American Concrete Institute Building Code Requirements for Structural Concrete (ACI 318). Crack control and serviceability considerations. Introduction to the design of reinforced concrete structures.

**Prerequisites:** CE 222 [Min Grade: C] and CE 360 [Min Grade: C]

**CE 456. Prestressed Concrete Design. 3 Hours.**

Principles and concepts of design in prestressed concrete including elastic and ultimate strength analyses for flexural, shear, bond, and deflection. Principles of concordance and linear transformation for indeterminate prestressed structures.

**Prerequisites:** CE 455 [Min Grade: D]

**CE 460. Structural Mechanics. 3 Hours.**

Elastic beam deflections, beam columns, lateral torsional buckling, column stability, plastic design, plate bending, and yield line theory.

**Prerequisites:** CE 360 [Min Grade: C]

**CE 461. Introduction to the Finite Element Method. 3 Hours.**

Concepts and applications of finite element method (FEM). Review of statics, equilibrium, compatibility, and constitutive relations. Direct stiffness method, principle of virtual work, concept of stiffness, and matrix methods: planar trusses, beams, and planar frames. Support settlements, three-dimensional systems; development and application of basic finite elements. Software use.

**Prerequisites:** CE 360 [Min Grade: C]

**CE 462. Advanced Structural Analysis. 3 Hours.**

Analysis of indeterminate structures utilizing both classical and matrix methods. Use of computer structural analysis programs.

**Prerequisites:** CE 360 [Min Grade: C]

**CE 464. Structural Dynamics. 3 Hours.**

Closed form and numerical solutions to single-degree-of-freedom structural models. Analysis of multistory frames. Response of single and multiple degree of freedom models to harmonic, periodic, impulse and arbitrary time-dependent loads. Computer applications and seismic analysis. Techniques of modal analysis.

**Prerequisites:** CE 360 [Min Grade: C] and ME 215 [Min Grade: C]

**CE 465. CE Construction Documents. 3 Hours.**

Introduction to Civil Engineering design and construction documents including drawings, specifications, contracts, and testing reports. Overview of civil infrastructure and project types, including the civil engineer's role in the preparation, certification, and use of construction documents. Construction topics include measurement, quantity estimating, and engineering budgets.

**CE 467. Wind and Seismic Loads. 3 Hours.**

Methods for calculating loads on structures caused by extreme winds and earthquakes. Calculation of wind loads on various types of structures according to theory and codes. Determination of earthquake loads on structures using structural dynamics and codes.

**Prerequisites:** CE 360 [Min Grade: C]

**CE 468. Bridge Engineering. 3 Hours.**

Bridge loads, steel beam bridges, composite beam bridges, bridge bearings, reinforced and prestressed concrete slab and T-beam bridges, bridge evaluations and ratings, and upgrade methodologies; computer applications.

**Prerequisites:** CE 450 [Min Grade: D] and CE 455 [Min Grade: D](Can be taken Concurrently)

**CE 470. International Research Experience. 3 Hours.**

The International Research Experience for Students (IRES) program provides the opportunity for undergraduate and graduate students to participate in hands-on engineering research in an international setting. Students perform research on an approved topic related to civil engineering design in an international environment. Students perform a detailed literature review and work with mentors from UAB and the international host institution to develop research objectives and a detailed research plan. The course will culminate in a 6-8 week visit to the international host institution, during which time students will conduct hands-on research with their mentors and prepare final reports.

**CE 475. Construction Safety and Health Management. 3 Hours.**

This course covers various causes of construction accidents and the adopted strategies to prevent worksite injuries and illnesses. Other topics covered include workers' compensation, OSHA standards for the construction industry, economics of construction safety management, temporary structures, system safety, ergonomic applications, health hazards, and the development of a safety program.

**Prerequisites:** CE 344 [Min Grade: C]

**CE 480. Introduction to Water and Wastewater Treatment. 3 Hours.**

Examination of chemical/biological unit processes for water and wastewater treatment. Design of wastewater treatment facilities and unit processes. Treatment and disposal of sludge.

**Prerequisites:** CE 236 [Min Grade: C]

**CE 485. Engineering Hydrology. 3 Hours.**

Hydrologic principles including the hydrologic cycle, precipitation data and stream-flow measurements. Applications to engineering problems: stream-flow analysis, and watershed management.

**Prerequisites:** CE 337 [Min Grade: C]

**CE 489. Undergraduate Engineering Research. 0 Hours.**

Undergraduate research experiences in civil, construction and/or environmental engineering.

**Prerequisites:** (EGR 110 [Min Grade: C] and EGR 111 [Min Grade: C]) or EGR 200 [Min Grade: C] or HC 111 [Min Grade: C] or EGR 100 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and PH 221 [Min Grade: C](Can be taken Concurrently)

**CE 490. Special Topics in Civil Engineering. 1-3 Hour.**

Special Topics in Civil Engineering.

**CE 491. Individual Study in Civil Engineering. 1-6 Hour.**

Individual Study in Civil Engineering.

**CE 497. Construction Engineering Management. 3 Hours.**

Study of construction management services including project planning, scheduling, estimating, budgeting, contract administration, agreements, and ethics. Emphasis is on the management of manpower, materials, money, and machinery.

**Prerequisites:** CE 395 [Min Grade: D]

**CE 499. Capstone Design Project. 3 Hours.**

Students work in teams to solve a complex engineering problem that incorporates the major aspects of civil engineering design including structural, geotechnical, environmental, transportation, and construction management components. The course also includes lectures and assignments related to professionalism including engineering ethics, leadership, and management. Normally taken during last term before graduation.

**Prerequisites:** CE 332 [Min Grade: D] and CE 337 [Min Grade: C] and CE 345 [Min Grade: D] and (CE 450 [Min Grade: D] or CE 455 [Min Grade: D]) and CE 430 [Min Grade: D](Can be taken Concurrently) and CE 497 [Min Grade: D](Can be taken Concurrently)

## Department of Electrical and Computer Engineering

**Interim Chair:** J. Iwan Alexander, PhD

**Associate Chair:** Leon Jololian, PhD

Degree Offered	Bachelor of Science in Electrical Engineering
Accreditation	The Bachelor of Science in Electrical Engineering degree program is accredited by the Engineering Accreditation Commission of ABET, <a href="http://www.abet.org">http://www.abet.org</a> .
Website	<a href="https://www.uab.edu/engineering/ece/undergrad">https://www.uab.edu/engineering/ece/undergrad</a>
Program Director	Leon Jololian, PhD
Email	<a href="mailto:leon@uab.edu">leon@uab.edu</a>
Phone	205 934-8440

The Department of Electrical and Computer Engineering offers a bachelor's degree in electrical engineering (BSEE), which provides the foundation for students to succeed in any of the areas of electrical engineering, including biomedical instrumentation, digital computer systems, software systems, electric utility power systems, digital control, signal processing, and data analysis. In addition to courses in mathematics; calculus-based physics; chemistry; the humanities and fine arts; and history, social, and behavioral sciences, students take a core of fundamental engineering coursework outside of electrical engineering, a core of courses in the breadth of electrical engineering, and electrical engineering elective courses.

Each student must complete a senior design team project that comprises six semester hours of coursework (EE 498 Team Design Project I and EE 499 Team Design Project II).

### Vision

To be a nationally recognized Department of Electrical and Computer Engineering: a first choice for undergraduate and graduate education

### Mission

To prepare graduates to be immediately productive and able to adapt to a rapidly changing environment while also creating and applying knowledge for the benefit of Birmingham, the state, and beyond

### Program Educational Objectives

The Electrical Engineering undergraduate program prepares graduates to:

- Succeed in a career or graduate studies in electrical engineering
- Approach problem solving with an engineering mindset
- Grow professionally

### Student Outcomes

Upon completion of the BSEE degree program, our graduates will have:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

## Bachelor of Science in Electrical Engineering

Requirements	Hours
<b>Core Curriculum as Specified for Engineering Majors</b>	<b>36</b>
Area I: Written Composition (6 hrs)	
Area II: Humanities and Fine Arts (9 hrs)	
Area III: Natural Sciences and Mathematics (12 hrs)	
MA 125      Calculus I	
PH 221      General Physics I & 221L      and General Physics Laboratory I & 221R      and General Physics I Recitation	
PH 222      General Physics II & 222L      and General Physics Laboratory II & 222R      and General Physics II - Recitation	
Area IV: History, Social, and Behavioral Sciences (9 hrs)	
<b>Other Required Courses</b>	<b>83</b>
CE 210      Statics	
CH 115      General Chemistry I & 115R      and General Chemistry I Recitation & CH 116      and General Chemistry I Laboratory	
EE 210      Digital Logic	
EE 233      Engineering Programming Methods	
EE 254      Applied Numerical Methods <sup>1</sup>	
EE 300      Engineering Problem Solving II	
EE 314      Electrical Circuits & 314R      and Electrical Circuits Recitation	
EE 316      Electrical Networks & 316L      and Electrical Networks Laboratory	
EE 318      Signals and Systems	
EE 333      Engineering Programming Using Objects	
EE 337      Introduction to Microprocessors & 337L      and Introduction to Microprocessors Laboratory	
EE 341      Electromagnetics	
EE 351      Electronics & 351L      and Electronics Laboratory	
EE 361      Machinery I & 361L      and Machinery I Laboratory	

EE 421	Communication Systems
EE 426	Control Systems
EE 431	Analog Integrated Electronics
EE 485	Engineering Operations
EE 498	Team Design Project I
EE 499	Team Design Project II
EGR 110 & EGR 111	Introduction to Engineering I and Introduction to Engineering II or EGR 2(Introduction to Engineering
EGR 150	Computer Methods in Engineering
EGR 265	Math Tools for Engineering Problem Solving <sup>1</sup>
MA 126	Calculus II
ME 102	Engineering Graphics
ME 251	Introduction to Thermal Sciences
<b>Electrical Engineering Electives</b>	
Select three courses from the following:	
EE 412	Practical Computer Vision
EE 418	Wireless Communications
EE 423	Digital Signal Processing
EE 427	Controls and Automation
EE 432	Introduction to Computer Networking
EE 433	Engineering Software Solutions
EE 434	Power Semiconductor Electronics
EE 437	Introduction to Embedded Systems
EE 438	Computer Architecture
EE 444	Real-Time Process & Protocols
EE 447	Internet/Intranet Application Development
EE 448	Software Engineering Projects
EE 452	Digital Systems Design
EE 458	Medical Instrumentation
EE 461	Machinery II
EE 471	Power Systems I
EE 472	Power Systems II
EE 473	Protective Relaying of Power Systems
<b>Total Hours</b>	

<sup>1</sup> Students may also replace EGR 265 and EE 254 with MA 227 and MA 252.

## Residency Requirement

In addition to UAB's residency requirement, to earn a bachelor of science in electrical engineering from UAB, the ECE department requires that students complete the following courses at UAB:

Requirements	Hours
EE 421      Communication Systems	3
EE 426      Control Systems	3
EE 431      Analog Integrated Electronics	4
EE 498      Team Design Project I	3
EE 499      Team Design Project II	3
Nine hours of EE 400-level electives	9
Total Hours	25

**Please refer to the School of Engineering overview for policies regarding admission; change of major; transfer credit; transient status; dual degree programs; reasonable progress; academic warning, probation, and suspension; reinstatement appeals; and graduation requirements.**

## Curriculum for the Bachelor of Science in Electrical Engineering (BSEE)

### Freshman

First Term	Hours	Second Term	Hours
CH 115 & 115R & CH 116		4 EE 210	3
EH 101		3 EGR 111 <sup>1</sup>	1
EGR 110 <sup>1</sup>		1 EH 102	3
MA 125		4 MA 126	4
ME 102		2 PH 221 & 221L & 221R EGR 150	4   3
	14		18

### Sophomore

First Term	Hours	Second Term	Hours
EE 314 & 314R		3 EE 233	3
EGR 265 <sup>2</sup>		4 EE 316 & 316L	4
CE 210		3 EE 300	3
PH 222 & 222L & 222R		4 ME 251	2
Core Curriculum Area II or IV <sup>3</sup>		3 Core Curriculum Area II or IV <sup>3</sup>	3
	17		15

### Junior

First Term	Hours	Second Term	Hours
EE 318		3 EE 254 <sup>2</sup>	3
EE 333		3 EE 337 & 337L	4
EE 351 & 351L		4 EE 361 & 361L	4
EE 485		3 EE 341	3
Core Curriculum Area II or IV <sup>3</sup>		3 Core Curriculum Area II or IV <sup>3</sup>	3
	16		17

### Senior

First Term	Hours	Second Term	Hours
EE 426		3 EE 421	3
EE 498		3 EE 431	4
Electrical Engineering Elective <sup>4</sup>		6 EE 499	3
Core Curriculum Area II or IV <sup>3</sup>		3 Electrical Engineering Elective <sup>4</sup> Core Curriculum Area II or IV <sup>3</sup>	3  3
	15		16

Total credit hours: 128

- <sup>1</sup> Transfer students may substitute EGR 200 for EGR 110 and EGR 111.
- <sup>2</sup> Students can substitute MA 227 and MA 252 for EGR 265 and EE 254.
- <sup>3</sup> Core Curriculum Area II: Humanities and Fine Art or Area IV: History, Social, and Behavioral Science. Please refer to the Core Curriculum as specified for Engineering majors.
- <sup>4</sup> Must be chosen from the approved list of electives.

## Courses

### EE 011. Coop/Internship in EE. 0 Hours.

The Co-op/Internship is a short-term engineering workplace learning experience in preparation for the student's intended career.

### EE 210. Digital Logic. 3 Hours.

This course introduces the basic principles of how computers do computations using digital components. Topics include: the number systems, Boolean algebra, circuit minimization of multi-level logic, K-Maps, combinational and sequential logic circuit design, clocked latches, flip-flops, registers, and finite state machines. In class lab.

**Prerequisites:** MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 125 [Min Grade: C] (Can be taken Concurrently)

### EE 233. Engineering Programming Methods. 3 Hours.

This course covers fundamentals of computer programming including coding and design elements. Topics include: the software development method, logic and algorithm development, C language coding, debugging, documentation, file input and output, an introduction to data structures, development environments, and command line tools.

**Prerequisites:** EGR 150 [Min Grade: C]

### EE 254. Applied Numerical Methods. 3 Hours.

This course covers applications of numerical mathematical techniques and theories laid out in prior courses. Topics include: Euler's Method, numerical integration and differentiation methods, root finding methods, accuracy versus precision and its relationship to data storage and algorithm efficiency.

**Prerequisites:** EGR 265 [Min Grade: C] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C]) and EGR 150 [Min Grade: C]

### EE 300. Engineering Problem Solving II. 3 Hours.

This course covers fundamental mathematical background on complex functions, linear algebra, and the theory of probability and statistics which are indispensable in many electrical and computer engineering sub-fields such as signal and image processing, circuit design, and control systems.

**Prerequisites:** EGR 265 [Min Grade: D] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C])

### EE 305. Fundamentals of Electrical Engineering. 3 Hours.

This course provides a survey of topics fundamental to field of electrical engineering. For non-engineering majors. Not available for credit toward engineering major.

**Prerequisites:** MA 109 [Min Grade: C]

### EE 312. Electrical Systems. 3 Hours.

This course introduces how electrical circuits work and how to analyze them. Topics include: introduction to DC circuit analysis, AC steady-state analysis, first-order transient analysis, ideal transformers, and electrical safety. For non-EE majors.

**Prerequisites:** MA 126 [Min Grade: C] or MA 226 [Min Grade: C] and PH 221 [Min Grade: C]

**EE 314. Electrical Circuits. 3 Hours.**

This course covers electrical circuits and their analysis. Topics include: DC circuit analysis, AC steady-state analysis, first-order transient analysis, and electrical safety. For EE Majors.

**Prerequisites:** (MA 126 [Min Grade: C] or MA 226 [Min Grade: C]) and PH 221 [Min Grade: C]

**EE 314R. Electrical Circuits Recitation. 0 Hours.**

A problem-solving course designed to reinforce concepts in EE 314.

**Prerequisites:** (MA 226 [Min Grade: C] or MA 126 [Min Grade: C]) and PH 221 [Min Grade: C]

**EE 316. Electrical Networks. 4 Hours.**

This course expands the Electrical Circuits course with advanced circuits and teaches how to report the results of experiments (emphasis on quantitative literacy). Topics include: Analysis of circuits using classical differential/integral techniques; Laplace transforms; Two-port network parameters; Ideal operational amplifiers; Circuit solution using simulation.

**Prerequisites:** EE 314 [Min Grade: C] and EH 101 [Min Grade: C] and EGR 265 [Min Grade: D] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C])(Can be taken Concurrently)

**EE 316L. Electrical Networks Laboratory. 0 Hours.**

Electrical Networks laboratory component.

**EE 318. Signals and Systems. 3 Hours.**

This course provides fundamental mathematical background for extraction of useful information from signals and for modeling dynamic systems in the frequency domain. Topics include: time-domain and frequency-domain methods for modeling and analyzing continuous-time and discrete-time signals and systems, Fourier, Laplace, and Z transform methods.

**Prerequisites:** EE 300 [Min Grade: D] and EE 316 [Min Grade: D]

**EE 333. Engineering Programming Using Objects. 3 Hours.**

This course covers object-oriented thinking and applies it to creating software for engineering applications. Topics include: object-oriented design and programming in an object-oriented language, graphical user interface framework, project management skills, written and oral communication, Team work, introduction to ethics and intellectual property issues.

**Prerequisites:** EE 233 [Min Grade: D]

**EE 337. Introduction to Microprocessors. 4 Hours.**

This course covers computer hardware, interfaces, and programming in assembly and C languages with applications of microcomputers to engineering problems, such as data acquisition and control. Topics include: CPU architecture, assembly language, Input/output interfacing.

**Prerequisites:** EE 210 [Min Grade: C] and EE 233 [Min Grade: D]

**EE 337L. Introduction to Microprocessors Laboratory. 0 Hours.**

Introduction to Microprocessors laboratory component.

**EE 341. Electromagnetics. 3 Hours.**

This course introduces mathematical techniques used to solve problems in antenna design, high-frequency circuit design, and communications. Topics include: Maxwell equations, dynamic and static problems, electromagnetic wave propagation.

**Prerequisites:** EE 300 [Min Grade: C](Can be taken Concurrently) and EE 316 [Min Grade: C]

**EE 351. Electronics. 4 Hours.**

This course covers fundamentals of solid-state electronics, PN junction diode and diode circuits, bipolar junction transistor (BJT) and field-effect transistor (FET) properties, biasing, frequency response, amplifier configurations, single and multistage amplifier circuits. Students will work on projects in areas such as Internet-of-Things (IoT), and sensor instrumentation.

**Prerequisites:** EE 210 [Min Grade: C] and EE 316 [Min Grade: C]

**EE 351L. Electronics Laboratory. 0 Hours.**

Electronics laboratory component.

**EE 361. Machinery I. 4 Hours.**

This course covers single and multi-phase electrical machines with an introduction to industrial applications. Topics include: Fundamentals and applications of polyphase circuits; magnetic circuits; transformers; polyphase synchronous and asynchronous machines.

**Prerequisites:** EE 316 [Min Grade: C]

**EE 361L. Machinery I Laboratory. 0 Hours.**

Machinery I laboratory component.

**EE 412. Practical Computer Vision. 3 Hours.**

This course covers fundamentals and applications of image analysis. Topics include: image preprocessing, detection, segmentation, classification and recognition, visual tracking, and deep learning.

**Prerequisites:** EE 318 [Min Grade: C]

**EE 418. Wireless Communications. 3 Hours.**

This course covers the principles and current applications of wireless technology. Topics include propagation models, modulation, multiple access, and channel and signal coding. Applications of wireless for cellular and Internet of Things (IoT) will also be covered.

**Prerequisites:** EE 316 [Min Grade: C]

**EE 421. Communication Systems. 3 Hours.**

This course covers the mathematics of modulation and demodulation of radio signals to transmit and receive information. It focuses on various forms of amplitude modulation (AM), phase and frequency modulation (FM). This course builds on the mathematics from signals and systems course to study how to represent and manipulate these signals in both time and frequency domain. It also studies the effects of sampling, and how these systems operate in the presence of noise.

**Prerequisites:** EE 318 [Min Grade: C]

**EE 423. Digital Signal Processing. 3 Hours.**

This course covers the theory and practice of using computers to process and analyze signals. The topics include Digital filter analysis and design; Fast Fourier Transform (FFT) algorithms; Applications of digital signal processing in engineering problems such as data acquisition and control.

**Prerequisites:** EE 318 [Min Grade: C]

**EE 426. Control Systems. 3 Hours.**

This course covers modeling and control of mechanisms or circuits to satisfy stability and performance criteria. Topics include: theory of linear feedback control systems using complex frequency techniques, block diagram manipulation, performance measures, stability, analysis and design using root locus, and Z-transform methods.

**Prerequisites:** EE 318 [Min Grade: C]

**EE 427. Controls and Automation. 3 Hours.**

This course covers power control devices and applications, relay logic and translation to other forms, programmable logic controllers (PLCs), proportional-integral-derivative (PID) and other methods for process control, modern laboratory instrumentation, and human-machine interface (HMI) software.

**Prerequisites:** EE 233 [Min Grade: C] and EE 318 [Min Grade: C] and EE 351 [Min Grade: C]

**EE 431. Analog Integrated Electronics. 4 Hours.**

This course covers advanced analysis and design using op-amps, differential amplifier, half-circuit analysis, error analysis and compensation. Applications include signal conditioning for instrumentation, instrumentation amplifiers, nonlinear and computational circuits, analog filter design, voltage regulator design, oscillators, and circuit configurations for A-to-D and D-to-A conversion methods. Laboratory exercises emphasize design techniques for projects in areas such as Internet-of-Things (IoT).

**Prerequisites:** EE 318 [Min Grade: C] and EE 351 [Min Grade: C]

**EE 432. Introduction to Computer Networking. 3 Hours.**

This course covers the fundamentals of modern computer networks including current applications such as Internet of Things (IoT). Topics Include: hardware and software level network protocols, network architecture and topology including WANs and LANs, client-server relationships, distributed computing, data transfer, security, virtualization of hardware, multi-tier network configuration examples, and certifications will be addressed.

**Prerequisites:** EE 233 [Min Grade: C]

**EE 433. Engineering Software Solutions. 3 Hours.**

This course covers the fundamentals of software design, architecture, and implementation for future software engineers. Topics include: customer-focused requirements gathering, project planning, team tools, architectural patterns, environment and component selection, quality assurance, sustainability, versioning. Various development methodologies are discussed with a project demonstrating at least one release cycle.

**Prerequisites:** EE 333 [Min Grade: C]

**EE 434. Power Semiconductor Electronics. 3 Hours.**

Fundamentals of integrated circuit design for radio-frequency and power converter circuits. Course contents include basics of RF circuit theory, matching networks, high frequency MOS model, low-noise-amplifier, voltage controlled oscillator, fundamentals of power electronics, power semiconductor switches, steady-state equivalent circuit modeling, DC transformer model, basic AC equivalent circuit modeling, linearization and perturbation, etc. Students will require accomplishing a computer aided design, simulation and chip layout of an integrated circuit design project.

**Prerequisites:** EE 316 [Min Grade: C] and EE 318 [Min Grade: D] and EE 351 [Min Grade: D]

**EE 437. Introduction to Embedded Systems. 3 Hours.**

This course provides an applied introduction to the design of embedded systems, including hardware and software aspects. Topics include: various embedded hardware platforms, interfacing industrial bus systems, sensors, actuators, low-power wireless communication, and application of Internet-of-Things (IoT).

**Prerequisites:** EE 314 [Min Grade: D] and EE 337 [Min Grade: D]

**EE 438. Computer Architecture. 3 Hours.**

Advanced microprocessor topics including cache design, pipelining, superscalar architecture, design of control units, microcoding, and parallel processors. Comparison of advanced, contemporary microprocessors from Intel and IBM. EE 337 (Introduction to Microprocessors) is a recommended prerequisite for this course.

**Prerequisites:** EE 210 [Min Grade: C] and EE 233 [Min Grade: D] and EE 337 [Min Grade: D]

**EE 444. Real-Time Process & Protocols. 3 Hours.**

Hands-on laboratory course covering topics in real-time computer systems such as algorithms, state-machine implementations, communication protocols, instrumentation, and hardware interfaces.

**Prerequisites:** EE 233 [Min Grade: D] and EE 337 [Min Grade: D]

**EE 447. Internet/Intranet Application Development. 3 Hours.**

This course covers development of software models and applications using Internet/Intranet technologies. Topics include: web client-server relationships, multi-tier design models, scripting and validation, basic TCP/IP networking, separation of concerns, markup and data description languages. Projects will allow the opportunity for the use of a range of tools and development platforms.

**Prerequisites:** EE 233 [Min Grade: C]

**EE 448. Software Engineering Projects. 3 Hours.**

This course covers practical applications of software engineering including development of applications for Internet of Things (IoT). Topics include: requirements gathering, design matrices, environment selection, relevant architectural patterns, networking basics, databases, service endpoints, embedded systems selection and security. Projects with a software emphasis will be utilized to demonstrate principles of IoT applications.

**Prerequisites:** EE 333 [Min Grade: C]

**EE 452. Digital Systems Design. 3 Hours.**

This course covers the design of customized complex digital systems using Field Programmable Gate Array (FPGA) based platforms, using modern design tools for simulation, synthesis, and implementation. Topics include hardware design and development languages such as Verilog or VHDL.

**Prerequisites:** EE 337 [Min Grade: C] and EE 351 [Min Grade: C]

**EE 458. Medical Instrumentation. 3 Hours.**

This course covers the fundamental operating principles, applications, safety, and design of electronic instrumentation used in the measurement of physiological parameters.

**Prerequisites:** EE 351 [Min Grade: C]

**EE 461. Machinery II. 3 Hours.**

Physical principles of DC machines. Mathematical analysis of generator designs using equivalent circuits and magnetization curves. Calculation of motor speed, torque, power, efficiency, and starting requirements. Solid-state speed control systems.

**Prerequisites:** EE 361 [Min Grade: D]

**EE 467. Brain Machine Interface. 3 Hours.**

This course explores the brain-machine interfaces, particularly the technologies that directly stimulate and/or record neural activity. This course is divided into three major components: 1) neuroscience and electrode interfaces, 2) brain recording and stimulating front-end circuits, and 3) circuit modeling, simulating, and optimization.

**Prerequisites:** EE 233 [Min Grade: C] and EE 351 [Min Grade: C]

**EE 471. Power Systems I. 3 Hours.**

Components of power systems. Performance of modern interconnected power systems under normal and abnormal conditions. Calculation of inductive and capacitive reactances of three-phase transmission lines in steady state.

**Prerequisites:** EE 361 [Min Grade: D]

**EE 472. Power Systems II. 3 Hours.**

Modeling of generators, transformers, and transmission lines for system studies. Introduction to symmetrical components. Calculation of short-circuit currents due to balanced and unbalanced faults. Determination of interrupting ratings of circuit breakers. Transient stability of power systems. Derivation of swing equation and solution by numerical method. Equal area criterion.

**Prerequisites:** EE 471 [Min Grade: D]

**EE 473. Protective Relaying of Power Systems. 3 Hours.**

Operating principles of protective relays. Protection of transmission lines, generators, motors, transformers, and buses.

**Prerequisites:** EE 361 [Min Grade: D]

**EE 485. Engineering Operations. 3 Hours.**

This course covers the principles and standards of engineering design from ideation to final design. Topics include: product development process, problem definition and need identification, embodiment and detail design, design for specific criterion, modeling and cost evaluation. Emphasis is placed on ethics and civil responsibilities in design including environmental, social, liable, sustainability and reliability through the lens of engineering design.

**Prerequisites:** (EGR 111 [Min Grade: C] or EGR 200 [Min Grade: C]) and EE 210 [Min Grade: D] and (EE 314 [Min Grade: D] or EE 312 [Min Grade: D])

**EE 489. Undergraduate Engineering Research. 0 Hours.**

Undergraduate research experiences in electrical and computer engineering under faculty guidance.

**Prerequisites:** EGR 111 [Min Grade: C] or EGR 200 [Min Grade: C]

**EE 490. Special Topics in Electrical Engineering. 1-3 Hour.**

This course covers contemporary topics in Electrical Engineering selected by faculty.

**EE 491. Individual Study in Electrical Engineering. 1-6 Hour.**

Faculty-guided self-study of special topic in electrical and computer engineering.

**EE 492. Honors Research I. 4 Hours.**

Departmental honors students work closely with faculty to develop research skills.

**Prerequisites:** EGR 301 [Min Grade: C](Can be taken Concurrently)

**EE 493. Honors Research II. 4 Hours.**

Departmental honors students work closely with faculty to develop research skills.

**Prerequisites:** EGR 492 [Min Grade: C]

**EE 498. Team Design Project I. 3 Hours.**

This course is the first part of a two-semester team design project. The deliverables include: detailed design, documentation, and project plan for completion in EE 499. Design projects are chosen from analog/digital systems, machine learning, embedded systems, signal processing, Internet of Things (IoT), and others. Course taken during the student's final year of the program.

**Prerequisites:** EE 318 [Min Grade: D] and EE 337 [Min Grade: D] and EE 485 [Min Grade: D](Can be taken Concurrently) and EE 351 [Min Grade: D](Can be taken Concurrently)

**EE 499. Team Design Project II. 3 Hours.**

This course is the second part of a two-semester team design project focusing on project implementation. Teams are required to complete a written design report and a final oral and poster presentation. Course is taken the during the student's final year of the program, in the term immediately after successfully completing EE 498.

**Prerequisites:** EE 498 [Min Grade: C]

## Engineering Design

Degree Offered	Bachelor of Science in Engineering
Accreditation	The Bachelor of Science in Engineering degree in Engineering Design will seek accreditation from the Engineering Accreditation Commission of ABET as soon as it is eligible to do so.
Website	<a href="https://www.uab.edu/engineering/home/undergraduate/engineering-design-major">https://www.uab.edu/engineering/home/undergraduate/engineering-design-major</a>
Program Director	Timothy M. Wick, PhD
Email	<a href="mailto:tmwick@uab.edu">tmwick@uab.edu</a>
Phone	(205) 934-8400

The School of Engineering offers undergraduates a unique opportunity to earn an engineering degree tailored to their interests with an emphasis on innovation and design with the Bachelor of Science in Engineering degree in Engineering Design (BSEED). This program stresses engineering design and product development and includes hands-on, project-based experiences throughout a curriculum designed to help students develop and practice these skills. The program is intended for students whose academic/scientific interests are not aligned with an existing engineering discipline or limited to one engineering discipline offered at UAB. The ideal student will be highly adaptable, prepared to work in interdisciplinary teams, and adept at hands-on learning.

Students in the program will choose from a list of approved engineering minors in consultation with their advisor and in consideration of their career goals. The program allows a maximum of 24 hours of general elective credit, which can be used to complete an additional minor or a certificate in Engineering or another program, School, or College at UAB. To help students clarify and achieve their goals, academic and career advising are provided within the School of Engineering.

Qualified, motivated undergraduate students may be eligible for participation in the engineering honors program.

Please refer to the School of Engineering overview for policies regarding admission; change of major; transfer credit; transient status; dual degree programs; reasonable progress; academic warning, probation, and suspension; reinstatement appeals; and graduation requirements.

### Student Outcomes

Upon completion of the BSE degree program, graduates will have:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety,

and welfare, as well as global, cultural, social, environmental, and economic factors

3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

### Experiential Learning

The BSEED program encourages students to participate in experiential learning opportunities, such as industry co-ops, engineering internships, extracurricular engineering activities, and undergraduate research. These opportunities enhance a student's education and provide the real-world experience employers are seeking. The School of Engineering assists students in pursuing these opportunities.

### Residency Requirement

In addition to UAB's residency requirement, to earn a bachelor of science in engineering degree in engineering design from UAB, a student must complete the following courses at UAB:

Requirements	Hours
EGR 117 Engineering Innovation I: Design Thinking	3
EGR 217 EGR Design & Innovation II: EGR Design Prototyping	3
EGR 317 Engineering Innovation III: Project Lab	3
EGR 498 Capstone Design I	3
EGR 499 Capstone Design II	3
<b>Total Hours</b>	<b>15</b>

Requirements	Hours
<b>Core Curriculum for Engineering Majors</b>	<b>36</b>
Area I: Written Composition (6 hrs)	
Area II: Humanities and Fine Arts (9 hrs)	
Area III: Natural Sciences and Mathematics (12 hrs)	
MA 125 Calculus I	
PH 221 General Physics I	
& 221L and General Physics Laboratory I	
& 221R and General Physics I Recitation	
PH 222 General Physics II	
& 222L and General Physics Laboratory II	
& 222R and General Physics II - Recitation	
Area IV: History, Social, and Behavioral Sciences (9 hrs)	

Required Courses	Hours
CE 210 Statics	3
CE 220 Mechanics of Solids	3
CH 115 General Chemistry I	4
& 115R and General Chemistry I Recitation	
& CH 116 and General Chemistry I Laboratory	
CH 117 General Chemistry II	4
& 117R and General Chemistry II Recitation	
& CH 118 and General Chemistry II Laboratory	

EE 312 Electrical Systems <sup>1</sup>	3
or EE 314 Electrical Circuits	
EGR 110 Introduction to Engineering I	2
& EGR 111 and Introduction to Engineering II <sup>2</sup>	
or EGR 200 Introduction to Engineering	
EGR 117 Engineering Innovation I: Design Thinking	3
EGR 150 Computer Methods in Engineering	3
EGR 265 Math Tools for Engineering Problem Solving <sup>3</sup>	4
EGR 217 EGR Design & Innovation II: EGR Design Prototyping	3
EGR 317 Engineering Innovation III: Project Lab	3
EGR 498 Capstone Design I	3
EGR 499 Capstone Design II	3
MA 126 Calculus II	4
MA 260 Introduction to Linear Algebra	3
ME 102 Engineering Graphics	2
ME 215 Dynamics	3
& 215R and Dynamics Recitation	
MSE 280 Engineering Materials	3
Math/Science Elective <sup>3, 4</sup>	3
General Electives <sup>5</sup>	15
Engineering Coursework <sup>6, 7</sup>	18
<b>Total Hours</b>	<b>128</b>

<sup>1</sup> Students wishing to pursue an Electrical Engineering minor must successfully complete EE 314.

<sup>2</sup> Transfer students may substitute EGR 200 for EGR 110/EGR 111.

<sup>3</sup> Students may also replace EGR 265 and a math/science elective with MA 227 and MA 252.

<sup>4</sup> Engineering Design MA/SCI options

- Any Biology (BY) course numbered 108 or above
- Any Chemistry (CH) courses numbered CH 200 or above
- MA 313 Patterns, Functions and Algebraic Reasoning
- MA 360 Scientific Programming
- MA 361 Mathematical Modeling
- Any Mathematics (MA) courses numbered MA 434 or above
- Any Physics (PH) courses numbered PH 223 or above
- NBL 230 Brain Science: Biology, Disorders, and Clinical Therapies

<sup>5</sup> Could be used to complete an additional minor or certificate.

<sup>6</sup> The following courses do not fulfill this requirement: CE 200, CE 344, EE 254, EE 300, EE 318, EE 485, ME 364.

<sup>7</sup> Must include courses to complete the chosen engineering minor

### Freshman

First Term	Hours	Second Term	Hours
EH 101		3 MA 126	4
EGR 110		1 EGR 111 <sup>1</sup>	1
ME 102		2 EGR 117	3
MA 125		4 PH 221	4
		& 221L	
CH 115		4 CH 117	4
& CH 116		& CH 118	
	14		16

### Sophomore

First Term	Hours	Second Term	Hours
CE 210		3 CE 220	3
EGR 150		3 PH 222	4
		& 222L	
EGR 265 <sup>2</sup>		4 MA 260	3

EH 102	3 ME 215	3
EGR 217	3 Core Curriculum Area II or IV <sup>3</sup>	3
16		16

**Junior**

First Term	Hours	Second Term	Hours
EE 312 or 314		3 BME/CE/EE/EGR/ME/MSE <sup>5, 6</sup>	3
MSE 280		3 BME/CE/EE/EGR/ME/MSE <sup>5, 6</sup>	3
EGR 317		3 Elective/Certificate Course <sup>4</sup>	3
Math/Science Elective <sup>2, 4</sup>		3 Core Curriculum Area II or IV <sup>3</sup>	3
BME/CE/EE/EGR/ME/MSE <sup>5, 6</sup>		3 Core Curriculum Area II or IV <sup>3</sup>	3
Elective/Certificate Course <sup>4</sup>		3	
18		15	

**Senior**

First Term	Hours	Second Term	Hours
BME/CE/EE/EGR/ME/MSE <sup>5, 6</sup>		3 BME/CE/EE/EGR/ME/MSE <sup>5, 6</sup>	3
BME/CE/EE/EGR/ME/MSE <sup>5, 6</sup>		3 Elective/Certificate Course <sup>4</sup>	3
Elective/Certificate Course <sup>4</sup>		3 Elective/Certificate Course <sup>4</sup>	3
Core Curriculum Area II or IV <sup>3</sup>		3 Core Curriculum Area II or IV <sup>3</sup>	3
EGR 498		3 EGR 499	3
Core Curriculum Area II or IV <sup>3</sup>		3	
18		15	

Total credit hours: 128

- <sup>1</sup> Transfer students may substitute EGR 200 for EGR 110 and EGR 111
- <sup>2</sup> Students may also take MA 227 and MA 252 instead of EGR 265 and approved Math/Science elective
- <sup>3</sup> Please refer to the Core Curriculum as specified for Engineering majors
- <sup>4</sup> Engineering Design MA/SCI options
  - Any Biology (BY) course numbered 108 or above
  - Any Chemistry (CH) courses numbered CH 200 or above
  - MA 313 Patterns, Functions and Algebraic Reasoning
  - MA 360 Scientific Programming
  - MA 361 Mathematical Modeling
  - Any Mathematics (MA) courses numbered MA 434 or above
  - Any Physics (PH) courses numbered PH 223 or above
  - NBL 230 Brain Science: Biology, Disorders, and Clinical Therapies
- <sup>5</sup> Could be used to complete an additional minor or certificate.
- <sup>6</sup> The following courses do not fulfill this requirement: CE 200, CE 344, EE 254, EE 300, EE 318, EE 485, ME 364.
- <sup>7</sup> Must include courses to complete the chosen engineering minor

**BME-Biomedical Engineering Courses****BME 011. Undergraduate Coop/Internship in BME. 0 Hours.**

Engineering workplace experience in preparation for the student's intended career.

**BME 210. Engineering in Biology. 3 Hours.**

Application of engineering to the study of biology on the cellular and molecular level. Engineering solutions in genomics, proteomics, and nanotechnology to investigate cellular and molecular process.

**Prerequisites:** BY 123 [Min Grade: C] and PH 222 [Min Grade: C](Can be taken Concurrently)

**BME 221. Clinical Innovation I. 3 Hours.**

The goals of this class are to develop an understanding of the concept of clinical innovation and develop skills in written and oral communication of innovation in the context of a business proposal/presentation.

**BME 289. Undergraduate Research in Biomedical Engineering I. 1 Hour.**

Undergraduate research experiences in biomedical engineering. Must have sophomore standing.

**Prerequisites:** EGR 200 [Min Grade: C] or EGR 111 [Min Grade: C] or HC 111 [Min Grade: C] or HC 120 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and PH 221 [Min Grade: C](Can be taken Concurrently)

**BME 310. Biomaterials. 3 Hours.**

Introduction to wide range of materials used for biomedical applications. Physical, chemical and mechanical properties of biomaterials.

**Prerequisites:** MSE 280 [Min Grade: C] and BME 210 [Min Grade: C]

**BME 311. Biomaterials for Non-Majors. 3 Hours.**

Wide range of materials used for biomedical applications. Physical, chemical and mechanical properties of biomaterials.

**Prerequisites:** MSE 280 [Min Grade: C]

**BME 312. Biocomputing. 3 Hours.**

Introduction to computational techniques used in biomedical engineering.

**Prerequisites:** EGR 150 [Min Grade: C] and EGR 265 [Min Grade: C] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C]) and MA 260 [Min Grade: C](Can be taken Concurrently)

**BME 313. Bioinstrumentation. 3 Hours.**

An introduction to instrumentation used to make biological and physiological measurements. Techniques include acquisition and analysis of bioelectric signals and instrument control.

**Prerequisites:** EE 312 [Min Grade: C] and (MA 227 [Min Grade: C] and MA 252 [Min Grade: C] or EGR 265 [Min Grade: C])

**BME 333. Biomechanics of Solids. 3 Hours.**

Application of mechanics of solids principles to biomedical engineering problems; stress-strain of bone, viscoelasticity and constitutive equations of tissues, mechanics of the cell, introduction to molecular mechanics.

**Prerequisites:** EGR 265 [Min Grade: C] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C]) and ME 215 [Min Grade: C](Can be taken Concurrently)

**BME 350. Biological Transport Phenomena. 3 Hours.**

Basic mechanisms and mathematical analysis of transport processes with biological and biomedical applications. Analysis of flow, transport and reaction processes for biological fluids and biological molecules with applications towards development of artificial organs, drug delivery systems and tissue engineering products.

**Prerequisites:** EGR 265 [Min Grade: C] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C]) and BME 210 [Min Grade: C] and BY 409 [Min Grade: C](Can be taken Concurrently) and ME 215 [Min Grade: C](Can be taken Concurrently)

**BME 370. Integrated Physiology. 3 Hours.**

Integrated Physiology will introduce undergraduate students to mathematical models of major physiological systems. Basic anatomy will be reviewed in pre-recorded videos to be watched prior to coming to synchronous lectures. Lectures will include discussions, derivations of relevant equations, and development of models to demonstrate understanding of biological systems. In-class activities will be used as means to provide interactive content that will be assessed via Assignments and Exams. The course will culminate in a final project where teams of students select a pathological condition and model it in Matlab, including comparing to normal conditions and with currently-available clinical interventions. Open to junior and senior level Biomedical Engineering students.

**Prerequisites:** EGR 150 [Min Grade: C] and BME 210 [Min Grade: C]

**BME 389. Undergraduate Research in Biomedical Engineering II. 1 Hour.**

Undergraduate research experiences in biomedical engineering. Must have junior standing.

**Prerequisites:** BME 210 [Min Grade: C]

**BME 401. Undergraduate Biomedical Engineering Seminar. 1 Hour.**

Undergraduate seminar.

**BME 420. Implant-Tissue Interactions. 3 Hours.**

An overview of implant biocompatibility including tissue histology, histopathology of implant response and the regulatory process for medical devices. Emphasis placed on ethical issues related to design, development, and implementation of biomedical implants. Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** BME 310 [Min Grade: C] or BME 311 [Min Grade: C]

**BME 423. Living Systems Analysis and Biostatistics. 3 Hours.**

Basic concepts and techniques of measurement processing and analysis of data from living systems. Statistics, analysis of variance and regression analysis. Emphasis is placed on data analysis and presentation of group projects.

**Prerequisites:** BME 312 [Min Grade: C]

**BME 424. Current Topics in Stem Cell Engineering. 3 Hours.**

This course is designed for students interested in the field of stem cells, regenerative medicine, and tissue engineering using stem cells and stem cell derived cells. The course will introduce the role of stem cells in tissue growth and development, the theory behind the design and in vitro construction of tissue and organ replacements, and the applications of biomedical engineering principles to the treatment of tissue-specific diseases. Students will have hands on experience on culturing and analyzing stem cells, stem cell differentiation, analysis of functional and physiological properties of differentiated cells, and fabricating basic engineered-tissues.

**Prerequisites:** BY 123 [Min Grade: C] and (BY 210 [Min Grade: C] or BY 212 [Min Grade: C] or BY 115 [Min Grade: C])

**BME 435. Tissue Engineering. 3 Hours.**

Principles underlying strategies for regenerative medicine such as stem-cell based therapy, scaffold design, proteins or genes delivery, roles of extracellular matrix, cell-materials interactions, angiogenesis, tissue transplantation, mechanical stimulus and nanotechnology.

**Prerequisites:** BME 310 [Min Grade: C] or BME 311 [Min Grade: C]

**BME 443. Medical Image Processing. 3 Hours.**

Fundamental topics of medical image processing to practical applications using conventional computer software.

**Prerequisites:** BME 312 [Min Grade: C](Can be taken Concurrently) and PH 222 [Min Grade: C]

**BME 444. Machine Learning for Biomedical Engineering Applications. 3 Hours.**

This course provides the introduction to the practical aspects of machine learning such that the students can apply some basic machine learning techniques in simple biomedical engineering problems. The course also provides the principle of machine learning 'thinking process' for the next machine learning – AI courses and more in-depth machine learning studies. By 'thinking process', at the beginning, it is better to view machine learning like human learning. Students who have experience with Data Mining may further understand the fundamental differences between Machine Learning and Data Mining, although these two fields share many concepts and techniques. Also, the student will learn fundamental theories in machine learning to be able to develop new machine learning techniques and research machine learning in biomedical engineering.

**Prerequisites:** EGR 150 [Min Grade: C]

**BME 450. Computational Neuroscience. 3 Hours.**

This course examines the computational principles used by the nervous system. Topics include: biophysics of axon and synapse, sensory coding (with an emphasis on vision and audition), planning and decision-making, and synthesis of motor responses. There will be an emphasis on systems approach throughout. Homework includes simulations.

**Prerequisites:** BME 312 [Min Grade: C]

**BME 461. Bioelectric Phenomena. 3 Hours.**

Quantitative methods in electrophysiology with focus on using simulations to examine responses in electrically excitable cell types.

**Prerequisites:** BME 312 [Min Grade: C]

**BME 462. Cardiac Electrophysiology. 3 Hours.**

Experimental and computational method on cardiac electrophysiology, ionic current, action potentials, electrical propagation, the electrocardiogram, electromechanical coupling, cardiac arrhythmias, effects of electric fields in cardiac tissue, defibrillation and ablation.

**Prerequisites:** BME 312 [Min Grade: C]

**BME 471. Continuum Mechanics of Solids. 3 Hours.**

Matrix and tensor mathematics, fundamentals of stress, momentum principles, Cauchy and Piola-Kirchoff stress tensors, static equilibrium, invariance, measures of strain, Lagrangian and Eulerian formulations, Green and Almansi strain, deformation gradient tensor, infinitesimal strain, constitutive equations, finite strain elasticity, strain energy methods, 2-D Elasticity, Airy Method, viscoelasticity, mechanical behavior of polymers.

**Prerequisites:** EGR 265 [Min Grade: C] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C]) and (BME 333 [Min Grade: C] or CE 220 [Min Grade: C])

**BME 472. Industrial Bioprocessing and Biomanufacturing. 3 Hours.**

This course will introduce students to the growing industries related to biomedical, biopharmaceutical and biotechnology. It is targeted to offer the students marketable skills to work in a vital area of economic growth and also convey some of the challenges and opportunities awaiting.

**Prerequisites:** BME 310 [Min Grade: C](Can be taken Concurrently) or BY 330 [Min Grade: C](Can be taken Concurrently) or CH 460 [Min Grade: C](Can be taken Concurrently)

**BME 489. Undergraduate Research in Biomedical Engineering III. 1-2 Hour.**

Undergraduate research experiences in biomedical engineering. Must have senior standing.

**Prerequisites:** BME 210 [Min Grade: C]

**BME 490. Special Topics in Biomedical Engineering. 1-3 Hour.**

Special Topic in Biomedical Engineering.

**BME 491. Individual Study in Biomedical Engineering. 1-6 Hour.**

Individual Study in Biomedical Engineering.

**BME 494. Honors Research I. 1-3 Hour.**

Research experiences for undergraduates enrolled in the departmental honors program. The student should write a proposal and make a presentation based on the proposal.

**Prerequisites:** EGR 301 [Min Grade: C] or STH 201 [Min Grade: C]

**BME 495. Honors Research II. 1-3 Hour.**

Research opportunities for undergraduate students in the Biomedical Engineering Honors Program. Research areas include cardiac electrophysiology, brain imaging, biomedical implants, and tissue engineering.

**Prerequisites:** BME 494 [Min Grade: C]

**BME 496. Biomedical Engineering Honors Seminar. 1 Hour.**

Must be enrolled in an Honors Program.

**BME 498. Capstone Design I Product Development. 3 Hours.**

Design and development of medical-products. Through experiential learning, students go through the early phases of engineering design innovation for medical products, starting with clinical immersion to determine a critical health-care need. Engineering students work in multi-disciplinary teams that include students from the School of Business to develop design concepts for both a client-based prototype and a commercializable version. Designs take into account client needs as well as legal, regulatory, and marketing requirements. Business ethics are also covered. Emphasis is placed on communication in both oral and written format to targeted audiences.

**Prerequisites:** (BME 310 [Min Grade: C] and BME 312 [Min Grade: C]) or (BME 310 [Min Grade: C] and BME 313 [Min Grade: C]) or (BME 310 [Min Grade: C] and BME 333 [Min Grade: C]) or (BME 310 [Min Grade: C] and BME 350 [Min Grade: C]) or (BME 312 [Min Grade: C] and BME 313 [Min Grade: C]) or (BME 312 [Min Grade: C] and BME 333 [Min Grade: C]) or (BME 312 [Min Grade: C] and BME 350 [Min Grade: C]) or (BME 313 [Min Grade: C] and BME 333 [Min Grade: C]) or (BME 313 [Min Grade: C] and BME 350 [Min Grade: C]) or (BME 333 [Min Grade: C] and BME 350 [Min Grade: C])

**BME 499. Capstone Design II. 3 Hours.**

Capstone design project; a continuation of BME 498. Through experiential learning, student teams complete the engineering design process for their client-based prototype incorporating engineering standards and realistic constraints. Student teams develop a business plan to present to potential business partners and product development teams from established companies. Additional skills learned in this part of the design process include: development of business proposals, project planning and scheduling, project execution and resource scheduling, communication of design, and interim and final design reviews. Emphasis is placed on communication of design and design justification in both an oral and written format to targeted audiences.

**Prerequisites:** BME 498 [Min Grade: C] and BME 310 [Min Grade: C] and BME 312 [Min Grade: C] and BME 313 [Min Grade: C] and BME 333 [Min Grade: C](Can be taken Concurrently) and BME 350 [Min Grade: C] (Can be taken Concurrently) and BME 423 [Min Grade: C](Can be taken Concurrently)

## CE-Civil Engineering Courses

**CE 011. UG Coop/Internship in CE. 0 Hours.**

Engineering workplace experience in preparation for the student's intended career.

**CE 200. Engineering Geology. 2 Hours.**

Fundamentals and advanced topics of geology including plate tectonics, mineral formation, sedimentary / igneous / metamorphic rocks, structural deformations, weathering and erosion, groundwater migration, and slope stability.

**CE 210. Statics. 3 Hours.**

Newton's laws of motion. Scalar and vector quantities, vector algebra, and the concepts of position and moment vectors. Two-dimensional systems: forces, moments, couples, and resultants. Three-dimensional systems and equivalent force systems, free body diagrams, and equations of equilibrium. Construction of shear force and bending moment diagrams. Analysis of pin-connected beams, plane trusses, and frames: method of joints and method of sections. Friction and properties of surfaces. Center of mass, center of gravity, and area moment of inertia. Quantitative Literacy is a significant component of this course.

**Prerequisites:** EGR 200 [Min Grade: C](Can be taken Concurrently) or HC 111 [Min Grade: C] or EGR 111 [Min Grade: C](Can be taken Concurrently) and (MA 126 [Min Grade: C] or MA 126 [Min Grade: P] or MA 226 [Min Grade: C]) and (PH 221 [Min Grade: C] or PH 221 [Min Grade: P])

**CE 220. Mechanics of Solids. 3 Hours.**

Variation of stress at a point. Equilibrium requirements and body force concepts. Variation of strain at a point. Stress-strain relationships. Stress transformation and Mohr's Circle for plane stress. Analysis of axially loaded bars, circular shafts in torsion, shear and bending of beams, and buckling of columns. Analysis of simple, statically determinate and indeterminate structures.

**Prerequisites:** CE 210 [Min Grade: C]

**CE 221. Mechanics of Solids Laboratory. 1 Hour.**

Standard tensile, torsion, bending, and column tests. Installation and applications of strain gages and rosettes. Measurement of forces, displacements, strains, and other variables. Writing is a significant component of this course.

**Prerequisites:** CE 220 [Min Grade: D](Can be taken Concurrently)

**CE 222. Civil Engineering Materials Laboratory. 1 Hour.**

Testing properties of construction materials such as cement, aggregate, concrete, and asphalt. Design of Portland cement concrete mixes. Writing is a significant component of this course.

**Prerequisites:** CE 220 [Min Grade: D](Can be taken Concurrently)

**CE 230. Plane Surveying. 3 Hours.**

Fundamental topics of surveying including care and use of surveying instruments, surveying methods, error theory, traversing, stadia, mapping techniques, circular and parabolic curves, areas, and volumes. CE 230L must be taken concurrently.

**Prerequisites:** MA 125 [Min Grade: C] or MA 225 [Min Grade: C]

**CE 230L. Plane Surveying Laboratory. 0 Hours.**

Principles of land measurement, the instruments and techniques used in surveying, theory of errors and mathematical precision in engineering analysis and design. Introduction to route surveying and the principles of horizontal and vertical curves. Companion to CE 230 and must be taken concurrently.

**CE 236. Environmental Engineering. 3 Hours.**

Introduction to environmental engineering principles. Air and water pollution, solid waste, quality of environment, environmental health, regulations and legal considerations, and ethics and civic responsibility. Design of testing protocols.

**Prerequisites:** MA 125 [Min Grade: C](Can be taken Concurrently) or MA 225 [Min Grade: C](Can be taken Concurrently) and CH 117 [Min Grade: C]

**CE 236L. Environmental Engineering Laboratory. 0 Hours.**

Laboratory equipment and methods. Chemical and physical tests to determine characteristics of water and wastewater. Companion lab to CE 236 and must be taken concurrently.

**CE 332. Soil Engineering. 4 Hours.**

Soil identification and properties, stress concepts, permeability settlement analysis, soil compaction, bearing capacity, shear strength of soil, and slope stability. CE 332L must be taken concurrently.

**Prerequisites:** CE 200 [Min Grade: D] and CE 220 [Min Grade: D]

**CE 332L. Soil Engineering Laboratory. 0 Hours.**

Soil classification, strength and shear tests, and permeability and consolidation tests. Companion to CE 332 and must be taken concurrently.

**CE 337. Hydraulics. 3 Hours.**

Fundamentals of hydraulics including properties of water, hydrostatic forces and pressures, flow, head losses, and related phenomena in pipes. Other topics include river hydrograph routing, statistical hydrology, flow in open channels, culvert design, and applied hydraulic modeling. Must earn a grade of C or better to satisfy BSCE degree requirements.

**Prerequisites:** MA 126 [Min Grade: C] or MA 226 [Min Grade: C]

**CE 344. Civil Engineering Analysis I. 3 Hours.**

Inspection and treatment of data using exploratory data analysis. Descriptive statistics. Introduction to probability and commonly used distributions. Basic data analysis using regression analysis, hypothesis testing, and analysis of variance. Quantitative literacy is a significant component of this course.

**Prerequisites:** MA 126 [Min Grade: C] or MA 226 [Min Grade: C]

**CE 345. Transportation Engineering. 3 Hours.**

Principles of transportation engineering and urban transportation planning. Traffic flow characteristics, traffic control, capacity analysis of basic highway sections and intersections, geometric design, and travel demand forecasting.

**Prerequisites:** (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and PH 221 [Min Grade: C]

**CE 360. Structural Analysis. 3 Hours.**

Reactions, shears, moments, and axial forces in determinate and indeterminate structures. Influence lines; moment area and energy methods of computing deflections; methods of truss and frame analysis. Computer applications.

**Prerequisites:** CE 220 [Min Grade: D]

**CE 371. Engineering Communication. 2 Hours.**

Introduces communication skills necessary for professional development. Topics include forms of technical writing and oral communication, report writing and organization, plan reading, professional practice, and ethics.

**Prerequisites:** EH 102 [Min Grade: C] and (EGR 111 [Min Grade: C] or EGR 200 [Min Grade: C])

**CE 395. Engineering Economics. 3 Hours.**

Fundamental concepts of engineering economy. Introduction to cost and revenue estimating and cash flow analysis for engineering projects. Choosing between alternatives taking into account the time value of money, depreciation, inflation, income taxes and risk factors.

**Prerequisites:** MA 125 [Min Grade: C] or MA 225 [Min Grade: C]

**CE 410. FE Review for Civil Engineers. 0 Hours.**

Review concepts of the engineering core and civil engineering in preparation for the Fundamentals of Engineering (FE) exam.

**CE 415. Building Information Modeling (BIM). 3 Hours.**

Introduction to virtual design and construction using AutoCAD and Revit software. An emphasis is placed on the use of these tools and their practical applications to real world engineering and design projects. Students are provided with the software required to complete a multi-step project.

**Prerequisites:** ME 102 [Min Grade: C]

**CE 420. Advanced Mechanics. 3 Hours.**

Variation of stress at point including determination of principal and maximum shear stresses. Strain gages and rosettes. Failure theories. Inelastic stress-strain behavior of axially loaded bars. Torsion of noncircular sections and plastic torque. Curved beams. Elastic and plastic analysis for unsymmetrical bending. Shear center. Beams on elastic foundations.

**Prerequisites:** CE 220 [Min Grade: D]

**CE 426. Foundation Engineering. 3 Hours.**

Design of foundations including bearing capacity and settlement of spread footings, mats, single piles, and pile groups. Site investigation and evaluation of data from field and tests. Estimation of stresses in soil masses, lateral resistance of piles and pile groups. Design of retaining walls, sheet piles, and cofferdams.

**Prerequisites:** CE 332 [Min Grade: D] and CE 455 [Min Grade: D]

**CE 430. Water Supply/Drainage Design. 3 Hours.**

Water requirements; wastewater characteristics. Hydraulics and design of sewers; distribution and reuse of water. Development of water supplies; design considerations.

**Prerequisites:** CE 337 [Min Grade: C]

**CE 431. Energy Resources. 3 Hours.**

Overview of primary energy resources, including oil, natural gas, coal, nuclear, hydro, solar, geothermal, biomass, wind, and tidal. Resources are discussed in terms of supply, distribution, recovery and conversion, environmental impacts, economies, policy, and technology. Concepts and opportunities for energy conservation are examined, including electric power generation, transportation applications, and energy use in developing countries.

**Prerequisites:** CE 236 [Min Grade: C]

**CE 433. Solid and Hazardous Wastes Management. 3 Hours.**

Overview of waste characterizations, regulations, and management options. Fundamentals of landfill design, recycling, incineration, emerging disposal technologies, federal and state laws, hazardous waste treatment, and ultimate disposal of hazardous waste.

**Prerequisites:** CE 236 [Min Grade: C]

**CE 434. Air Quality Modeling and Monitoring. 3 Hours.**

Overview of atmospheric pollutant effects, reactions, and sources. Introduction to air dispersion modeling and ambient air quality monitoring.

**Prerequisites:** ME 251 [Min Grade: C]

**CE 440. Civil Engineering Honors Research. 3 Hours.**

Departmental honors students work closely with faculty researchers and graduate students in departmental concentration specialties to develop research skills. Enrollment is limited to undergraduate students enrolled in CCEE Departmental Honors Program.

**CE 441. Civil Engineering Honors Seminar. 1 Hour.**

Seminar focusing on student research and guest presentations of various topics of interest to civil and environmental engineering students.

**CE 443. Pavement Design and Construction. 3 Hours.**

Analysis of stresses and strains in pavement systems. Design and construction of flexible and rigid pavements, base courses, and subgrades. Effects of loading on pavement life.

**Prerequisites:** CE 345 [Min Grade: D]

**CE 445. Engineering the Built Environment. 3 Hours.**

This service learning course explores the effects the built environment has on urban function, connectivity, community health, and the well-being of its residents. Students work directly in local neighborhoods learning how to assess components of the built environment, including transportation, green spaces, lighting, and blight, and to estimate their impacts on community health and well-being. Students propose engineering solutions, develop cost estimates, assess potential benefits, and develop implementation plans. Registration restricted to Junior or Senior standing.

**CE 446. Green Infrastructure and Transportation. 3 Hours.**

Policy and technical issues related to sustainable transportation. Examines the concepts, viewpoints, and fundamentals essential for understanding sustainable transportation planning and the tools used to assess sustainability of transportation facilities and neighborhoods. Design options in support of green infrastructure and transportation, including livable street design and traffic calming applications. Registration restricted to Junior or Senior standing.

**CE 447. Principles of Sustainable Development. 3 Hours.**

Concepts, viewpoints, and fundamentals essential for understanding the urban sustainable development agenda. Review of basic earth sciences to better evaluate the impact of anthropogenic activities on the natural environment and how to minimize adverse future outcomes. Case studies of sustainable developments are used to illustrate the value, challenges, and limitations of this concept.

**Prerequisites:** CE 236 [Min Grade: C]

**CE 450. Structural Steel Design. 3 Hours.**

Tension members, columns, beams, and beam columns. Simple connections. Load Resistance Factor Design (LRFD) approaches.

**Prerequisites:** CE 221 [Min Grade: C] and CE 360 [Min Grade: C]

**CE 453. Design of Wood Structures. 3 Hours.**

Properties of structural wood materials, both sawn lumber and engineered wood materials. Design of wood structures including beams, columns, connections, roof diaphragms, and shear walls. The requirements of the National Design Specification for Wood Structures will be addressed.

**Prerequisites:** CE 360 [Min Grade: C]

**CE 454. Design of Masonry Structures. 3 Hours.**

Design and detailing of masonry structures. Nomenclature, properties, and specifications for components. Design of assemblages, simple masonry structures, unreinforced and reinforced elements, and complex masonry structures.

**Prerequisites:** CE 360 [Min Grade: C]

**CE 455. Reinforced Concrete Design. 3 Hours.**

Behavior, strength, and design of reinforced concrete structural members (beams, columns, one-way slabs, and continuous beams) subjected to moment, shear, and axial forces according to the American Concrete Institute Building Code Requirements for Structural Concrete (ACI 318). Crack control and serviceability considerations. Introduction to the design of reinforced concrete structures.

**Prerequisites:** CE 222 [Min Grade: C] and CE 360 [Min Grade: C]

**CE 456. Prestressed Concrete Design. 3 Hours.**

Principles and concepts of design in prestressed concrete including elastic and ultimate strength analyses for flexural, shear, bond, and deflection. Principles of concordance and linear transformation for indeterminate prestressed structures.

**Prerequisites:** CE 455 [Min Grade: D]

**CE 460. Structural Mechanics. 3 Hours.**

Elastic beam deflections, beam columns, lateral torsional buckling, column stability, plastic design, plate bending, and yield line theory.

**Prerequisites:** CE 360 [Min Grade: C]

**CE 461. Introduction to the Finite Element Method. 3 Hours.**

Concepts and applications of finite element method (FEM). Review of statics, equilibrium, compatibility, and constitutive relations. Direct stiffness method, principle of virtual work, concept of stiffness, and matrix methods: planar trusses, beams, and planar frames. Support settlements, three-dimensional systems; development and application of basic finite elements. Software use.

**Prerequisites:** CE 360 [Min Grade: C]

**CE 462. Advanced Structural Analysis. 3 Hours.**

Analysis of indeterminate structures utilizing both classical and matrix methods. Use of computer structural analysis programs.

**Prerequisites:** CE 360 [Min Grade: C]

**CE 464. Structural Dynamics. 3 Hours.**

Closed form and numerical solutions to single-degree-of-freedom structural models. Analysis of multistory frames. Response of single and multiple degree of freedom models to harmonic, periodic, impulse and arbitrary time-dependent loads. Computer applications and seismic analysis. Techniques of modal analysis.

**Prerequisites:** CE 360 [Min Grade: C] and ME 215 [Min Grade: C]

**CE 465. CE Construction Documents. 3 Hours.**

Introduction to Civil Engineering design and construction documents including drawings, specifications, contracts, and testing reports. Overview of civil infrastructure and project types, including the civil engineer's role in the preparation, certification, and use of construction documents. Construction topics include measurement, quantity estimating, and engineering budgets.

**CE 467. Wind and Seismic Loads. 3 Hours.**

Methods for calculating loads on structures caused by extreme winds and earthquakes. Calculation of wind loads on various types of structures according to theory and codes. Determination of earthquake loads on structures using structural dynamics and codes.

**Prerequisites:** CE 360 [Min Grade: C]

**CE 468. Bridge Engineering. 3 Hours.**

Bridge loads, steel beam bridges, composite beam bridges, bridge bearings, reinforced and prestressed concrete slab and T-beam bridges, bridge evaluations and ratings, and upgrade methodologies; computer applications.

**Prerequisites:** CE 450 [Min Grade: D] and CE 455 [Min Grade: D](Can be taken Concurrently)

**CE 470. International Research Experience. 3 Hours.**

The International Research Experience for Students (IRES) program provides the opportunity for undergraduate and graduate students to participate in hands-on engineering research in an international setting. Students perform research on an approved topic related to civil engineering design in an international environment. Students perform a detailed literature review and work with mentors from UAB and the international host institution to develop research objectives and a detailed research plan. The course will culminate in a 6-8 week visit to the international host institution, during which time students will conduct hands-on research with their mentors and prepare final reports.

**CE 475. Construction Safety and Health Management. 3 Hours.**

This course covers various causes of construction accidents and the adopted strategies to prevent worksite injuries and illnesses. Other topics covered include workers' compensation, OSHA standards for the construction industry, economics of construction safety management, temporary structures, system safety, ergonomic applications, health hazards, and the development of a safety program.

**Prerequisites:** CE 344 [Min Grade: C]

**CE 480. Introduction to Water and Wastewater Treatment. 3 Hours.**

Examination of chemical/biological unit processes for water and wastewater treatment. Design of wastewater treatment facilities and unit processes. Treatment and disposal of sludge.

**Prerequisites:** CE 236 [Min Grade: C]

**CE 485. Engineering Hydrology. 3 Hours.**

Hydrologic principles including the hydrologic cycle, precipitation data and stream-flow measurements. Applications to engineering problems: stream-flow analysis, and watershed management.

**Prerequisites:** CE 337 [Min Grade: C]

**CE 489. Undergraduate Engineering Research. 0 Hours.**

Undergraduate research experiences in civil, construction and/or environmental engineering.

**Prerequisites:** (EGR 110 [Min Grade: C] and EGR 111 [Min Grade: C]) or EGR 200 [Min Grade: C] or HC 111 [Min Grade: C] or EGR 100 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and PH 221 [Min Grade: C](Can be taken Concurrently)

**CE 490. Special Topics in Civil Engineering. 1-3 Hour.**

Special Topics in Civil Engineering.

**CE 491. Individual Study in Civil Engineering. 1-6 Hour.**

Individual Study in Civil Engineering.

**CE 497. Construction Engineering Management. 3 Hours.**

Study of construction management services including project planning, scheduling, estimating, budgeting, contract administration, agreements, and ethics. Emphasis is on the management of manpower, materials, money, and machinery.

**Prerequisites:** CE 395 [Min Grade: D]

**CE 499. Capstone Design Project. 3 Hours.**

Students work in teams to solve a complex engineering problem that incorporates the major aspects of civil engineering design including structural, geotechnical, environmental, transportation, and construction management components. The course also includes lectures and assignments related to professionalism including engineering ethics, leadership, and management. Normally taken during last term before graduation.

**Prerequisites:** CE 332 [Min Grade: D] and CE 337 [Min Grade: C] and CE 345 [Min Grade: D] and (CE 450 [Min Grade: D] or CE 455 [Min Grade: D]) and CE 430 [Min Grade: D](Can be taken Concurrently) and CE 497 [Min Grade: D](Can be taken Concurrently)

**EE-Electrical Computer Egr Courses****EE 011. Coop/Internship in EE. 0 Hours.**

The Co-op/Internship is a short-term engineering workplace learning experience in preparation for the student's intended career.

**EE 210. Digital Logic. 3 Hours.**

This course introduces the basic principles of how computers do computations using digital components. Topics include: the number systems, Boolean algebra, circuit minimization of multi-level logic, K-Maps, combinational and sequential logic circuit design, clocked latches, flip-flops, registers, and finite state machines. In class lab.

**Prerequisites:** MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 125 [Min Grade: C](Can be taken Concurrently)

**EE 233. Engineering Programming Methods. 3 Hours.**

This course covers fundamentals of computer programming including coding and design elements. Topics include: the software development method, logic and algorithm development, C language coding, debugging, documentation, file input and output, an introduction to data structures, development environments, and command line tools.

**Prerequisites:** EGR 150 [Min Grade: C]

**EE 254. Applied Numerical Methods. 3 Hours.**

This course covers applications of numerical mathematical techniques and theories laid out in prior courses. Topics include: Euler's Method, numerical integration and differentiation methods, root finding methods, accuracy versus precision and its relationship to data storage and algorithm efficiency.

**Prerequisites:** EGR 265 [Min Grade: C] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C]) and EGR 150 [Min Grade: C]

**EE 300. Engineering Problem Solving II. 3 Hours.**

This course covers fundamental mathematical background on complex functions, linear algebra, and the theory of probability and statistics which are indispensable in many electrical and computer engineering sub-fields such as signal and image processing, circuit design, and control systems.

**Prerequisites:** EGR 265 [Min Grade: D] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C])

**EE 305. Fundamentals of Electrical Engineering. 3 Hours.**

This course provides a survey of topics fundamental to field of electrical engineering. For non-engineering majors. Not available for credit toward engineering major.

**Prerequisites:** MA 109 [Min Grade: C]

**EE 312. Electrical Systems. 3 Hours.**

This course introduces how electrical circuits work and how to analyze them. Topics include: introduction to DC circuit analysis, AC steady-state analysis, first-order transient analysis, ideal transformers, and electrical safety. For non-EE majors.

**Prerequisites:** MA 126 [Min Grade: C] or MA 226 [Min Grade: C] and PH 221 [Min Grade: C]

**EE 314. Electrical Circuits. 3 Hours.**

This course covers electrical circuits and their analysis. Topics include: DC circuit analysis, AC steady-state analysis, first-order transient analysis, and electrical safety. For EE Majors.

**Prerequisites:** (MA 126 [Min Grade: C] or MA 226 [Min Grade: C]) and PH 221 [Min Grade: C]

**EE 314R. Electrical Circuits Recitation. 0 Hours.**

A problem-solving course designed to reinforce concepts in EE 314.

**Prerequisites:** (MA 226 [Min Grade: C] or MA 126 [Min Grade: C]) and PH 221 [Min Grade: C]

**EE 316. Electrical Networks. 4 Hours.**

This course expands the Electrical Circuits course with advanced circuits and teaches how to report the results of experiments (emphasis on quantitative literacy). Topics include: Analysis of circuits using classical differential/integral techniques; Laplace transforms; Two-port network parameters; Ideal operational amplifiers; Circuit solution using simulation.

**Prerequisites:** EE 314 [Min Grade: C] and EH 101 [Min Grade: C] and EGR 265 [Min Grade: D] or (MA 227 [Min Grade: C] and MA 252 [Min Grade: C])(Can be taken Concurrently)

**EE 316L. Electrical Networks Laboratory. 0 Hours.**

Electrical Networks laboratory component.

**EE 318. Signals and Systems. 3 Hours.**

This course provides fundamental mathematical background for extraction of useful information from signals and for modeling dynamic systems in the frequency domain. Topics include: time-domain and frequency-domain methods for modeling and analyzing continuous-time and discrete-time signals and systems, Fourier, Laplace, and Z transform methods.

**Prerequisites:** EE 300 [Min Grade: D] and EE 316 [Min Grade: D]

**EE 333. Engineering Programming Using Objects. 3 Hours.**

This course covers object-oriented thinking and applies it to creating software for engineering applications. Topics include: objected-oriented design and programming in an object-oriented language, graphical user interface framework, project management skills, written and oral communication, Team work, introduction to ethics and intellectual property issues.

**Prerequisites:** EE 233 [Min Grade: D]

**EE 337. Introduction to Microprocessors. 4 Hours.**

This course covers computer hardware, interfaces, and programming in assembly and C languages with applications of microcomputers to engineering problems, such as data acquisition and control. Topics include: CPU architecture, assembly language, Input/output interfacing.

**Prerequisites:** EE 210 [Min Grade: C] and EE 233 [Min Grade: D]

**EE 337L. Introduction to Microprocessors Laboratory. 0 Hours.**

Introduction to Microprocessors laboratory component.

**EE 341. Electromagnetics. 3 Hours.**

This course introduces mathematical techniques used to solve problems in antenna design, high-frequency circuit design, and communications. Topics include: Maxwell equations, dynamic and static problems, electromagnetic wave propagation.

**Prerequisites:** EE 300 [Min Grade: C](Can be taken Concurrently) and EE 316 [Min Grade: C]

**EE 351. Electronics. 4 Hours.**

This course covers fundamentals of solid-state electronics, PN junction diode and diode circuits, bipolar junction transistor (BJT) and field-effect transistor (FET) properties, biasing, frequency response, amplifier configurations, single and multistage amplifier circuits. Students will work on projects in areas such as Internet-of-Things (IoT), and sensor instrumentation.

**Prerequisites:** EE 210 [Min Grade: C] and EE 316 [Min Grade: C]

**EE 351L. Electronics Laboratory. 0 Hours.**

Electronics laboratory component.

**EE 361. Machinery I. 4 Hours.**

This course covers single and multi-phase electrical machines with an introduction to industrial applications. Topics include: Fundamentals and applications of polyphase circuits; magnetic circuits; transformers; polyphase synchronous and asynchronous machines.

**Prerequisites:** EE 316 [Min Grade: C]

**EE 361L. Machinery I Laboratory. 0 Hours.**

Machinery I laboratory component.

**EE 412. Practical Computer Vision. 3 Hours.**

This course covers fundamentals and applications of image analysis. Topics include: image preprocessing, detection, segmentation, classification and recognition, visual tracking, and deep learning.

**Prerequisites:** EE 318 [Min Grade: C]

**EE 418. Wireless Communications. 3 Hours.**

This course covers the principles and current applications of wireless technology. Topics include propagation models, modulation, multiple access, and channel and signal coding. Applications of wireless for cellular and Internet of Things (IoT) will also be covered.

**Prerequisites:** EE 316 [Min Grade: C]

**EE 421. Communication Systems. 3 Hours.**

This course covers the mathematics of modulation and demodulation of radio signals to transmit and receive information. It focuses on various forms of amplitude modulation (AM), phase and frequency modulation (FM). This course builds on the mathematics from signals and systems course to study how to represent and manipulate these signals in both time and frequency domain. It also studies the effects of sampling, and how these systems operate in the presence of noise.

**Prerequisites:** EE 318 [Min Grade: C]

**EE 423. Digital Signal Processing. 3 Hours.**

This course covers the theory and practice of using computers to process and analyze signals. The topics include Digital filter analysis and design; Fast Fourier Transform (FFT) algorithms; Applications of digital signal processing in engineering problems such as data acquisition and control.

**Prerequisites:** EE 318 [Min Grade: C]

**EE 426. Control Systems. 3 Hours.**

This course covers modeling and control of mechanisms or circuits to satisfy stability and performance criteria. Topics include: theory of linear feedback control systems using complex frequency techniques, block diagram manipulation, performance measures, stability, analysis and design using root locus, and Z-transform methods.

**Prerequisites:** EE 318 [Min Grade: C]

**EE 427. Controls and Automation. 3 Hours.**

This course covers power control devices and applications, relay logic and translation to other forms, programmable logic controllers (PLCs), proportional-integral-derivative (PID) and other methods for process control, modern laboratory instrumentation, and human-machine interface (HMI) software.

**Prerequisites:** EE 233 [Min Grade: C] and EE 318 [Min Grade: C] and EE 351 [Min Grade: C]

**EE 431. Analog Integrated Electronics. 4 Hours.**

This course covers advanced analysis and design using op-amps, differential amplifier, half-circuit analysis, error analysis and compensation. Applications include signal conditioning for instrumentation, instrumentation amplifiers, nonlinear and computational circuits, analog filter design, voltage regulator design, oscillators, and circuit configurations for A-to-D and D-to-A conversion methods. Laboratory exercises emphasize design techniques for projects in areas such as Internet-of-Things (IoT).

**Prerequisites:** EE 318 [Min Grade: C] and EE 351 [Min Grade: C]

**EE 432. Introduction to Computer Networking. 3 Hours.**

This course covers the fundamentals of modern computer networks including current applications such as Internet of Things (IoT). Topics include: hardware and software level network protocols, network architecture and topology including WANs and LANs, client-server relationships, distributed computing, data transfer, security, virtualization of hardware, multi-tier network configuration examples, and certifications will be addressed.

**Prerequisites:** EE 233 [Min Grade: C]

**EE 433. Engineering Software Solutions. 3 Hours.**

This course covers the fundamentals of software design, architecture, and implementation for future software engineers. Topics include: customer-focused requirements gathering, project planning, team tools, architectural patterns, environment and component selection, quality assurance, sustainability, versioning. Various development methodologies are discussed with a project demonstrating at least one release cycle.

**Prerequisites:** EE 333 [Min Grade: C]

**EE 434. Power Semiconductor Electronics. 3 Hours.**

Fundamentals of integrated circuit design for radio-frequency and power converter circuits. Course contents include basics of RF circuit theory, matching networks, high frequency MOS model, low-noise-amplifier, voltage controlled oscillator, fundamentals of power electronics, power semiconductor switches, steady-state equivalent circuit modeling, DC transformer model, basic AC equivalent circuit modeling, linearization and perturbation, etc. Students will require accomplishing a computer aided design, simulation and chip layout of an integrated circuit design project.

**Prerequisites:** EE 316 [Min Grade: C] and EE 318 [Min Grade: D] and EE 351 [Min Grade: D]

**EE 437. Introduction to Embedded Systems. 3 Hours.**

This course provides an applied introduction to the design of embedded systems, including hardware and software aspects. Topics include: various embedded hardware platforms, interfacing industrial bus systems, sensors, actuators, low-power wireless communication, and application of Internet-of-Things (IoT).

**Prerequisites:** EE 314 [Min Grade: D] and EE 337 [Min Grade: D]

**EE 438. Computer Architecture. 3 Hours.**

Advanced microprocessor topics including cache design, pipelining, superscalar architecture, design of control units, microcoding, and parallel processors. Comparison of advanced, contemporary microprocessors from Intel and IBM. EE 337 (Introduction to Microprocessors) is a recommended prerequisite for this course.

**Prerequisites:** EE 210 [Min Grade: C] and EE 233 [Min Grade: D] and EE 337 [Min Grade: D]

**EE 444. Real-Time Process & Protocols. 3 Hours.**

Hands-on laboratory course covering topics in real-time computer systems such as algorithms, state-machine implementations, communication protocols, instrumentation, and hardware interfaces.

**Prerequisites:** EE 233 [Min Grade: D] and EE 337 [Min Grade: D]

**EE 447. Internet/Intranet Application Development. 3 Hours.**

This course covers development of software models and applications using Internet/Intranet technologies. Topics include: web client-server relationships, multi-tier design models, scripting and validation, basic TCP/IP networking, separation of concerns, markup and data description languages. Projects will allow the opportunity for the use of a range of tools and development platforms.

**Prerequisites:** EE 233 [Min Grade: C]

**EE 448. Software Engineering Projects. 3 Hours.**

This course covers practical applications of software engineering including development of applications for Internet of Things (IoT). Topics include: requirements gathering, design matrices, environment selection, relevant architectural patterns, networking basics, databases, service endpoints, embedded systems selection and security. Projects with a software emphasis will be utilized to demonstrate principles of IoT applications.

**Prerequisites:** EE 333 [Min Grade: C]

**EE 452. Digital Systems Design. 3 Hours.**

This course covers the design of customized complex digital systems using Field Programmable Gate Array (FPGA) based platforms, using modern design tools for simulation, synthesis, and implementation. Topics include hardware design and development languages such as Verilog or VHDL.

**Prerequisites:** EE 337 [Min Grade: C] and EE 351 [Min Grade: C]

**EE 458. Medical Instrumentation. 3 Hours.**

This course covers the fundamental operating principles, applications, safety, and design of electronic instrumentation used in the measurement of physiological parameters.

**Prerequisites:** EE 351 [Min Grade: C]

**EE 461. Machinery II. 3 Hours.**

Physical principles of DC machines. Mathematical analysis of generator designs using equivalent circuits and magnetization curves. Calculation of motor speed, torque, power, efficiency, and starting requirements. Solid-state speed control systems.

**Prerequisites:** EE 361 [Min Grade: D]

**EE 467. Brain Machine Interface. 3 Hours.**

This course explores the brain-machine interfaces, particularly the technologies that directly stimulate and/or record neural activity. This course is divided into three major components: 1) neuroscience and electrode interfaces, 2) brain recording and stimulating front-end circuits, and 3) circuit modeling, simulating, and optimization.

**Prerequisites:** EE 233 [Min Grade: C] and EE 351 [Min Grade: C]

**EE 471. Power Systems I. 3 Hours.**

Components of power systems. Performance of modern interconnected power systems under normal and abnormal conditions. Calculation of inductive and capacitive reactances of three-phase transmission lines in steady state.

**Prerequisites:** EE 361 [Min Grade: D]

**EE 472. Power Systems II. 3 Hours.**

Modeling of generators, transformers, and transmission lines for system studies. Introduction to symmetrical components. Calculation of short-circuit currents due to balanced and unbalanced faults. Determination of interrupting ratings of circuit breakers. Transient stability of power systems. Derivation of swing equation and solution by numerical method. Equal area criterion.

**Prerequisites:** EE 471 [Min Grade: D]

**EE 473. Protective Relaying of Power Systems. 3 Hours.**

Operating principles of protective relays. Protection of transmission lines, generators, motors, transformers, and buses.

**Prerequisites:** EE 361 [Min Grade: D]

**EE 485. Engineering Operations. 3 Hours.**

This course covers the principles and standards of engineering design from ideation to final design. Topics include: product development process, problem definition and need identification, embodiment and detail design, design for specific criterion, modeling and cost evaluation. Emphasis is placed on ethics and civil responsibilities in design including environmental, social, liable, sustainability and reliability through the lens of engineering design.

**Prerequisites:** (EGR 111 [Min Grade: C] or EGR 200 [Min Grade: C]) and EE 210 [Min Grade: D] and (EE 314 [Min Grade: D] or EE 312 [Min Grade: D])

**EE 489. Undergraduate Engineering Research. 0 Hours.**

Undergraduate research experiences in electrical and computer engineering under faculty guidance.

**Prerequisites:** EGR 111 [Min Grade: C] or EGR 200 [Min Grade: C]

**EE 490. Special Topics in Electrical Engineering. 1-3 Hour.**

This course covers contemporary topics in Electrical Engineering selected by faculty.

**EE 491. Individual Study in Electrical Engineering. 1-6 Hour.**

Faculty-guided self-study of special topic in electrical and computer engineering.

**EE 492. Honors Research I. 4 Hours.**

Departmental honors students work closely with faculty to develop research skills.

**Prerequisites:** EGR 301 [Min Grade: C](Can be taken Concurrently)

**EE 493. Honors Research II. 4 Hours.**

Departmental honors students work closely with faculty to develop research skills.

**Prerequisites:** EGR 492 [Min Grade: C]

**EE 498. Team Design Project I. 3 Hours.**

This course is the first part of a two-semester team design project. The deliverables include: detailed design, documentation, and project plan for completion in EE 499. Design projects are chosen from analog/digital systems, machine learning, embedded systems, signal processing, Internet of Things (IoT), and others. Course taken during the student's final year of the program.

**Prerequisites:** EE 318 [Min Grade: D] and EE 337 [Min Grade: D] and EE 485 [Min Grade: D](Can be taken Concurrently) and EE 351 [Min Grade: D](Can be taken Concurrently)

**EE 499. Team Design Project II. 3 Hours.**

This course is the second part of a two-semester team design project focusing on project implementation. Teams are required to complete a written design report and a final oral and poster presentation. Course is taken the during the student's final year of the program, in the term immediately after successfully completing EE 498.

**Prerequisites:** EE 498 [Min Grade: C]

## EGR-Engineering Courses

**EGR 011. Undergraduate Coop/Internship in Engineering. 0 Hours.**

Engineering workplace experience in preparation for the student's intended career.

**EGR 102. Engineering LLC Seminar. 0 Hours.**

The Engineering Living Learning Community (LLC) is designed to strengthen students' first year of college while fostering a sense of community. The living-learning community extends learning from the classroom into the residence hall where students participate in structured programs built around academics, common interests, and shared goals. This program will provide scholars with a solid foundation for the successful completion of an engineering degree. Programming within the LLC is a partnership between the Office of Student Housing and Residence Life and the UAB School of Engineering.

**EGR 110. Introduction to Engineering I. 1 Hour.**

Introduction to engineering as a profession, ethics and safety, engineering specialties, educational requirements, and team work; and present and future societal demands on profession. This is the first course in a two-course sequence for first-year students.

**Prerequisites:** MA 105 [Min Grade: C](Can be taken Concurrently) or MA 106 [Min Grade: C](Can be taken Concurrently) or MA 107 [Min Grade: C](Can be taken Concurrently) or MA 125 [Min Grade: C] (Can be taken Concurrently) or MA 225 [Min Grade: C](Can be taken Concurrently)

**EGR 111. Introduction to Engineering II. 1 Hour.**

Introduction to engineering specialties; career opportunities in engineering; introduction to engineering design, technical communication, and team work; and present and future societal demands on profession. This is the second course in a two-course sequence for first-year students.

**Prerequisites:** EGR 110 [Min Grade: C]

**EGR 117. Engineering Innovation I: Design Thinking. 3 Hours.**

Learn to produce great designs, be a more effective engineer, and communicate with high emotional and intellectual impact. This project based course gives students the ability to understand, contextualize, and analyze engineering designs and systems. By learning and applying design thinking, students will more effectively solve problems in any domain. Lectures focus on teaching a tested, iterative design process as well as techniques to sharpen creative analysis. Guest lectures from all disciplines illustrate different approaches to design thinking. This course develops students' skills to conceive, organize, lead, implement, and evaluate successful projects in any engineering discipline. Additionally, students learn how to give compelling in-person presentations.

**Prerequisites:** MA 106 [Min Grade: C](Can be taken Concurrently) and (EGR 110 [Min Grade: C] or EGR 200 [Min Grade: C](Can be taken Concurrently)

**EGR 150. Computer Methods in Engineering. 3 Hours.**

An introduction to engineering computation using MATLAB language and Excel. Basic programming skills using built-in functions is emphasized. Generation and manipulation of vectors and matrices, operations on vectors/matrices, plotting, iterations calculations. If/else and other logical constructs, and data input/output are covered. Engineering applications are used throughout the course.

**Prerequisites:** (MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**EGR 200. Introduction to Engineering. 2 Hours.**

Introduction to the profession of engineering, ethics and safety, engineering specialties, career opportunities, and educational requirements; introduction to engineering design, team work, and technical communication; and present and future societal demands on profession.

**Prerequisites:** (MA 102 [Min Grade: C] or MA 105 [Min Grade: C] (Can be taken Concurrently) or MA 106 [Min Grade: C] (Can be taken Concurrently) or MA 107 [Min Grade: C] (Can be taken Concurrently) or MA 125 [Min Grade: C] (Can be taken Concurrently) or MA 225 [Min Grade: C] (Can be taken Concurrently)

**EGR 217. EGR Design & Innovation II: EGR Design Prototyping. 3 Hours.**

Students will learn to design and prototype physical system components and devices that meet design criteria of the intended user. Students will learn how and when to use paper and other low-fidelity prototyping techniques as well as more advanced techniques such as additive manufacturing, machining, and programming.

**Prerequisites:** EGR 117 [Min Grade: C] and ME 102 [Min Grade: C]

**EGR 265. Math Tools for Engineering Problem Solving. 4 Hours.**

Designed to allow engineering majors to utilize the terminology and problem-solving approaches inherent to engineering, while completing their mathematical preparation.

**Prerequisites:** MA 126 [Min Grade: C] or MA 226 [Min Grade: C]

**EGR 301. Honors Research I. 1 Hour.**

Introduces students to research methodology, ethics, data analysis, and technical communication. Students must be invited into program in order to enroll.

**Prerequisites:** (MA 227 [Min Grade: C] or EGR 265 [Min Grade: C])

**EGR 317. Engineering Innovation III: Project Lab. 3 Hours.**

Student teams engineer devices based on client needs. The project team will collaborate with the client to establish an appropriate engineering design to meet user needs. Students are trained in product development, product design, engineering validation and will develop training and documentation market analysis, business plan and a go-to-market strategy as appropriate for the project.

**Prerequisites:** EGR 217 [Min Grade: C] and (EGR 265 [Min Grade: C] or MA 227 [Min Grade: C]) and (CE 210 [Min Grade: C] or EE 312 [Min Grade: C] or EE 314 [Min Grade: C] or MSE 280 [Min Grade: C])

**EGR 481. Interdisciplinary Project Lab. 3 Hours.**

Multidisciplinary student teams (engineering, business, arts) engineer devices based on client needs. The project team will collaborate with the client to establish an appropriate engineering design to meet user needs. Students are trained in product development, product design, engineering validation and will develop training and documentation market analysis, business plan and a go-to-market strategy as appropriate for the project.

**Prerequisites:** (ME 102 [Min Grade: C] and CE 210 [Min Grade: C] and EE 312 [Min Grade: C]) or CE 360 [Min Grade: C] or (EE 337 [Min Grade: D] and EE 351 [Min Grade: D]) or (ME 322 [Min Grade: C] and ME 371 [Min Grade: C]) or MSE 281 [Min Grade: D]

**EGR 490. Special Topics in Engineering. 1-3 Hour.**

Special Topics in Engineering.

**EGR 491. Individual Study in Engineering. 1-6 Hour.**

Individual Study in Engineering.

**EGR 494. Undergraduate Honors Research in Engineering I. 1-3 Hour.**

Research opportunities for undergraduate students in the Biomedical Engineering Honors Program. Research areas include cardiac electrophysiology, brain imaging, biomedical implants, and tissue engineering.

**Prerequisites:** EGR 301 [Min Grade: C] or STH 201 [Min Grade: C]

**EGR 495. Undergraduate Honors Research in Engineering II. 1-3 Hour.**

Research opportunities for undergraduate students in the Biomedical Engineering Honors Program. Research areas include cardiac electrophysiology, brain imaging, biomedical implants, and tissue engineering.

**Prerequisites:** EGR 494 [Min Grade: C]

**EGR 498. Capstone Design I. 3 Hours.**

Through experiential learning, students go through the early phases of engineering design innovation. Engineering students will work in multi-disciplinary teams to develop design concepts for both a client-based prototype and a commercializable version. Designs take into account client needs as well as legal, regulatory, and marketing requirements. Business ethics are also covered. Emphasis is placed on communication to targeted audiences in both oral and written formats.

**Prerequisites:** EGR 317 [Min Grade: C] and (EE 312 [Min Grade: C] or EE 314 [Min Grade: C]) and MSE 280 [Min Grade: C] and ME 215 [Min Grade: C] and CE 220 [Min Grade: C]

**EGR 499. Capstone Design II. 3 Hours.**

Capstone design project; a continuation of EGR 498. Through experiential learning, student teams complete the engineering design process for their client-based prototype incorporating engineering standards and realistic constraints. Student teams develop a business plan to present to potential business partners and product development teams from established companies. Additional skills learned in this part of the design process include: development of business proposals, project planning and scheduling, project execution and resource scheduling, communication of design, and interim and final design reviews. Emphasis is placed on communication of design and design justification in both an oral and written format to targeted audiences.

**Prerequisites:** EGR 498 [Min Grade: C]

**ME-Mechanical Engineering Courses****ME 011. Coop/Internship in ME. 0 Hours.**

Engineering workplace experience in preparation for the student's intended career.

**ME 102. Engineering Graphics. 2 Hours.**

Basic concepts in technical sketching, computer-aided drawing and design, projections, sections, and dimensioning.

**Prerequisites:** MA 105 [Min Grade: C] (Can be taken Concurrently) or MA 106 [Min Grade: C] (Can be taken Concurrently) or MA 107 [Min Grade: C] (Can be taken Concurrently) or MA 125 [Min Grade: C] (Can be taken Concurrently) or MA 225 [Min Grade: C]

**ME 103. Drawing, Design and Measurement for Industrial Distribution. 3 Hours.**

Technical sketching and reading of engineering drawings and analysis of systems involving human performance. For non-engineering majors. Not available for credit toward engineering major.

**ME 215. Dynamics. 3 Hours.**

Kinematics of particles in Cartesian, cylindrical, and polar coordinates. Simple relative motion. Second law application in rectilinear translation. Projectile motion. Energy and momentum principles for particles and for rigid bodies in plane motion. Impact and conservation of linear momentum.

**Prerequisites:** CE 210 [Min Grade: C]

**ME 215R. Dynamics Recitation. 0 Hours.**

An application-based course designed to reinforce concepts from ME 215.

**ME 241. Thermodynamics I. 3 Hours.**

Thermodynamic definitions, properties of a pure substance, ideal, and real gases, work, and heat. Fundamental laws of thermodynamics, entropy, reversible cycles, and irreversibility.

**Prerequisites:** PH 221 [Min Grade: C] and (CH 115 [Min Grade: C] or CH 125 [Min Grade: C]) and (CH 116 [Min Grade: C] or CH 126 [Min Grade: C]) and MA 126 [Min Grade: C](Can be taken Concurrently) or MA 226 [Min Grade: C](Can be taken Concurrently)

**ME 241R. Thermodynamics Recitation. 0 Hours.**

An application-based course designed to reinforce concepts from ME 241.

**ME 242. Thermodynamics II. 3 Hours.**

Application of thermodynamic principles to engineering systems; vapor power cycles; gas turbine cycles; Otto and Diesel cycles; refrigeration cycles; mixtures of ideal gases; psychrometrics.

**Prerequisites:** ME 241 [Min Grade: C] and (BME 150 [Min Grade: C] or EGR 150 [Min Grade: C]) and (MA 126 [Min Grade: C] or MA 226 [Min Grade: C])

**ME 251. Introduction to Thermal Sciences. 2 Hours.**

Introduction to thermodynamics and heat transfer for non-mechanical engineering majors.

**Prerequisites:** (MA 126 [Min Grade: C] or MA 226 [Min Grade: C]) and PH 221 [Min Grade: C]

**ME 302. Overview of Mechanical Components. 3 Hours.**

An introduction to statics, dynamics, strength of materials, and engineering design. Transformation of energy, thermodynamics, heat transfer, and fluid mechanics. For non-engineering majors. Not available for credit toward engineering major.

**ME 321. Introduction to Fluid Mechanics. 3 Hours.**

Fluid properties, fluid statics, fluid in motion (control volume method), pressure variation in flowing fluids (Bernoulli equation), principles of momentum and energy transport, dimensional analysis and similitude, internal flow and external flow.

**Prerequisites:** ME 241 [Min Grade: C] and (MA 227 [Min Grade: C] and MA 252 [Min Grade: C] or EGR 265 [Min Grade: C]) and CE 210 [Min Grade: C] and (BME 150 [Min Grade: C] or EGR 150 [Min Grade: C])

**ME 322. Introduction to Heat Transfer. 3 Hours.**

Fundamentals of heat transfer and their application to practical problems, including steady and transient heat conduction, external and internal forced convection, natural convection and radiation.

**Prerequisites:** ME 321 [Min Grade: C]

**ME 360. Introduction to Mechatronic Systems Engineering. 3 Hours.**

Control systems, feedback, and transfer function concepts. Laplace transform of mechatronic systems. Stability, steady state, and transient response. Systems modeling and analysis in time and frequency domain. Root locus and Nyquist Bode plots. Actuators, sensors, and controllers for various engineering applications. Fundamentals of mechanical and electrical/electronic component integration with controls and mechatronic system design.

**Prerequisites:** ME 215 [Min Grade: C] and ME 364 [Min Grade: C]

**ME 361. Thermo-Fluids Systems. 3 Hours.**

Pressure, temperature, fluid flow, and heat transfer instrumentation and their application to measurements of mass, heat, and momentum transport, flow characterization, heat engine and refrigeration cycles, and other thermal-fluids experiments. Experimental uncertainty analysis. Writing proficiency is required. ME 361L must be taken concurrently.

**Prerequisites:** ME 242 [Min Grade: C](Can be taken Concurrently) and ME 322 [Min Grade: C](Can be taken Concurrently)

**ME 361L. Thermo-Fluids Systems Laboratory. 0 Hours.**

Lab component for ME 361 Thermo-Fluids Systems. ME 361 must be taken concurrently.

**ME 364. Linear Algebra and Numerical Methods. 3 Hours.**

Linear equations and matrices, real vector bases, matrix decompositions, linear transformations; determinants, eigenvalues, eigenvectors; numerical methods for linear systems of equations, integration, ordinary differential equations; approximation, interpolation, least squares fits.

**Prerequisites:** (MA 227 [Min Grade: C] and MA 252 [Min Grade: C] or EGR 265 [Min Grade: C]) and (BME 150 [Min Grade: C] or EGR 150 [Min Grade: C])

**ME 370. Kinematics and Dynamics of Machinery. 3 Hours.**

Displacement, velocity and acceleration analysis, synthesis and design of linkages and mechanisms for various engineering applications on the basis of motion requirements. Static and dynamic force analysis of linkages, balancing of rotors and reciprocating machines. Significant consideration is given to designing geometry of gear sets: spur, helical, worm, and bevel gears. Analysis of planetary gear sets and drivetrains completes the course. Computer workshops support the learning process of main technical components.

**Prerequisites:** ME 102 [Min Grade: C] and ME 215 [Min Grade: C]

**ME 371. Machine Design. 3 Hours.**

Body stress, deflection and fatigue strength of machine components. Failure theories, safety factors and reliability, surface damage. Application to the design of gears, shafts, bearings, welded joints, threaded fasteners, belts and chains, keys, pins, springs, as well as mechanical design and selection of other machine components. Software applications, design projects, and exposure to hardware and systems are used to reinforce concepts.

**Prerequisites:** CE 220 [Min Grade: C] and (BME 150 [Min Grade: C] or EGR 150 [Min Grade: C]) and ME 215 [Min Grade: C]

**ME 411. Intermediate Fluid Mechanics. 3 Hours.**

Applications of fluid dynamic principles to engineering flow problems such as turbo-machinery flow and one-dimensional compressible flow. Vorticity, potential flow, viscous flow, Navier-Stokes solutions, and boundary layers.

**Prerequisites:** ME 321 [Min Grade: C] and ME 364 [Min Grade: C]

**ME 421. Introduction to Computational Fluid Dynamics Basics. 3 Hours.**

Governing equations for fluid flows, classifications of flow regimes, and approaches to analyze fluid flow problems. Introduction to Computational Fluid Dynamics (CFD), mesh generation, boundary conditions, numerical solution of equations governing fluid flows, and visualization. Hands-on exercises using a commercial CFD solver.

**Prerequisites:** ME 321 [Min Grade: C]

**ME 430. Vehicular Dynamics. 3 Hours.**

Introduction to the fundamentals of mechanics and analytical methods for modeling vehicle dynamics and performance. Topics include tire-road interaction modeling, vehicle longitudinal dynamics and traction performance, lateral dynamics, handling, stability of motion and rollover, as well as contribution of the drivetrain system, steering system and suspension configurations to the dynamics of a vehicle. Software applications, projects, and exposure to hardware and systems are used to reinforce concepts.

**Prerequisites:** ME 215 [Min Grade: C]

**ME 431. Introduction to Vehicle Drive Systems Engineering. 3 Hours.**

Engineering fundamentals of mechanical and mechatronic, hybrid-electric, and electric drive systems. Applications to passenger cars and commercial vehicles. Drive system and component design, including main clutches and torque converters, transmissions, transfer cases, and drive axles. Introduction to plug-in hybrid-electric vehicles.

**Prerequisites:** ME 215 [Min Grade: C] and ME 370 [Min Grade: C](Can be taken Concurrently)

**ME 432. Introduction to Electric and Hybrid Vehicle Engineering. 3 Hours.**

Introduction to fully electric and hybrid vehicle engineering. Mechatronic system and component design. Batteries and energy storage devices. Plug-in hybrid electric vehicles.

**Prerequisites:** ME 215 [Min Grade: C] and ME 360 [Min Grade: C](Can be taken Concurrently)

**ME 445. Combustion. 3 Hours.**

Evaluation of the impact of fuel characteristics and operating conditions on the performance of coal-fired electric utility steam-raising plant and the prospects for continued reliance on coal as fuel for electric power generation. The phenomena emphasized are the behavior of turbulent jets; ignition, devolatilization and combustion of coal particles; radiative heat transfer and the effect of ash deposits on heat transfer; formation of air pollutants and their removal from combustion products; integrated gasification combined cycle; and capture and sequestration of carbon dioxide.

**Prerequisites:** ME 242 [Min Grade: C] and ME 322 [Min Grade: C]

**ME 447. Internal Combustion Engines. 3 Hours.**

Fundamentals of reciprocating internal combustion engines: engine types, engine components, engine design and operating parameters, thermochemistry of fuel-air mixtures, properties of working fluids, ideal models of engine cycles, engine operating characteristics, gas-exchange processes, fuel metering, charge motion within the cylinder, combustion in spark-ignition and compression ignition engines.

**Prerequisites:** ME 215 [Min Grade: C] and ME 242 [Min Grade: C]

**ME 449. Power Generation. 3 Hours.**

Application of thermodynamics, fluid mechanics, and heat transfer to conversion of useful energy. Includes terrestrial and thermodynamic limitations, fossil fuel power plants, renewable energy sources, and direct energy conversion.

**Prerequisites:** ME 242 [Min Grade: C]

**ME 454. Heating, Ventilating and Air Conditioning. 3 Hours.**

Fundamentals and practice associated with heating, ventilating, and air conditioning; study of heat and moisture flow in structures, energy consumption, and design of practical systems.

**Prerequisites:** ME 242 [Min Grade: C] and ME 322 [Min Grade: C]

**ME 455. Thermal-Fluid Systems Design. 3 Hours.**

Comprehensive design problems requiring engineering decisions and code/Standard compliance. Emphasis on energy system components: piping networks, pumps, heat exchangers. Includes fluid transients and system modeling.

**Prerequisites:** ME 242 [Min Grade: C] and ME 322 [Min Grade: C]

**ME 456. Building Energy Modeling and Analysis. 3 Hours.**

Computer modeling of energy use and thermal comfort in buildings using several software tools. Interpretation and analysis of the results. Implementing energy efficiency measures in the model and studying the effects on energy use.

**Prerequisites:** ME 242 [Min Grade: C] and ME 322 [Min Grade: C]

**ME 461. Mechanical Systems. 3 Hours.**

This course concentrates on main technical principles and aspects of mechanical systems design. The course also provides fundamental knowledge on test equipment and experimental techniques for experimenting on main technical principles of mechanical design. This course discusses data acquisition systems and signal conditioning, and design of experiments. Writing proficiency is required. ME 461L must be taken concurrently.

**Prerequisites:** CE 220 [Min Grade: C] and ME 215 [Min Grade: C]

**ME 461L. Mechanical Systems Laboratory. 0 Hours.**

Lab Component of ME 461 Mechanical Systems. ME 461 must be taken concurrently.

**ME 464. Introduction to Finite Element Method. 3 Hours.**

Concepts and applications of finite element method. Development and applications of basic elements used in engineering mechanics. Use of finite element analysis software. Application of finite element concept to several areas of mechanics.

**Prerequisites:** CE 220 [Min Grade: C]

**ME 475. Mechanical Vibrations. 3 Hours.**

Development of equations of motion for free and forced single-degree-of-freedom (SDOF) systems. Multi-degree-of-freedom systems. Transient response, support motion and vibration isolation for SDOFs. Vibration absorbers, generalized mass and stiffness, orthogonality of normal modes, and root solving and Gauss elimination procedures. Cholesky decomposition and Jacobi diagonalization methods.

**Prerequisites:** (MA 227 [Min Grade: C] and MA 252 [Min Grade: C] or EGR 265 [Min Grade: C]) and ME 215 [Min Grade: C]

**ME 477. Systems Engineering. 3 Hours.**

Exposure to the field of systems engineering, mission design, requirements development, trade studies, project life cycle, system hierarchy, risk analysis, cost analysis, team organization, design fundamentals, work ethics, compare and evaluate engineering alternatives, systems thinking. Registration is restricted to junior or higher standing.

**ME 478. Automated Manufacturing. 3 Hours.**

Introduction to automated manufacturing technology. Components of automated systems (controllers, sensors and actuators) and automated manufacturing sub-systems (3D printer, CNC, robot and computer vision) will be studied in a lecture/lab environment with hands on activities.

**Prerequisites:** ME 102 [Min Grade: C] and EGR 150 [Min Grade: C]

**ME 480. Instrumentation and Measurements. 3 Hours.**

Thorough exploration of fundamental measurement concepts and techniques for data acquisition and validation. Explanation of important selection criteria for the identification and configuration of commercially available data acquisition devices. Students will get hands-on experience following best practices for data acquisition (high speed vs low speed) relevant to their field of study or career. Many types of sensors, their underlying technology, and measurement techniques will be discussed (i.e. accelerometers, load cells, Digital Image Correlation, etc.) to demonstrate best practices for sensor selection for a wide range of specialized applications. Registration is restricted to junior or higher standing.

**ME 489. Undergraduate Research in Mechanical Engineering. 1-6 Hour.**

Undergraduate research experiences in mechanical engineering.

**Prerequisites:** EGR 200 [Min Grade: C] or (EGR 110 [Min Grade: C] and EGR 111 [Min Grade: C]) or HC 111 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and PH 221 [Min Grade: C](Can be taken Concurrently)

**ME 490. Special Topics in Mechanical Engineering. 1-3 Hour.**

Special Topics in Mechanical Engineering.

**ME 491. Individual Study in Mechanical Engineering. 1-6 Hour.**

Individual Study in Mechanical Engineering.

**ME 494. Mechanical Engineering Seminar. 1 Hour.**

Required for ME undergraduate Honors Program students. Presentations by students, faculty, and guests regarding current research.

**ME 496. Honors Research. 1-6 Hour.**

Research opportunities for undergraduate students in the Mechanical Engineering Honors Program.

**Prerequisites:** EGR 301 [Min Grade: C]

**ME 498. Capstone Design Project I. 3 Hours.**

Capstone design project: interdisciplinary design teams, ethics, materials selection, design process, development of proposal, project planning and scheduling, project execution and resource scheduling, and communication of design.

**Prerequisites:** (ME 322 [Min Grade: C] and ME 360 [Min Grade: C]) or (ME 322 [Min Grade: C] and ME 370 [Min Grade: C]) or (ME 322 [Min Grade: C] and ME 371 [Min Grade: C]) or (ME 360 [Min Grade: C] and ME 370 [Min Grade: C]) or (ME 360 [Min Grade: C] and ME 371 [Min Grade: C]) or (ME 370 [Min Grade: C] and ME 371 [Min Grade: C]) and MSE 401 [Min Grade: C](Can be taken Concurrently)

**ME 499. Capstone Design Project II. 3 Hours.**

Continuation of ME 498. Capstone interim and final design reviews with written and oral reports. ME 498 must be taken the term immediately before ME 499.

**Prerequisites:** (ME 322 [Min Grade: C] or ME 360 [Min Grade: C] or ME 370 [Min Grade: C] or ME 371 [Min Grade: C]) and (ME 322 [Min Grade: C] or ME 360 [Min Grade: C] or ME 370 [Min Grade: C] or ME 371 [Min Grade: C]) and (ME 322 [Min Grade: C] or ME 360 [Min Grade: C] or ME 370 [Min Grade: C] or ME 371 [Min Grade: C]) and ME 498 [Min Grade: C]

**MSE-Material Science Egr Courses****MSE 011. Coop/Internship in MSE. 0 Hours.**

Engineering workplace experience in preparation for the student's intended career.

**MSE 280. Engineering Materials. 3 Hours.**

Fundamentals of materials engineering, including terminology, mechanical testing and behavior, heat treating, and processing of metals, ceramics, polymers, and composites. Degradation of materials and criteria for materials selection. Course requires completion of 4 credits of Area III Science.

**MSE 281. Physical Materials I. 4 Hours.**

Structure of metals, ceramics and polymers; crystal bonding; phase diagrams, diffusion, dislocations and grain boundaries. Applications to the iron-carbon system, including heat treatment. MSE 281L must be taken concurrently.

**Prerequisites:** (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and MSE 280 [Min Grade: D]

**MSE 281L. Physical Materials I Laboratory. 0 Hours.**

Laboratory component of MSE 281 and must be taken concurrently with MSE 281.

**MSE 350. Introduction to Materials. 3 Hours.**

Concepts and applications, crystal structure of materials, formation of microstructures, and selected structure-property relationships. Not available for credit toward engineering major. For non-engineering majors only.

**MSE 380. Thermodynamics of Materials. 3 Hours.**

First, second, and third laws of thermodynamics. Gibbs free energy, heat capacity, enthalpy, entropy, and relationships between thermodynamic functions. Free-energy versus composition relationships; behavior of ideal and non-ideal solutions; concept of thermodynamic activity of components in solution. Applications to materials systems.

**Prerequisites:** CH 117 [Min Grade: D] and CH 118 [Min Grade: D] and (MA 126 [Min Grade: C] or MA 226 [Min Grade: C]) and MSE 280 [Min Grade: D]

**MSE 381. Physical Materials II. 3 Hours.**

Microstructural changes in response to temperature and time; vacancies, annealing, diffusion, nucleation and growth kinetics. Equilibrium and non-equilibrium microstructures. Applications to precipitation hardening and solidification of metals.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 382. Mechanical Behavior of Materials. 3 Hours.**

Microscopic deformation mechanisms in materials leading to macroscopic properties of fatigue; creep; ductile, transitional, and brittle fracture; friction; and wear. CE 220 (Mechanics of Solids) is recommended as a prerequisite for this course.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 401. Materials Processing. 3 Hours.**

Processing of metals, ceramics, polymers, and composites. Casting, forging, rolling, welding, powder processing, 3D printing, compression molding, and other advanced methods. Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** MSE 280 [Min Grade: D] and CE 220 [Min Grade: D]

**MSE 405. Frontiers of Automotive Materials. 3 Hours.**

Advanced lightweight automotive materials, manufacturing and modeling techniques. Technology advancements in cost-effective carbon, glass and related reinforcements; "green" and sustainable materials, crashworthiness and injury protection of occupants and pedestrians, metal castings, heavy truck, mass transit, fuel cell and hybrid vehicles.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 408. Nanobiomaterials. 3 Hours.**

Basic tools of nanotechnology, building blocks of nanostructured materials. Behavior of materials with nanoscale structures and their technological applications, including automotive, medical, and electronic applications. Introduction to biomaterials and nanobiomaterials, concepts in tissue engineering with special focus on nanoscaffolds for tissue engineering, nanoparticles in drug delivery and safety and toxicity of nanomaterials.

**Prerequisites:** MSE 280 [Min Grade: D]

**MSE 409. Principles of Metal Casting. 3 Hours.**

Engineering theory and practice on the production of cast ferrous (gray iron, ductile iron, steel) and non-ferrous metals (brass, bronze, aluminum). Producer requirements/responsibilities such as part and mold design, material specifications, and testing requirements are discussed. Laboratory on common testing and production methods and analysis and handling techniques required to produce high quality castings.

**Prerequisites:** MSE 280 [Min Grade: D]

**MSE 409L. Principles of Metal Casting Laboratory. 0 Hours.**

Laboratory component of MSE 409 and must be taken concurrently with MSE 409.

**MSE 413. Composite Materials. 3 Hours.**

Processing, structure, and properties of metal-, ceramic-, and polymer-matrix composite materials. Roles of interfacial bond strength, reinforcement type and orientation, and matrix selection in physical and mechanical properties of composite materials. MSE 382 (Mechanical Behavior of Materials) is recommended as a prerequisite for this course. Writing is a significant component of this course.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 425. Statistics and Quality. 3 Hours.**

This course is arranged to reflect the sequential steps an engineer or scientist take to assess process capability and implement process improvement studies. There is a focus on connecting the theoretical equations to practical examples as well as interpreting and communicating of statistical results.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 430. Polymeric Materials. 3 Hours.**

Processing methods, structure/engineering/property relationships, and applications of polymeric materials.

**Prerequisites:** MSE 281 [Min Grade: D] and (CH 117 [Min Grade: D] or CH 127 [Min Grade: D]) and (CH 118 [Min Grade: D] or CH 128 [Min Grade: D])

**MSE 430L. Polymeric Materials Laboratory. 0 Hours.**

Laboratory component of MSE 430 and must be taken concurrently with MSE 430.

**MSE 433. Nondestructive Evaluation of Materials. 3 Hours.**

This course reviews the principles, history, applications, and strengths/weaknesses of the five primary NDE techniques (RT, UT, EC, MP, and LP) with an emphasis on the fundamentals and techniques of each testing method. Importance of NDE on part performance and engineering design is also discussed.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 445. The Evolution of Engineering Materials. 3 Hours.**

Past, present and future of engineering materials; how new materials and processing methods have impacted human society, from the Stone Age until today. Taught as a 3-week study abroad course in Germany, with visits to universities, industrial facilities, research labs, museums and selected cultural sites.

**Prerequisites:** MSE 280 [Min Grade: D]

**MSE 462. Composites Manufacturing. 3 Hours.**

Principles of manufacturing and processing of polymeric matrix composites. Production techniques including filament winding, pultrusion, and liquid infusion techniques combined with design, environmental and manufacturing issues of polymer matrix composites.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 464. Metals and Alloys. 4 Hours.**

Microstructures, properties, heat treatment, and processing of ferrous and nonferrous materials.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 464L. Metals and Alloys Laboratory. 0 Hours.**

Laboratory component of MSE 464 and must be taken concurrently with MSE 464.

**MSE 465. Characterization of Materials. 4 Hours.**

Theory and practice of materials characterization, with emphasis on optical metallography, quantitative metallography, scanning electron microscopy, crystallography, and x-ray diffraction. Specific applications in metals and ceramics considered. MSE 465L must be taken concurrently.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 465L. Characterization of Materials Laboratory. 0 Hours.**

Laboratory component of MSE 465 and must be taken with MSE 465.

**MSE 470. Ceramic Materials. 4 Hours.**

Structure, processing, properties, and uses of ceramic compounds and glasses. Mechanical, thermal, and electrical behavior of ceramic materials in terms of microstructure and processing variables.

**Prerequisites:** MSE 281 [Min Grade: D] and CH 117 [Min Grade: D] and CH 118 [Min Grade: D]

**MSE 470L. Ceramic Materials Laboratory. 0 Hours.**

Laboratory component of MSE 470 and must be taken concurrently with MSE 470.

**MSE 474. Metals and Alloys II. 3 Hours.**

Production and physical metallurgy of ferrous and non-ferrous alloys including: steel alloys, inoculation and production of ductile, gray, compacted and malleable iron; advanced heat treatments of steel and iron; conventional and ultra-high strength aluminum alloys; wrought and cast copper alloys; wrought and cast magnesium alloys.

**Prerequisites:** MSE 281 [Min Grade: D] and MSE 464 [Min Grade: D]

**MSE 489. Undergraduate Research in MSE. 0 Hours.**

Undergraduate research experiences in materials science and/or engineering.

**Prerequisites:** (EGR 110 [Min Grade: C] and EGR 111 [Min Grade: C]) or EGR 200 [Min Grade: C] or HC 111 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and PH 221 [Min Grade: C](Can be taken Concurrently)

**MSE 490. Special Topics in Materials Engineering. 1-6 Hour.**

Special Topics in Materials Engineering.

**MSE 491. Individual Study in Materials Engineering. 1-6 Hour.**

Individual Study in Materials Engineering.

**MSE 496. MSE Honors Seminar. 1 Hour.**

Research presentations by faculty, students, and invited guests on topics related to Materials Science and Engineering.

**MSE 497. MSE Honors Research. 2-6 Hours.**

Honor students develop materials engineering research skills by working closely with faculty and graduate students.

**Prerequisites:** EGR 301 [Min Grade: C](Can be taken Concurrently)

**MSE 498. Capstone Design Project I. 3 Hours.**

Capstone design project: interdisciplinary design teams, ethics, materials selection, design process, development of proposal, project planning and scheduling, project execution and resource scheduling, and communication of design. Writing is a significant component of this course.

**Prerequisites:** MSE 401 [Min Grade: D](Can be taken Concurrently) and (MSE 413 [Min Grade: D] or MSE 430 [Min Grade: D] or MSE 465 [Min Grade: D] or MSE 470 [Min Grade: D])

**MSE 499. Capstone Design Project II. 3 Hours.**

Continuation of MSE 498 which must be taken in the previous term. Interim and final design reviews with written and oral reports. Writing is a significant component of this course.

**Prerequisites:** MSE 498 [Min Grade: D]

## Department of Materials Science and Engineering

**Interim Chair:** Lee Moradi, PhD

Degree Offered	Bachelor of Science in Materials Engineering
Accreditation	The Bachelor of Science in Materials Engineering degree program is accredited by the Engineering Accreditation Commission of ABET, <a href="http://www.abet.org">http://www.abet.org</a> .
Website	<a href="https://www.uab.edu/engineering/mse/undergraduate">https://www.uab.edu/engineering/mse/undergraduate</a>
Program Director	Haibin Ning, PhD
Email	<a href="mailto:ning@uab.edu">ning@uab.edu</a>
Phone	205-934-8450

Materials engineering utilizes the interrelationships among structure, properties, and processing to achieve performance in the application of metals, ceramics, polymers, and composites to meet the needs of society. Students learn how to select the optimum material, design new materials and processes, and predict behavior under various environmental and service conditions. Materials Engineers are employed in every major industry, including aerospace, chemical, automotive, metals casting, biomedical, and microelectronics.

Students take a core of fundamental engineering coursework and a sequence of materials engineering courses in addition to courses in mathematics; calculus-based physics; chemistry; humanities and fine arts; and history, social, and behavioral sciences. The required materials engineering courses address ceramics, polymers, composite materials, and metals. Materials engineering elective courses are also offered to introduce students to leading-edge materials engineering topics. Students can specialize in Biomaterials by proper selection of their electives (see Concentration in Biomaterials). The curriculum prepares graduates to enter industry, pursue graduate studies, or enter a professional school, such as medicine or dentistry. The department has active research programs in metal casting, biomaterials, ceramic materials, and composite materials. The department also offers courses of study leading to the Master of Science in Materials Engineering and Doctor of Philosophy degrees in both Materials Engineering and Materials

Science. These programs are described in the UAB Graduate School Catalog.

**Please refer to the School of Engineering overview for policies regarding admission; change of major; transfer credit; transient status; dual degree programs; reasonable progress; academic warning, probation, and suspension; reinstatement appeals; and graduation requirements.**

## Vision

To be an internationally recognized research-oriented department – a first choice for undergraduate and graduate education.

## Mission

To excel in research for the benefit of society while educating students at all levels to be immediately productive.

## Program Educational Objectives

Our Materials Engineering undergraduate program will produce functioning professionals who:

- Advance in materials engineering or related professional positions
- Continue to develop intellectually and professionally

## Student Outcomes

Upon completion of the BSMtE degree program, our graduates will have:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

## Bachelor of Science in Materials Science Engineering

Requirements	Hours
<b>Core Curriculum as Specified for Engineering Majors</b>	<b>36</b>
Area I: Written Composition (6 hrs)	
Area II: Humanities and Fine Arts (9 hrs)	
Area III: Natural Sciences and Mathematics (12 hrs)	
MA 125      Calculus I	

PH 221 & 221L & 221R	General Physics I and General Physics Laboratory I and General Physics I Recitation
PH 222 & 222L & 222R	General Physics II and General Physics Laboratory II and General Physics II - Recitation
Area IV: History, Social, and Behavioral Sciences (9 hrs)	
<b>Other Required Courses</b>	
CE 210	Statics
CE 220	Mechanics of Solids
CH 115 & 115R & CH 116	General Chemistry I and General Chemistry I Recitation and General Chemistry I Laboratory
CH 117 & 117R & CH 118	General Chemistry II and General Chemistry II Recitation and General Chemistry II Laboratory
EE 312	Electrical Systems
EGR 110 & EGR 111 or EGR 200	Introduction to Engineering I and Introduction to Engineering II Introduction to Engineering
EGR 150	Computer Methods in Engineering
EGR 265	Math Tools for Engineering Problem Solving <sup>1</sup>
MA 126	Calculus II
ME 102	Engineering Graphics
ME 251	Introduction to Thermal Sciences
MSE 280	Engineering Materials
MSE 281 & 281L	Physical Materials I and Physical Materials I Laboratory
MSE 380	Thermodynamics of Materials
MSE 381	Physical Materials II
MSE 382	Mechanical Behavior of Materials
MSE 401	Materials Processing
MSE 413	Composite Materials
MSE 425	Statistics and Quality
MSE 430 & 430L	Polymeric Materials and Polymeric Materials Laboratory
MSE 464 & 464L	Metals and Alloys and Metals and Alloys Laboratory
MSE 465 & 465L	Characterization of Materials and Characterization of Materials Laboratory
MSE 470 & 470L	Ceramic Materials and Ceramic Materials Laboratory
MSE 498	Capstone Design Project I
MSE 499	Capstone Design Project II
<b>Materials Engineering Elective <sup>1</sup></b>	
MSE 405	Frontiers of Automotive Materials
MSE 408	Nanobiomaterials
MSE 409 & 409L	Principles of Metal Casting and Principles of Metal Casting Laboratory
MSE 433	Nondestructive Evaluation of Materials
MSE 462	Composites Manufacturing
MSE 474	Metals and Alloys II
<b>Mathematics/Science Elective</b>	
Any Biology (BY) courses numbered BY 108 or above	
Any Chemistry (CH) courses numbered CH 200 or above	
MA 260	Introduction to Linear Algebra
MA 360	Scientific Programming
MA 361	Mathematical Modeling
Any Mathematics (MA) courses numbered MA 434 or above	

Any Physics (PH) courses numbered PH 223 or above

### Engineering/Mathematics/Science Electives <sup>2</sup> 6

CS 103 Introduction to Computer Science in Python

CS 203 Object-Oriented Programming

Any course listed in the Mathematics/Science Electives section

Any engineering course not required in the major except CE 344, EE 300, EE 305, EE 314, EGR 301, ME 241, ME 302, MSE 350, or any capstone/senior project course, or any honors research hours from another program.

Total Hours 128

<sup>1</sup> Students may also take [MA 227](#) and [MA 252](#) instead of [EGR 265](#) and approved Math/Science elective.

<sup>2</sup> Completion of Departmental Honors Program satisfies three credits of either a Materials Engineering Elective or an Engineering/Mathematics/Science Elective.

## Residency Requirement

In addition to UAB's residency requirement, to earn a bachelor of science in materials engineering from UAB, the program requires that students complete the following courses at UAB:

Requirements	Hours
Three courses from the following:	9
MSE 401 Materials Processing	
MSE 413 Composite Materials	
MSE 430 Polymeric Materials	
MSE 464 Metals and Alloys	
MSE 465 Characterization of Materials	
MSE 470 Ceramic Materials	
MSE 498 Capstone Design Project I	3
MSE 499 Capstone Design Project II	3
Total Hours	15

## Concentration in Biomaterials

Students seeking the degree of BSMtE may add a concentration in Biomaterials by appropriate selection of their MSE Elective and Science/Mathematics/Engineering Electives (9 credit hours total).

Requirements	Hours
<a href="#">BME 311</a> Biomaterials for Non-Majors	3
Elective Courses	
Select two from the following:	6
<a href="#">BME 420</a> Implant-Tissue Interactions	
<a href="#">BME 435</a> Tissue Engineering	
<a href="#">MSE 408</a> Nanobiomaterials	
Total Hours	9

## Concentration in Metallurgy

Students seeking the degree of BSMtE may add a concentration in Metallurgy by appropriate selection of their MSE Elective and Science/Mathematics/Engineering Electives (9 credit hours total).

Requirements	Hours
Elective Courses	
Select three from the following:	9
<a href="#">MSE 405</a> Frontiers of Automotive Materials	
<a href="#">MSE 409</a> Principles of Metal Casting	

<u>MSE 433</u>	Nondestructive Evaluation of Materials	
<u>MSE 474</u>	Metals and Alloys II	
Total Hours		9

## Concentration in Polymer Matrix Composites

Students seeking the degree of BSMtE may add a concentration of Polymer Matrix Composites by appropriate selection of their MSE Elective and Science/Mathematics/Engineering Electives (10 credit hours total). CH 235/CH 236 may be used as the Science/Mathematics Elective instead of one of the Science/Mathematics/Engineering Electives.

Requirements		Hours
<u>CH 235</u>	Organic Chemistry I	3
<u>CH 236</u>	Organic Chemistry I Laboratory	1
<b>Elective Courses</b>		
Select two from the following:		6
<u>MSE 405</u>	Frontiers of Automotive Materials	
<u>MSE 408</u>	Nanobiomaterials	
<u>MSE 433</u>	Nondestructive Evaluation of Materials	
<u>MSE 462</u>	Composites Manufacturing	
Total Hours		10

## Curriculum for the Bachelor of Science in Materials Engineering (BSMtE)

### Freshman

First Term	Hours	Second Term	Hours
CH 115 & 115R & CH 116 EGR 110 <sup>1</sup> MA 125		4 EGR 111 <sup>1</sup>  1 EH 102 4 CH 117 & 117R & CH 118	1  3 4
ME 102		2 PH 221 & 221L & 221R	4
EH 101		3 MA 126	4
		14	16

### Sophomore

First Term	Hours	Second Term	Hours
CE 210 EGR 265 <sup>2</sup> MSE 280 PH 222 & 222L & 222R Core Curriculum Area II or IV <sup>3</sup>		3 CE 220 4 EE 312 3 ME 251 4 MSE 281 & 281L 3 EGR 150 Core Curriculum Area II or IV <sup>3</sup>	3 3 2 4  3 3
		17	18

### Junior

First Term	Hours	Second Term	Hours
MSE 380 MSE 381  MSE 401		3 MSE 382 3 MSE 464 & 464L 3 MSE 470 & 470L	3 4  4

MSE 425	3 Science/Mathematics Elective <sup>4</sup>	3
MSE 465 & 465L	4 Core Curriculum Area II or IV <sup>3</sup>	3
		16
		17

### Senior

First Term	Hours	Second Term	Hours
MSE 413		3 MSE 430 & 430L	3
MSE 498		3 MSE 499	3
Engineering/Math/Science Elective <sup>4</sup>		3 Materials Engineering Elective <sup>4</sup>	3
Core Curriculum Area II or IV <sup>3</sup>		6 Engineering/Math/Science Elective <sup>4</sup> Core Curriculum Area II or IV <sup>3</sup>	3 3
		15	15

Total credit hours: 128

- Transfer students may substitute EGR 200 for EGR 110 and EGR 111.
- Students may also take MA 227 and MA 252 for EGR 265 and either the MA/SCI or one EGR/MA/SCI elective.
- Please refer to the Core Curriculum as specified for Engineering majors.
- Completion of Departmental Honors Program satisfies three credits of either a Materials Engineering Elective or an Engineering/Mathematics/Science Elective.

## Courses

### MSE 011. Coop/Internship in MSE. 0 Hours.

Engineering workplace experience in preparation for the student's intended career.

### MSE 280. Engineering Materials. 3 Hours.

Fundamentals of materials engineering, including terminology, mechanical testing and behavior, heat treating, and processing of metals, ceramics, polymers, and composites. Degradation of materials and criteria for materials selection. Course requires completion of 4 credits of Area III Science.

### MSE 281. Physical Materials I. 4 Hours.

Structure of metals, ceramics and polymers; crystal bonding; phase diagrams, diffusion, dislocations and grain boundaries. Applications to the iron-carbon system, including heat treatment. MSE 281L must be taken concurrently.

**Prerequisites:** (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and MSE 280 [Min Grade: D]

### MSE 281L. Physical Materials I Laboratory. 0 Hours.

Laboratory component of MSE 281 and must be taken concurrently with MSE 281.

### MSE 350. Introduction to Materials. 3 Hours.

Concepts and applications, crystal structure of materials, formation of microstructures, and selected structure-property relationships. Not available for credit toward engineering major. For non-engineering majors only.

**MSE 380. Thermodynamics of Materials. 3 Hours.**

First, second, and third laws of thermodynamics. Gibbs free energy, heat capacity, enthalpy, entropy, and relationships between thermodynamic functions. Free-energy versus composition relationships; behavior of ideal and non-ideal solutions; concept of thermodynamic activity of components in solution. Applications to materials systems.

**Prerequisites:** CH 117 [Min Grade: D] and CH 118 [Min Grade: D] and (MA 126 [Min Grade: C] or MA 226 [Min Grade: C]) and MSE 280 [Min Grade: D]

**MSE 381. Physical Materials II. 3 Hours.**

Microstructural changes in response to temperature and time; vacancies, annealing, diffusion, nucleation and growth kinetics. Equilibrium and non-equilibrium microstructures. Applications to precipitation hardening and solidification of metals.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 382. Mechanical Behavior of Materials. 3 Hours.**

Microscopic deformation mechanisms in materials leading to macroscopic properties of fatigue; creep; ductile, transitional, and brittle fracture; friction; and wear. CE 220 (Mechanics of Solids) is recommended as a prerequisite for this course.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 401. Materials Processing. 3 Hours.**

Processing of metals, ceramics, polymers, and composites. Casting, forging, rolling, welding, powder processing, 3D printing, compression molding, and other advanced methods. Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** MSE 280 [Min Grade: D] and CE 220 [Min Grade: D]

**MSE 405. Frontiers of Automotive Materials. 3 Hours.**

Advanced lightweight automotive materials, manufacturing and modeling techniques. Technology advancements in cost-effective carbon, glass and related reinforcements; "green" and sustainable materials, crashworthiness and injury protection of occupants and pedestrians, metal castings, heavy truck, mass transit, fuel cell and hybrid vehicles.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 408. Nanobiomaterials. 3 Hours.**

Basic tools of nanotechnology, building blocks of nanostructured materials. Behavior of materials with nanoscale structures and their technological applications, including automotive, medical, and electronic applications. Introduction to biomaterials and nanobiomaterials, concepts in tissue engineering with special focus on nanoscaffolds for tissue engineering, nanoparticles in drug delivery and safety and toxicity of nanomaterials.

**Prerequisites:** MSE 280 [Min Grade: D]

**MSE 409. Principles of Metal Casting. 3 Hours.**

Engineering theory and practice on the production of cast ferrous (gray iron, ductile iron, steel) and non-ferrous metals (brass, bronze, aluminum). Producer requirements/responsibilities such as part and mold design, material specifications, and testing requirements are discussed. Laboratory on common testing and production methods and analysis and handling techniques required to produce high quality castings.

**Prerequisites:** MSE 280 [Min Grade: D]

**MSE 409L. Principles of Metal Casting Laboratory. 0 Hours.**

Laboratory component of MSE 409 and must be taken concurrently with MSE 409.

**MSE 413. Composite Materials. 3 Hours.**

Processing, structure, and properties of metal-, ceramic-, and polymer-matrix composite materials. Roles of interfacial bond strength, reinforcement type and orientation, and matrix selection in physical and mechanical properties of composite materials. MSE 382 (Mechanical Behavior of Materials) is recommended as a prerequisite for this course. Writing is a significant component of this course.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 425. Statistics and Quality. 3 Hours.**

This course is arranged to reflect the sequential steps an engineer or scientist take to assess process capability and implement process improvement studies. There is a focus on connecting the theoretical equations to practical examples as well as interpreting and communicating of statistical results.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 430. Polymeric Materials. 3 Hours.**

Processing methods, structure/engineering/property relationships, and applications of polymeric materials.

**Prerequisites:** MSE 281 [Min Grade: D] and (CH 117 [Min Grade: D] or CH 127 [Min Grade: D]) and (CH 118 [Min Grade: D] or CH 128 [Min Grade: D])

**MSE 430L. Polymeric Materials Laboratory. 0 Hours.**

Laboratory component of MSE 430 and must be taken concurrently with MSE 430.

**MSE 433. Nondestructive Evaluation of Materials. 3 Hours.**

This course reviews the principles, history, applications, and strengths/weaknesses of the five primary NDE techniques (RT, UT, EC, MP, and LP) with an emphasis on the fundamentals and techniques of each testing method. Importance of NDE on part performance and engineering design is also discussed.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 445. The Evolution of Engineering Materials. 3 Hours.**

Past, present and future of engineering materials; how new materials and processing methods have impacted human society, from the Stone Age until today. Taught as a 3-week study abroad course in Germany, with visits to universities, industrial facilities, research labs, museums and selected cultural sites.

**Prerequisites:** MSE 280 [Min Grade: D]

**MSE 462. Composites Manufacturing. 3 Hours.**

Principles of manufacturing and processing of polymeric matrix composites. Production techniques including filament winding, pultrusion, and liquid infusion techniques combined with design, environmental and manufacturing issues of polymer matrix composites.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 464. Metals and Alloys. 4 Hours.**

Microstructures, properties, heat treatment, and processing of ferrous and nonferrous materials.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 464L. Metals and Alloys Laboratory. 0 Hours.**

Laboratory component of MSE 464 and must be taken concurrently with MSE 464.

**MSE 465. Characterization of Materials. 4 Hours.**

Theory and practice of materials characterization, with emphasis on optical metallography, quantitative metallography, scanning electron microscopy, crystallography, and x-ray diffraction. Specific applications in metals and ceramics considered. MSE 465L must be taken concurrently.

**Prerequisites:** MSE 281 [Min Grade: D]

**MSE 465L. Characterization of Materials Laboratory. 0 Hours.**

Laboratory component of MSE 465 and must be taken with MSE 465.

**MSE 470. Ceramic Materials. 4 Hours.**

Structure, processing, properties, and uses of ceramic compounds and glasses. Mechanical, thermal, and electrical behavior of ceramic materials in terms of microstructure and processing variables.

**Prerequisites:** MSE 281 [Min Grade: D] and CH 117 [Min Grade: D] and CH 118 [Min Grade: D]

**MSE 470L. Ceramic Materials Laboratory. 0 Hours.**

Laboratory component of MSE 470 and must be taken concurrently with MSE 470.

**MSE 474. Metals and Alloys II. 3 Hours.**

Production and physical metallurgy of ferrous and non-ferrous alloys including: steel alloys, inoculation and production of ductile, gray, compacted and malleable iron; advanced heat treatments of steel and iron; conventional and ultra-high strength aluminum alloys; wrought and cast copper alloys; wrought and cast magnesium alloys.

**Prerequisites:** MSE 281 [Min Grade: D] and MSE 464 [Min Grade: D]

**MSE 489. Undergraduate Research in MSE. 0 Hours.**

Undergraduate research experiences in materials science and/or engineering.

**Prerequisites:** (EGR 110 [Min Grade: C] and EGR 111 [Min Grade: C]) or EGR 200 [Min Grade: C] or HC 111 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and PH 221 [Min Grade: C] (Can be taken Concurrently)

**MSE 490. Special Topics in Materials Engineering. 1-6 Hour.**

Special Topics in Materials Engineering.

**MSE 491. Individual Study in Materials Engineering. 1-6 Hour.**

Individual Study in Materials Engineering.

**MSE 496. MSE Honors Seminar. 1 Hour.**

Research presentations by faculty, students, and invited guests on topics related to Materials Science and Engineering.

**MSE 497. MSE Honors Research. 2-6 Hours.**

Honor students develop materials engineering research skills by working closely with faculty and graduate students.

**Prerequisites:** EGR 301 [Min Grade: C] (Can be taken Concurrently)

**MSE 498. Capstone Design Project I. 3 Hours.**

Capstone design project: interdisciplinary design teams, ethics, materials selection, design process, development of proposal, project planning and scheduling, project execution and resource scheduling, and communication of design. Writing is a significant component of this course.

**Prerequisites:** MSE 401 [Min Grade: D] (Can be taken Concurrently) and (MSE 413 [Min Grade: D] or MSE 430 [Min Grade: D] or MSE 465 [Min Grade: D] or MSE 470 [Min Grade: D])

**MSE 499. Capstone Design Project II. 3 Hours.**

Continuation of MSE 498 which must be taken in the previous term. Interim and final design reviews with written and oral reports. Writing is a significant component of this course.

**Prerequisites:** MSE 498 [Min Grade: D]

## Department of Mechanical Engineering

**Chair:** David L. Littlefield

Degree Offered	Bachelor of Science in Mechanical Engineering
Accreditation	The Bachelor of Science in Mechanical Engineering program is accredited by the Engineering Accreditation Commission of ABET, <a href="http://www.abet.org">http://www.abet.org</a> .
Website	<a href="https://www.uab.edu/engineering/me/undergraduate">https://www.uab.edu/engineering/me/undergraduate</a>
Program Director	Pasquale Cinnella, PhD
Email	<a href="mailto:pc1@uab.edu">pc1@uab.edu</a>
Phone	205-934-8460

Mechanical engineering is a broad-based discipline that embraces the two major areas of mechanical systems and thermal systems. With an understanding of the phenomena associated with these topics, mechanical engineers conceive and design a wide variety of devices, machines, and systems to meet the needs and desires of a modern economy. Mechanical engineers also engage in applied research, product development, and project management. Mechanical engineers have a primary role in addressing the problems related to manufacturing, productivity, and safety in the workplace; supply and efficient utilization of energy; transportation; and human rehabilitation.

The mechanical engineering curriculum includes a core of fundamental engineering coursework and advanced courses in thermodynamics, fluid mechanics, heat transfer, mechanics of machinery, and mechanical design. In addition, the program includes courses in mathematics; calculus-based physics; chemistry; humanities and fine arts; and history, social, and behavioral sciences. Laboratory experiences are provided in each area to illustrate the application of theory in engineering practice. With additional coursework, the mechanical engineering program can also be utilized as a pre-health curriculum.

**Please refer to the School of Engineering overview for policies regarding admission; change of major; transfer credit; transient status; dual degree programs; reasonable progress; academic warning, probation, and suspension; reinstatement appeals; and graduation requirements.**

## Vision

To be a nationally and internationally recognized research-oriented mechanical engineering department – a first choice for undergraduate and graduate education.

## Mission

To prepare students to be immediately productive and able to adapt to and lead in a rapidly changing environment and to create and apply knowledge for the benefit of society.

## Program Educational Objectives

The Educational Objectives of the Mechanical Engineering undergraduate program are the following:

- Graduates will meet or exceed the expectations of their employers in mechanical engineering or any other career path they choose;
- Graduates will pursue continuing education opportunities in their chosen field through a variety of means, such as professional development training and advanced education;

- Graduates will pursue leadership positions in their selected profession and/or communities.

## Student Outcomes

Upon completion of the BSME degree program, our graduates will have:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

## Bachelor of Science in Mechanical Engineering

A C or better is required in any course that is a prerequisite or co-requisite to another course in the ME curriculum.

Requirements		Hours
<b>Core Curriculum as Specified for Engineering Majors</b>		<b>36</b>
Area I: Written Composition (6 hrs)		
Area II: Humanities and Fine Arts (9 hrs)		
Area III: Natural Sciences and Mathematics (12 hrs)		
MA 125	Calculus I	
PH 221 & 221L & 221R	General Physics I and General Physics Laboratory I and General Physics I Recitation	
PH 222 & 222L & 222R	General Physics II and General Physics Laboratory II and General Physics II - Recitation	
Area IV: History, Social, and Behavioral Sciences (9 hrs)		
<b>Other Required Courses</b>		<b>80</b>
CE 210	Statics	
CE 220	Mechanics of Solids	
CE 221	Mechanics of Solids Laboratory	
CE 395	Engineering Economics	
CH 115 & 115R & CH 116	General Chemistry I and General Chemistry I Recitation and General Chemistry I Laboratory	
CH 117 & 117R	General Chemistry II and General Chemistry II Recitation	
EE 312	Electrical Systems	
EGR 110 & EGR 111	Introduction to Engineering I and Introduction to Engineering II	
or EGR 200	Introduction to Engineering	

EGR 150	Computer Methods in Engineering
EGR 265	Math Tools for Engineering Problem Solving <sup>1</sup>
MA 126	Calculus II
ME 102	Engineering Graphics
ME 215 & 215R	Dynamics and Dynamics Recitation
ME 241 & 241R	Thermodynamics I and Thermodynamics Recitation
ME 242	Thermodynamics II
ME 321	Introduction to Fluid Mechanics
ME 322	Introduction to Heat Transfer
ME 360	Introduction to Mechatronic Systems Engineering
ME 361 & 361L	Thermo-Fluids Systems and Thermo-Fluids Systems Laboratory
ME 364	Linear Algebra and Numerical Methods
ME 370	Kinematics and Dynamics of Machinery
ME 371	Machine Design
ME 461 & 461L	Mechanical Systems and Mechanical Systems Laboratory
ME 498	Capstone Design Project I
ME 499	Capstone Design Project II
MSE 280	Engineering Materials
MSE 401	Materials Processing

### Math/Science Elective

3

BY 101	Topics in Contemporary Biology
BY 108	Human Population and the Earth's Environment
BY 123 & 123L	Introductory Biology I and Introductory Biology I Laboratory
CH 235 & 235R	Organic Chemistry I and Organic Chemistry I Recitation
ES 101	Physical Geology
MA 180	Introduction to Statistics
MA 360	Scientific Programming
MA 361	Mathematical Modeling
MA 444	Vector Analysis
MA 445	Complex Analysis
MA 453	Fourier Analysis
PH 351 & 351L	Modern Physics I and Modern Physics I Laboratory

### Mechanical Engineering Electives

9

Three Mechanical Engineering (ME) electives: one with computer-aided engineering content, one thermal fluids elective, and one mechanical systems elective.

#### Computer Aided Engineering Courses

ME 421	Introduction to Computational Fluid Dynamics Basics
ME 456	Building Energy Modeling and Analysis
ME 464	Introduction to Finite Element Method

#### Thermal Fluids Courses

ME 411	Intermediate Fluid Mechanics
ME 421	Introduction to Computational Fluid Dynamics Basics
ME 445	Combustion
ME 447	Internal Combustion Engines
ME 449	Power Generation
ME 454	Heating, Ventilating and Air Conditioning
ME 455	Thermal-Fluid Systems Design
ME 456	Building Energy Modeling and Analysis

#### Mechanical Systems Courses

ME 430	Vehicular Dynamics
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ME 431	Introduction to Vehicle Drive Systems Engineering	
ME 432	Introduction to Electric and Hybrid Vehicle Engineering	
ME 464	Introduction to Finite Element Method	
ME 475	Mechanical Vibrations	
ME 477	Systems Engineering	
ME 478	Automated Manufacturing	
ME 480	Instrumentation and Measurements	
Total Hours		128

<sup>1</sup> Students may also replace EGR 265 and a math/science elective with MA 227 and MA 252.

## Residency Requirement

In addition to UAB's residency requirement, to earn a bachelor of science in mechanical engineering from UAB, the program requires that students complete the following courses at UAB:

Requirements		Hours
Any two of the following:		6
ME 322	Introduction to Heat Transfer	
ME 360	Introduction to Mechatronic Systems Engineering	
ME 370	Kinematics and Dynamics of Machinery	
ME 371	Machine Design	
ME 498	Capstone Design Project I	3
ME 499	Capstone Design Project II	3
Total Hours		12

Please refer to the **School of Engineering overview for policies regarding admission; change of major; transfer credit; transient status; dual degree programs; reasonable progress; academic warning, probation, and suspension; reinstatement appeals; and graduation requirements.**

## Curriculum for the Bachelor of Science in Mechanical Engineering(BSME)

Freshman			
First Term	Hours	Second Term	Hours
EGR 110 <sup>1</sup>		1 EGR 150	3
EH 101		3 EGR 111 <sup>1</sup>	1
MA 125		4 EH 102	3
CH 115 & 115R & CH 116		4 MA 126	4
ME 102		2 PH 221 & 221L & 221R	4
		Core Curriculum Area II or IV <sup>2</sup>	3
		14	18
Sophomore			
First Term	Hours	Second Term	Hours
CE 210		3 ME 215 & 215R	3
EGR 265 <sup>3</sup>		4 CE 220	3
ME 241 & 241R		3 CE 221	1
PH 222 & 222L & 222R		4 ME 242	3

CH 117 & 117R	3 Math/Science Elective <sup>4</sup>	3
	Core Curriculum Area II or IV <sup>2</sup>	3
		17
		16

### Junior

First Term	Hours	Second Term	Hours
ME 321		3 ME 322	3
ME 364		3 ME 360	3
ME 370		3 ME 361 & 361L	3
MSE 280		3 ME 371	3
Core Curriculum Area II or IV <sup>2</sup>		3 EE 312	3
		15	15

### Senior

First Term	Hours	Second Term	Hours
MSE 401		3 ME 499	3
ME 461 & 461L		3 CE 395	3
ME 498		3 Thermal Fluids Elective <sup>6</sup>	3
Mechanical Systems Elective <sup>5</sup>		3 Computer-Aided Engineering Elective <sup>7</sup>	3
Core Curriculum Area II or IV <sup>2</sup>		3 Core Curriculum Area II or IV <sup>2</sup>	3
Core Curriculum Area II or IV <sup>2</sup>		3	
		18	15

Total credit hours: 128

- <sup>1</sup> Transfer students may substitute EGR 200 for EGR 110 and EGR 111.
- <sup>2</sup> Please refer to the Core Curriculum as specified for Engineering majors.
- <sup>3</sup> Students may also take both MA 227 and MA 252 instead of both EGR 265 and the Math/Science elective.
- <sup>4</sup> Students may choose from the following: BY 101, BY 108, BY 123, CH 235, ES 101, MA 180, MA 360, MA 361, MA 444, MA 445, MA 453, PH 351
- <sup>5</sup> Mechanical systems electives include: ME 430, ME 431, ME 432, ME 464, ME 475, ME 477, ME 478, and ME 480
- <sup>6</sup> Thermal fluids electives include: ME 411, ME 421, ME 445, ME 447, ME 449, ME 454, ME 455, and ME 456
- <sup>7</sup> Electives with computer-aided engineering content include: ME 421, ME 456, and ME 464

## Courses

### ME 011. Coop/Internship in ME. 0 Hours.

Engineering workplace experience in preparation for the student's intended career.

### ME 102. Engineering Graphics. 2 Hours.

Basic concepts in technical sketching, computer-aided drawing and design, projections, sections, and dimensioning.

**Prerequisites:** MA 105 [Min Grade: C](Can be taken Concurrently) or MA 106 [Min Grade: C](Can be taken Concurrently) or MA 107 [Min Grade: C](Can be taken Concurrently) or MA 125 [Min Grade: C](Can be taken Concurrently) or MA 225 [Min Grade: C]

**ME 103. Drawing, Design and Measurement for Industrial Distribution. 3 Hours.**

Technical sketching and reading of engineering drawings and analysis of systems involving human performance. For non-engineering majors. Not available for credit toward engineering major.

**ME 215. Dynamics. 3 Hours.**

Kinematics of particles in Cartesian, cylindrical, and polar coordinates. Simple relative motion. Second law application in rectilinear translation. Projectile motion. Energy and momentum principles for particles and for rigid bodies in plane motion. Impact and conservation of linear momentum.

**Prerequisites:** CE 210 [Min Grade: C]

**ME 215R. Dynamics Recitation. 0 Hours.**

An application-based course designed to reinforce concepts from ME 215.

**ME 241. Thermodynamics I. 3 Hours.**

Thermodynamic definitions, properties of a pure substance, ideal, and real gases, work, and heat. Fundamental laws of thermodynamics, entropy, reversible cycles, and irreversibility.

**Prerequisites:** PH 221 [Min Grade: C] and (CH 115 [Min Grade: C] or CH 125 [Min Grade: C]) and (CH 116 [Min Grade: C] or CH 126 [Min Grade: C]) and MA 126 [Min Grade: C](Can be taken Concurrently) or MA 226 [Min Grade: C](Can be taken Concurrently)

**ME 241R. Thermodynamics Recitation. 0 Hours.**

An application-based course designed to reinforce concepts from ME 241.

**ME 242. Thermodynamics II. 3 Hours.**

Application of thermodynamic principles to engineering systems; vapor power cycles; gas turbine cycles; Otto and Diesel cycles; refrigeration cycles; mixtures of ideal gases; psychrometrics.

**Prerequisites:** ME 241 [Min Grade: C] and (BME 150 [Min Grade: C] or EGR 150 [Min Grade: C]) and (MA 126 [Min Grade: C] or MA 226 [Min Grade: C])

**ME 251. Introduction to Thermal Sciences. 2 Hours.**

Introduction to thermodynamics and heat transfer for non-mechanical engineering majors.

**Prerequisites:** (MA 126 [Min Grade: C] or MA 226 [Min Grade: C]) and PH 221 [Min Grade: C]

**ME 302. Overview of Mechanical Components. 3 Hours.**

An introduction to statics, dynamics, strength of materials, and engineering design. Transformation of energy, thermodynamics, heat transfer, and fluid mechanics. For non-engineering majors. Not available for credit toward engineering major.

**ME 321. Introduction to Fluid Mechanics. 3 Hours.**

Fluid properties, fluid statics, fluid in motion (control volume method), pressure variation in flowing fluids (Bernoulli equation), principles of momentum and energy transport, dimensional analysis and similitude, internal flow and external flow.

**Prerequisites:** ME 241 [Min Grade: C] and (MA 227 [Min Grade: C] and MA 252 [Min Grade: C] or EGR 265 [Min Grade: C]) and CE 210 [Min Grade: C] and (BME 150 [Min Grade: C] or EGR 150 [Min Grade: C])

**ME 322. Introduction to Heat Transfer. 3 Hours.**

Fundamentals of heat transfer and their application to practical problems, including steady and transient heat conduction, external and internal forced convection, natural convection and radiation.

**Prerequisites:** ME 321 [Min Grade: C]

**ME 360. Introduction to Mechatronic Systems Engineering. 3 Hours.**

Control systems, feedback, and transfer function concepts. Laplace transform of mechatronic systems. Stability, steady state, and transient response. Systems modeling and analysis in time and frequency domain. Root locus and Nyquist Bode plots. Actuators, sensors, and controllers for various engineering applications. Fundamentals of mechanical and electrical/electronic component integration with controls and mechatronic system design.

**Prerequisites:** ME 215 [Min Grade: C] and ME 364 [Min Grade: C]

**ME 361. Thermo-Fluids Systems. 3 Hours.**

Pressure, temperature, fluid flow, and heat transfer instrumentation and their application to measurements of mass, heat, and momentum transport, flow characterization, heat engine and refrigeration cycles, and other thermal-fluids experiments. Experimental uncertainty analysis. Writing proficiency is required. ME 361L must be taken concurrently.

**Prerequisites:** ME 242 [Min Grade: C](Can be taken Concurrently) and ME 322 [Min Grade: C](Can be taken Concurrently)

**ME 361L. Thermo-Fluids Systems Laboratory. 0 Hours.**

Lab component for ME 361 Thermo-Fluids Systems. ME 361 must be taken concurrently.

**ME 364. Linear Algebra and Numerical Methods. 3 Hours.**

Linear equations and matrices, real vector bases, matrix decompositions, linear transformations; determinants, eigenvalues, eigenvectors; numerical methods for linear systems of equations, integration, ordinary differential equations; approximation, interpolation, least squares fits.

**Prerequisites:** (MA 227 [Min Grade: C] and MA 252 [Min Grade: C] or EGR 265 [Min Grade: C]) and (BME 150 [Min Grade: C] or EGR 150 [Min Grade: C])

**ME 370. Kinematics and Dynamics of Machinery. 3 Hours.**

Displacement, velocity and acceleration analysis, synthesis and design of linkages and mechanisms for various engineering applications on the basis of motion requirements. Static and dynamic force analysis of linkages, balancing of rotors and reciprocating machines. Significant consideration is given to designing geometry of gear sets: spur, helical, worm, and bevel gears. Analysis of planetary gear sets and drivetrains completes the course. Computer workshops support the learning process of main technical components.

**Prerequisites:** ME 102 [Min Grade: C] and ME 215 [Min Grade: C]

**ME 371. Machine Design. 3 Hours.**

Body stress, deflection and fatigue strength of machine components. Failure theories, safety factors and reliability, surface damage. Application to the design of gears, shafts, bearings, welded joints, threaded fasteners, belts and chains, keys, pins, springs, as well as mechanical design and selection of other machine components. Software applications, design projects, and exposure to hardware and systems are used to reinforce concepts.

**Prerequisites:** CE 220 [Min Grade: C] and (BME 150 [Min Grade: C] or EGR 150 [Min Grade: C]) and ME 215 [Min Grade: C]

**ME 411. Intermediate Fluid Mechanics. 3 Hours.**

Applications of fluid dynamic principles to engineering flow problems such as turbo-machinery flow and one-dimensional compressible flow. Vorticity, potential flow, viscous flow, Navier-Stokes solutions, and boundary layers.

**Prerequisites:** ME 321 [Min Grade: C] and ME 364 [Min Grade: C]

**ME 421. Introduction to Computational Fluid Dynamics Basics. 3 Hours.**

Governing equations for fluid flows, classifications of flow regimes, and approaches to analyze fluid flow problems. Introduction to Computational Fluid Dynamics (CFD), mesh generation, boundary conditions, numerical solution of equations governing fluid flows, and visualization. Hands-on exercises using a commercial CFD solver.

**Prerequisites:** ME 321 [Min Grade: C]

**ME 430. Vehicular Dynamics. 3 Hours.**

Introduction to the fundamentals of mechanics and analytical methods for modeling vehicle dynamics and performance. Topics include tire-road interaction modeling, vehicle longitudinal dynamics and traction performance, lateral dynamics, handling, stability of motion and rollover, as well as contribution of the drivetrain system, steering system and suspension configurations to the dynamics of a vehicle. Software applications, projects, and exposure to hardware and systems are used to reinforce concepts.

**Prerequisites:** ME 215 [Min Grade: C]

**ME 431. Introduction to Vehicle Drive Systems Engineering. 3 Hours.**

Engineering fundamentals of mechanical and mechatronic, hybrid-electric, and electric drive systems. Applications to passenger cars and commercial vehicles. Drive system and component design, including main clutches and torque converters, transmissions, transfer cases, and drive axles. Introduction to plug-in hybrid-electric vehicles.

**Prerequisites:** ME 215 [Min Grade: C] and ME 370 [Min Grade: C](Can be taken Concurrently)

**ME 432. Introduction to Electric and Hybrid Vehicle Engineering. 3 Hours.**

Introduction to fully electric and hybrid vehicle engineering. Mechatronic system and component design. Batteries and energy storage devices. Plug-in hybrid electric vehicles.

**Prerequisites:** ME 215 [Min Grade: C] and ME 360 [Min Grade: C](Can be taken Concurrently)

**ME 445. Combustion. 3 Hours.**

Evaluation of the impact of fuel characteristics and operating conditions on the performance of coal-fired electric utility steam-raising plant and the prospects for continued reliance on coal as fuel for electric power generation. The phenomena emphasized are the behavior of turbulent jets; ignition, devolatilization and combustion of coal particles; radiative heat transfer and the effect of ash deposits on heat transfer; formation of air pollutants and their removal from combustion products; integrated gasification combined cycle; and capture and sequestration of carbon dioxide.

**Prerequisites:** ME 242 [Min Grade: C] and ME 322 [Min Grade: C]

**ME 447. Internal Combustion Engines. 3 Hours.**

Fundamentals of reciprocating internal combustion engines: engine types, engine components, engine design and operating parameters, thermochemistry of fuel-air mixtures, properties of working fluids, ideal models of engine cycles, engine operating characteristics, gas-exchange processes, fuel metering, charge motion within the cylinder, combustion in spark-ignition and compression ignition engines.

**Prerequisites:** ME 215 [Min Grade: C] and ME 242 [Min Grade: C]

**ME 449. Power Generation. 3 Hours.**

Application of thermodynamics, fluid mechanics, and heat transfer to conversion of useful energy. Includes terrestrial and thermodynamic limitations, fossil fuel power plants, renewable energy sources, and direct energy conversion.

**Prerequisites:** ME 242 [Min Grade: C]

**ME 454. Heating, Ventilating and Air Conditioning. 3 Hours.**

Fundamentals and practice associated with heating, ventilating, and air conditioning; study of heat and moisture flow in structures, energy consumption, and design of practical systems.

**Prerequisites:** ME 242 [Min Grade: C] and ME 322 [Min Grade: C]

**ME 455. Thermal-Fluid Systems Design. 3 Hours.**

Comprehensive design problems requiring engineering decisions and code/Standard compliance. Emphasis on energy system components: piping networks, pumps, heat exchangers. Includes fluid transients and system modeling.

**Prerequisites:** ME 242 [Min Grade: C] and ME 322 [Min Grade: C]

**ME 456. Building Energy Modeling and Analysis. 3 Hours.**

Computer modeling of energy use and thermal comfort in buildings using several software tools. Interpretation and analysis of the results. Implementing energy efficiency measures in the model and studying the effects on energy use.

**Prerequisites:** ME 242 [Min Grade: C] and ME 322 [Min Grade: C]

**ME 461. Mechanical Systems. 3 Hours.**

This course concentrates on main technical principles and aspects of mechanical systems design. The course also provides fundamental knowledge on test equipment and experimental techniques for experimenting on main technical principles of mechanical design. This course discusses data acquisition systems and signal conditioning, and design of experiments. Writing proficiency is required. ME 461L must be taken concurrently.

**Prerequisites:** CE 220 [Min Grade: C] and ME 215 [Min Grade: C]

**ME 461L. Mechanical Systems Laboratory. 0 Hours.**

Lab Component of ME 461 Mechanical Systems. ME 461 must be taken concurrently.

**ME 464. Introduction to Finite Element Method. 3 Hours.**

Concepts and applications of finite element method. Development and applications of basic elements used in engineering mechanics. Use of finite element analysis software. Application of finite element concept to several areas of mechanics.

**Prerequisites:** CE 220 [Min Grade: C]

**ME 475. Mechanical Vibrations. 3 Hours.**

Development of equations of motion for free and forced single-degree-of-freedom (SDOF) systems. Multi-degree-of-freedom systems. Transient response, support motion and vibration isolation for SDOFs. Vibration absorbers, generalized mass and stiffness, orthogonality of normal modes, and root solving and Gauss elimination procedures. Cholesky decomposition and Jacobi diagonalization methods.

**Prerequisites:** (MA 227 [Min Grade: C] and MA 252 [Min Grade: C] or EGR 265 [Min Grade: C]) and ME 215 [Min Grade: C]

**ME 477. Systems Engineering. 3 Hours.**

Exposure to the field of systems engineering, mission design, requirements development, trade studies, project life cycle, system hierarchy, risk analysis, cost analysis, team organization, design fundamentals, work ethics, compare and evaluate engineering alternatives, systems thinking. Registration is restricted to junior or higher standing.

**ME 478. Automated Manufacturing. 3 Hours.**

Introduction to automated manufacturing technology. Components of automated systems (controllers, sensors and actuators) and automated manufacturing sub-systems (3D printer, CNC, robot and computer vision) will be studied in a lecture/lab environment with hands on activities.

**Prerequisites:** ME 102 [Min Grade: C] and EGR 150 [Min Grade: C]

**ME 480. Instrumentation and Measurements. 3 Hours.**

Thorough exploration of fundamental measurement concepts and techniques for data acquisition and validation. Explanation of important selection criteria for the identification and configuration of commercially available data acquisition devices. Students will get hands-on experience following best practices for data acquisition (high speed vs low speed) relevant to their field of study or career. Many types of sensors, their underlying technology, and measurement techniques will be discussed (i.e. accelerometers, load cells, Digital Image Correlation, etc.) to demonstrate best practices for sensor selection for a wide range of specialized applications. Registration is restricted to junior or higher standing.

**ME 489. Undergraduate Research in Mechanical Engineering. 1-6 Hour.**

Undergraduate research experiences in mechanical engineering.

**Prerequisites:** EGR 200 [Min Grade: C] or (EGR 110 [Min Grade: C] and EGR 111 [Min Grade: C]) or HC 111 [Min Grade: C] and (MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and PH 221 [Min Grade: C](Can be taken Concurrently)

**ME 490. Special Topics in Mechanical Engineering. 1-3 Hour.**

Special Topics in Mechanical Engineering.

**ME 491. Individual Study in Mechanical Engineering. 1-6 Hour.**

Individual Study in Mechanical Engineering.

**ME 494. Mechanical Engineering Seminar. 1 Hour.**

Required for ME undergraduate Honors Program students. Presentations by students, faculty, and guests regarding current research.

**ME 496. Honors Research. 1-6 Hour.**

Research opportunities for undergraduate students in the Mechanical Engineering Honors Program.

**Prerequisites:** EGR 301 [Min Grade: C]

**ME 498. Capstone Design Project I. 3 Hours.**

Capstone design project: interdisciplinary design teams, ethics, materials selection, design process, development of proposal, project planning and scheduling, project execution and resource scheduling, and communication of design.

**Prerequisites:** (ME 322 [Min Grade: C] and ME 360 [Min Grade: C]) or (ME 322 [Min Grade: C] and ME 370 [Min Grade: C]) or (ME 322 [Min Grade: C] and ME 371 [Min Grade: C]) or (ME 360 [Min Grade: C] and ME 370 [Min Grade: C]) or (ME 360 [Min Grade: C] and ME 371 [Min Grade: C]) or (ME 370 [Min Grade: C] and ME 371 [Min Grade: C]) and MSE 401 [Min Grade: C](Can be taken Concurrently)

**ME 499. Capstone Design Project II. 3 Hours.**

Continuation of ME 498. Capstone interim and final design reviews with written and oral reports. ME 498 must be taken the term immediately before ME 499.

**Prerequisites:** (ME 322 [Min Grade: C] or ME 360 [Min Grade: C] or ME 370 [Min Grade: C] or ME 371 [Min Grade: C]) and (ME 322 [Min Grade: C] or ME 360 [Min Grade: C] or ME 370 [Min Grade: C] or ME 371 [Min Grade: C]) and (ME 322 [Min Grade: C] or ME 360 [Min Grade: C] or ME 370 [Min Grade: C] or ME 371 [Min Grade: C]) and ME 498 [Min Grade: C]

# School of Health Professions

**Dean:** Andrew J. Butler, PhD

**Senior Associate Dean for Academic & Faculty Affairs:** Donna J. Slovensky, PhD

The School of Health Professions delivers educational programs to prepare health personnel who will improve the services in health care and the systems through which these services are provided. In keeping with the mission of the University of Alabama at Birmingham, the resources and programs of the school are dedicated to excellence in teaching, research, and scholarly activity and to service to the institution, the community, and the professions represented by programs of the school.

Degree options in the School of Health Professions include undergraduate, master's, and doctoral programs sponsored by five academic departments – Clinical and Diagnostic Sciences, Health Services Administration, Nutrition Sciences, Occupational Therapy, and Physical Therapy. In addition, minors, certificates, and post-doctoral fellowships are available in some specialized areas. The School sponsors more than 25 degree and certificate options, all of which require students to apply for and be accepted to the specific degree or certificate program.

The School of Health Professions is committed to the practice of ethical standards of conduct. School policies, procedures, and regulations reflect this commitment and are in compliance with those of the University of Alabama at Birmingham. To ensure continued practice of ethical standards, the administration and the standing committees of the school (Faculty Affairs, Academic Affairs, Student Affairs, and Diversity, Equity and Inclusion) regularly review school policies and procedures. All research endeavors are in compliance with policies of the UAB Institutional Review Board.

## SHP Admissions

Entrance requirements for the individual educational programs of SHP vary. Persons desiring admission to a particular program should consult the appropriate section of the University Catalogs for specific entrance requirements, application process, and program information. Students who attend an institution other than UAB are encouraged to seek academic advisement from the intended program as early as possible to plan for completion of program prerequisites.

Application for admission to UAB to complete program entrance or pre-professional requirements at UAB may be made to the Office of Undergraduate Admissions (<http://www.uab.edu/students/undergraduate-admissions>). Admission to UAB does not guarantee admission to the professional phase of any SHP program.

The School of Health Professions welcomes applications from all individuals who are prepared for the programs offered. All applicants must offer acceptable evidence of ability and intent to meet the academic standards specified by the particular program into which admission is desired. In addition, certain immunizations are required prior to enrollment; see UAB Student Health and Insurance Programs and UAB Immunization Policy. Accepted students are subject to background check and drug screen requirements. Applicants are considered regardless of race, color, religion, gender, sexual orientation, national origin, disability unrelated to program performance, disabled veteran status, or Vietnam era veteran status (see UAB Equal Opportunity Policy).

Persons who have not yet decided upon a specific health career may obtain information about our programs from the SHP Office of Student

Services and Advising, School of Health Professions Building, Room 230, 1716 9th Avenue South; Telephone: (205) 934-4195.

## SHP Mission, Vision, Values

The mission of the School of Health Professions is “*To improve health care through teaching, research, and translation of discoveries into practice in partnership with the UAB community.*” The School vision is, “*To be recognized as the leading school of health professions – shaping the future of healthcare.*” Fulfilling the mission requires faculty and staff to embrace the following organizational values:

- Accountability
- Collaboration/Cooperation
- Diversity
- Excellence
- Innovation/Creativity
- Integrity/Ethical behavior
- Open communication
- Professional behavior

## SHP First Year Experience

All freshmen admitted to the university are required to complete a first year experience (FYE) course. The FYE sponsored by SHP, HRP 101 Experience the University Transition, is designed to ease the transition between high school and university experiences and to prepare students for success in health professions majors. The course is delivered in a blended seminar / online format. Students interact with faculty, advisers, and other students to learn academic skills and personal lifestyle management tactics to make their freshman experience positive and academically rewarding. Social interaction and engagement in the UAB community are key goals as well.

## Core Curriculum

All SHP majors are required to comply with the UAB core curriculum for a baccalaureate degree. However, most professional curricula in the school include specific prerequisite coursework that should be considered in making choices about options within the core curriculum. Students are strongly encouraged to make early contact with academic advisers in the School of Health Professions to plan their course schedules to meet the dual requirements of the core curriculum and the requirements of their chosen major. The courses identified in Area V of the core curriculum (Elective and Pre-professional Credits) differ by major, and are subject to change as programs respond to changes in workforce requirements. Students should work closely with their academic advisers to plan their programs of study during the freshman and sophomore years.

## School-Wide Core / Capstone

The School of Health Professions does not specify a common core for all programs. Students must comply with the UAB core curriculum and the degree requirements for their chosen major. All SHP programs include capstone experiences, either a supervised practicum, a didactic course, or a combination of both.

## University Requirements

In order to receive a degree at UAB, a student must have a minimum 120 semester hours of acceptable credit.

## Interdisciplinary Majors / Minors

Interdisciplinary majors are not offered by the School of Health Professions. Students may elect to pursue any minor available at UAB in addition to their major, but minor study is not required. Several minor options are available in the School of Health Professions.

### Research Technician Certificate.

Undergraduate students who wish to explore an individual research experience may apply for the Research Technician Certificate. The certificate program is designed to provide didactic and experiential coursework to build knowledge and skills appropriate to entry level work in research laboratories or in support of non-laboratory research. Students are expected to develop the following behaviors and skills through their experiences and courses:

- Understanding and application of responsible conduct of research
- Critical thinking and analytical skills
- Project management skills
- Experience in data logging and in communicating research results
- Experience in the application and performance of a variety of laboratory techniques
- Experience in the application of statistical methods for data analysis

Students will complete a total of 21 credits, including six hours of mentored research spread over at least two semesters, and a blend of required and elective courses selected from their degree major's course of study. Students who complete this program will receive a Research Technician Certificate from the School of Health Professions, which will be reflected on their academic transcript.

For information about application to this certificate or any undergraduate research activity, or to make an appointment to discuss required courses and project work, please contact Dr. Samantha Giordano-Mooga by email at [sgjordan@uab.edu](mailto:sgjordan@uab.edu). Additional information is available on the SHP website at: <http://www.uab.edu/shp/urh>.

## Minor in Biomedical Sciences

All courses (including prerequisites) must be completed with a grade of C or better and students must maintain a 2.5 overall GPA.

Requirements		Hours
<b>Required Courses</b>		
CH 115	General Chemistry I	3
CH 116	General Chemistry I Laboratory	1
CH 117	General Chemistry II	3
CH 118	General Chemistry II Laboratory	1
BY 123	Introductory Biology I	4
BY 123L	Introductory Biology I Laboratory	0
BY 124	Introductory Biology II	4
BY 124L	Introductory Biology II Laboratory	0
BMD 315	Clinical Physiology and Pharmacology for Health Professions I	4
BMD 317	Clinical Physiology and Pharmacology for Health Professions II	4
<b>Choose 3-4 Semester Hours of BMD/CDS Elective Courses</b>		<b>6</b>
BMD 310	Clinical Anatomy and Histology	4
BMD 320	Survey of Cell Biology for Health Professions	3
BMD 330	Clinical Microbiology for Health Professions	3
BMD 410	Clinical Biochemistry for Health Professions	3

BMD 420	Pathophysiology for Health Professions	4
BMD 430	Clinical Immunology for Health Professions	3
BMD 331	Microbiology Lab for Health Professionals	1
Total Minors Hours: 27-28		

## Minor in Clinical Coding and Reimbursement

The Clinical Coding and Reimbursement minor requires completion of 24 semester hours of course work. Students must contact the Health Care Management program office for admission to the minor, and must have a 2.5 GPA to qualify. All courses must be completed with a grade of C or better. **NOTE: Admission to this minor is currently suspended; contact [hcminfo@uab.edu](mailto:hcminfo@uab.edu) for information.**

Requirements		Hours
HIM 318	Survey of Human Anatomy and Physiology for Coding	3
HCM 325	Healthcare Law and Ethics	3
HCM 350	Medical Terminology for Health Professionals	3
HIM 417	Pathology for Coders	3
HIM 418	Documentation Standards for Health Data	3
HCM 425	Healthcare Reimbursement Methods	3
HIM 441	Diagnostic Coding for Health Care Organizations	3
HIM 460	Coding/Classification Systems	3
Total Hours		24

## Minor in Health Care Management

The minor in Health Care Management requires completion of 21 semester hours of course work. Students must apply to the Health Care Management program for admission to the minor, and must have a 2.5 GPA to qualify. All courses must be completed with a grade of C or better.

Requirements		Hours
HCM 330	Health Care Systems	3
HCM 401	Organizational Studies in Health Care	4
HCM 403	Operations Management in Health Care Organizations	4
HCM 405	Human Resource Management in Health Care Organizations	4
HCM 407	Strategic Management in Health Care Organizations	3
HCM 480	Health Care Policy and Reform	3
Total Hours		21

## Minor in Health Information Management

The Health Information Management minor requires completion of 18 semester hours of course work. Students must contact the Health Care Management program office for admission to the minor, and must have a 2.5 GPA to qualify. All courses must be completed with a grade of C or better.

Requirements		Hours
HCM 325	Healthcare Law and Ethics	3
HCM 330	Health Care Systems	3
HCM 425	Healthcare Reimbursement Methods	3
HCM 435	Clinical and Administrative Information Systems	3
HIM 418	Documentation Standards for Health Data	3
HIM 475	Electronic Health Records	3
Total Hours		18

## Minor in Nutrition Sciences

The Department of Nutrition Sciences offers a minor option for undergraduate students matriculating in programs in the School of Health Professions. Interested students from other schools may be admitted upon approval from the NTR minor program director. The Nutrition Sciences minor requires completion of 18 semester hours of course work, maintenance of a 2.5 GPA overall, and no grade lower than a C in minor courses.

Requirements		Hours
NTR 222	Nutrition and Health	3
NTR 232	Lifecycle Nutrition	3
NTR 330	Nutrition and Metabolism	3
Choose 9 Hours of Elective Coursework From the List Below		9
NTR 320	Nutrition and the Consumer	
NTR 420	Nutritional Genetics	
NTR 421	Nutrition Assessment and the Nutrition Care Process	
NTR 500	Communications in Nutrition	
KIN 405	Sports Nutrition	
ANTH 319	Food and Culture	
HRP 415	Mentored Research in the Health Professions	
Approved Research Experience Course		
Total Hours		18

## School of Health Professions Undergraduate Research and Honors Programs

The School of Health Professions Undergraduate Research and Honors Programs provide experiential opportunities for undergraduate students to develop project leadership and research skills in a team environment to prepare for careers in health care or for graduate study in the health professions. All students' projects are presented publicly in an appropriate professional forum.

**SHP Honors Program.** A cohort of students is accepted into the SHP Honors Program each year. Admission criteria include a 3.25 GPA, an application process, and starting the 3rd year of the major. Honors students participate in four semester credits of interdisciplinary seminars and a minimum of six semester credits in honors projects under the direction of a faculty and community mentor. Projects may involve community research or service learning activities, and are completed by teams of students. Students who successfully complete all program requirements graduate with School Honors.

**SHP Undergraduate Research Opportunities.** Students who wish to pursue a mentored research experience outside of, or in addition to, the Honors Program are paired with a faculty mentor to complete a research activity consistent with their goals and abilities that will contribute meaningfully to their mentor's research.

**Individual Mentored Research.** Students who wish to complete individual projects must be registered for the appropriate HRP course while working with their mentor. Project hours completed will be documented on the student's academic transcript. The number of credit hours allocated to the project is negotiated among the student, the mentor, and the Honors Program Director. Interested students should contact the Director of the Honors Program to determine the registration requirements.

**Undergraduate Team Research Certificate.** Students may participate in a 3-semester team based research experience that pairs student teams

with research mentors, to address research issues. Students participate in a two-credit research/team work/project development course, and then complete a minimum of six semester hours of research in a team. Teams of students who complete this experience will receive a certificate from the School for their professional portfolios.

**Research Technician Certificate.** Students who wish to expand their individual research experience may apply to the Research Technician Certificate Program. Students must participate in six hours of mentored research spread over at least two semesters, as well as complete a blend of required and elective courses selected from their degree major's course of study. Students who complete this track will receive a Research Technician Certificate, which will be reflected on their transcript.

For information about application to any honors or research activity, or to make an appointment to discuss required courses and project work, please contact Dr. Samantha Giordano-Mooga by email at [sgjordan@uab.edu](mailto:sgjordan@uab.edu). Additional information is available on the SHP website at: <http://www.uab.edu/shp/urh>.

## Courses

### HRP 101. Experience the University Transition. 2 Hours.

Structured introduction to the college experience for entering freshmen with health professions majors.

### HRP 200. Responsible Conduct of Research Training. 1 Hour.

Provides required RCR training for undergraduates conducting any form of research at UAB.

### HRP 300. Survey of Health Professions. 2 Hours.

A survey of undergraduate and graduate health professions that provide patient care and other services in the health care delivery system. Designed to assist undergraduate students in career investigation.

### HRP 401. Honors Seminar I. 1 Hour.

Introduction to leadership and team principles.

### HRP 402. Honors Seminar II. 1 Hour.

Advanced leadership and team principles. Skills development in information critiquing, report writing, and presentation techniques.

### HRP 405. Team-Based Problem Solving in the Health Professions. 2 Hours.

Blend of didactic, online, and mentored team work; development of effective team skills, including assessment, conflict management, and project development and management; information searching and critiquing, literature review, and technical writing. May be taken for Honors credit.

### HRP 410. Honors Research Project. 1-3 Hour.

Development and completion of a scholarly project for presentation and publication under the direction of a faculty mentor. Two to four terms required for a minimum accumulation of 4 semester hours.

### HRP 411. Honors Community Service Project. 1-3 Hour.

Development and completion of a community-based team project for presentation and publication under the direction of a faculty mentor.

### HRP 414. Volunteer Research Experience. 0 Hours.

Short-term supervised research experience focused on a specific learning objective. Approval of faculty mentor and course director is required.

### HRP 415. Mentored Research in the Health Professions. 1-6 Hour.

Field, laboratory, literary study, service learning or community based research project directed by a supervising mentor.

**HRP 475. Special Topics in Health Services or Clinical Research. 1-4 Hour.**

Faculty-led exploration of current topics and issues in health services or clinical research.

**HRP 490. Capstone Experience in the Health Professions. 1-4 Hour.**

Capstone experience to demonstrate health professions curriculum integration.

## Clinical and Diagnostic Sciences

The Department of Clinical and Diagnostic Sciences sponsors the B.S. degree and minor in Biomedical Sciences in addition to graduate degree and certificate programs in several clinical specialty areas. Elective coursework is available to students in the School of Health Professions and to students in other UAB degree programs.

### Courses

**CDS 300. Microbiology for the Health Professions. 3 Hours.**

A course in which the basic, and some advanced, concepts of microbiology are presented as they relate to health sciences and medicine. The course consists of nine units, each of which contains multiple lessons. The units cover the scope of microbiology, a survey of microorganisms, the study of microorganisms, microbial physiology, the control of microbial growth, microbial genetics, immunity, microbial pathogenesis, and microbial processes.

**CDS 405. Survival Spanish for Health Professionals. 1 Hour.**

Health care professionals will be introduced to basic vocabulary, useful questions and expressions in Spanish needed to communicate in practical health care situations. Students will participate in speaking exercises, dialogue, and role-play activities (field-specific scenarios).

## Biomedical Sciences

**Program Director:** Fred 'Ted' Bertrand, PhD

The B.S. in Biomedical Sciences program curriculum is designed to prepare students for entry into the biomedical science workforce or for graduate and professional study in the health professions. Many of the prerequisites for admission to identified graduate programs can be incorporated into the student's program of study. This allows students to create a tailored undergraduate educational experience to prepare for further study in an area of choice such as physician assistant studies, medicine, dentistry, optometry, physical therapy, biotechnology, clinical laboratory science, genetic counseling, and many more.

### Admission Requirements

Admission options are based on the student's previous academic work and personal interests. Students intending to enroll in the B.S. in Biomedical Sciences program must meet all UAB undergraduate admission and academic requirements. The following additional requirements also apply and must be met prior to acceptance into the Biomedical Sciences program.

### Program Admission from High School

Must be a graduate of an accredited high school with a grade point average of a 2.75 or higher on a 4.0 scale for admission.

Must have earned an ACT Composite Score of 22 (or SAT equivalent) or higher.

Must place in College English 101 or higher.

Must meet all UAB undergraduate admission and academic requirements.

If accepted, complete the UAB Student Health and Wellness Immunization Form and provide proof of medical coverage. A background check and drug screening will be required prior to any practicum or lab placement.

### Program Admission from Community College or University, including UAB, and Degree-Seeking Post-Baccalaureate

Must meet all UAB undergraduate admission and academic requirements.

If accepted, complete the UAB Student Health and Wellness Immunization Form and provide proof of medical coverage.

Must place in College English 101 or higher.

Must have earned an ACT Composite Score of 22 (or SAT equivalent) or higher.

Must have earned an ACT math sub score of 22 (or SAT equivalent)..

Must hold a 2.75 or higher Overall GPA on a 4.0 scale for admission to the Biomedical Sciences Program.

A background check and drug screening will be required prior to any practicum or lab placement.

### Other Biomedical Sciences Program Requirements

Grades of C or better are required for any Biomedical Sciences curriculum requirements.

A minimum of 2.75 Overall GPA and 2.00 UAB institutional GPA must be maintained to remain enrolled in the B.S. in Biomedical Sciences program.

### Application Procedure

Applicants are accepted at any time, and students may be enrolled during any term. Applicants should submit the following materials:

#### To the UAB Undergraduate Admissions Office:

- Completed UAB undergraduate application form, including SHP as the school, and application fee, if applicable (if enrolled at UAB in another major, complete a Change of School/Major Request using the online form available on [BlazerNET](#)).
- Official transcripts from each college or university attended

### Recommended Courses Core Curriculum

Students, in consultation with their academic advisor, should sequence coursework to meet any stated prerequisite requirements for specific courses in their curriculum, including UAB Core Curriculum requirements stated in this catalog.

Although the courses listed below are recommendations, **students are required to earn a satisfactory grade in MA 106 or MA 125 for the major.**

Area II (non-Literature option): CMST 101

Area III Mathematics: MA 106 or MA 125

Area IV non-History: PY 101 or PY 212

### Contact for additional information:

B.S. in Biomedical Sciences Program (BMD) Program  
School of Health Professions Building

University of Alabama at Birmingham  
 1716 9th Avenue South  
 Telephone: (205) 996-4721  
 Email: [bmd@uab.edu](mailto:bmd@uab.edu) ([askCDS@uab.edu](mailto:askCDS@uab.edu))  
 Web address: <http://www.uab.edu/shp/cds/biomedical-sciences>

The Biomedical Sciences (BMD) program partners with several graduate programs to provide students with enhanced opportunities to prepare for graduate professional education.

## B.S. in Biomedical Sciences to M.S. Degree in Clinical Laboratory Science Fast Track

Qualified BMD juniors must have an overall GPA of 3.0 and a prerequisite GPA of 3.25, a GRE of 305, and must have a demonstrated interest in Clinical Laboratory Science. In consultation with the CLS Admissions Coordinator and BMD advisor, BMD students admitted to the Clinical Laboratory Science Fast Track will take selected graduate level courses to meet BMD degree or elective requirements. For more information, contact the Program Director for Clinical Laboratory Sciences or the BMD adviser.

## B.S. in Biomedical Sciences to M.S. Degree in Biotechnology Fast Track

Qualified BMD juniors (at least 60 hours of course work) must have an overall GPA of 3.00 and demonstrated interest in BT. In consultation with the BT Admissions Coordinator and the BMD advisor, BMD students who are admitted to the Biotechnology Fast Track will take selected BT courses to fulfill BMD degree or elective requirements. For more information, contact the Program Director for Biotechnology or the BMD adviser.

## Early Acceptance Program with PharmD Degree at the Lake Erie College of Osteopathic Medicine

This opportunity is available for BMD majors prior to their third year of study, who are interested in obtaining a doctorate in Pharmacy after graduation. Students who qualify for admission into both the BMD program and the LECOM EAP program, and maintain qualifying EAP LECOM credentials until completion of the BMD program will be admitted into LECOM PharmD program. More information can be found here: <http://lecom.edu/admissions/entrance-requirements/early-acceptance-programs> or by contacting the BMD program director at [BMD@uab.edu](mailto:BMD@uab.edu).

## Bachelor of Science with a Major in Biomedical Sciences

Requirements	Hours
<b>First Year Experience</b>	
HRP 101 Experience the University Transition <sup>1</sup>	2
<b>Chemistry Requirements</b>	
CH 115 General Chemistry I	3
or CH 125 General Chemistry I HONORS	
CH 116 General Chemistry I Laboratory	1
or CH 126 General Chemistry I HONORS Laboratory	
CH 117 General Chemistry II	3
or CH 127 General Chemistry II HONORS	
CH 118 General Chemistry II Laboratory	1

or CH 128	General Chemistry II HONORS Laboratory	
CH 235	Organic Chemistry I	3
or CH 245	Organic Chemistry I Honors	
CH 235R	Organic Chemistry I Recitation	0
CH 236	Organic Chemistry I Laboratory	1
or CH 246	Organic Chemistry I Laboratory (Honors)	
CH 237	Organic Chemistry II	3
or CH 247	Organic Chemistry II Honors	
CH 237R	Organic Chemistry II Recitation	0
CH 238	Organic Chemistry II Laboratory	1
or CH 248	Organic Chemistry II Laboratory (Honors)	

### Nutrition Requirement

NTR 222	Nutrition and Health	3
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### CDS Requirement

BMD 440	Human Genetics for Health Professions	3
or BY 210	Genetics	

### Statistics Requirement 3-4

MA 180	Introduction to Statistics	
QM 214	Quantitative Analysis I	3
PUH 250	Biostatistics	3
HCM 360	Statistics for Managers	3
PY 216 & 216L	Elementary Statistical Methods and Elementary Statistical Methods Laboratory	

### Biomedical Science Requirements

BMD 150	Introduction to the Biomedical Sciences	1
BMD 201	Contemporary Issues in Biomedical Sciences	2
BMD 202	Survey of the Biomedical Sciences Literature	1
BMD 310	Clinical Anatomy and Histology	4
BMD 315	Clinical Physiology and Pharmacology for Health Professions I	4
BMD 317	Clinical Physiology and Pharmacology for Health Professions II	4
BMD 320	Survey of Cell Biology for Health Professions	3
BMD 330	Clinical Microbiology for Health Professions	3
BMD 380	Research Methods and Scientific Literacy for the Biomedical Sciences	3
BMD 410	Clinical Biochemistry for Health Professions	3
BMD 420	Pathophysiology for Health Professions	4
BMD 430	Clinical Immunology for Health Professions	3
BMD 475	Capstone Experience in the Biomedical Sciences	4

### Biomedical Science Electives <sup>2</sup> 16-18

Total Hours	91-94
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<sup>1</sup> Or equivalent, University approved FYE course.

<sup>2</sup> Students may choose 16 to 18 hours of elective courses to tailor their degree to their career and educational goals. Six hours of these electives must be in 300-level courses or higher. Students are encouraged to select electives in consultation with their academic adviser.

### Freshman

First Term	Hours	Second Term	Hours
EH 101		3 EH 102	3
Core Area III (MA 106 or MA 107 or MA 125)		3 BY 123	4
CH 115 <sup>1</sup>		3 BY 123L	0
CH 116		1 CH 117	3
PY 101 or 201 <sup>2</sup>		3 CH 118	1

Freshman Year Experience course (HRP 101 or equivalent)	3 Core Area IV History course	3
	BMD 150	1
	16	15

**Sophomore**

First Term	Hours	Second Term	Hours
CH 235	3	CH 237	3
CH 236	1	CH 238	1
BY 124	4	NTR 222	3
BY 124L	0	BMD 310	4
Core Area II Literature course	3	BMD 202	1
PY 212 (or equivalent Core Area IV equivalent course)	3	Core Area II or Area IV course (based on sequence)	3
BMD 201	2		
	16		15

**Junior**

First Term	Hours	Second Term	Hours
BMD 315	4	BMD 317	4
BMD 320	3	BMD 330	3
CMST 101	3	Core Area II or Core Area IV course (based on sequence)	3
Approved Statistics course <sup>3</sup>	3	BMD 380	3
BMD Elective or Approved Physics	3	BMD Elective or Approved Physics	3
	16		16

**Senior**

First Term	Hours	Second Term	Hours
BMD 410	3	BMD 475	4
BMD 420	4	BMD 430	3
BMD 440	3	BMD Elective	3
BMD Elective	3	BMD Elective	2
BMD Elective	3	Core Area II Fine Art 3	3
	16		15

Total credit hours: 125

<sup>1</sup> any Honors courses substituted for an original course requirement will require completion of the corresponding lab and/or recitation.

<sup>2</sup> or equivalent Core Area IV course applicable to requirement

<sup>3</sup> see Major for approved Statistics courses.

## Minor in Biomedical Sciences

All courses (including prerequisites) must be completed with a grade of C or better and students must maintain a 2.5 overall GPA.

Requirements		Hours
Required Courses		
CH 115	General Chemistry I	3
CH 116	General Chemistry I Laboratory	1
CH 117	General Chemistry II	3
CH 118	General Chemistry II Laboratory	1
BY 123	Introductory Biology I	4
BY 123L	Introductory Biology I Laboratory	0
BY 124	Introductory Biology II	4
BY 124L	Introductory Biology II Laboratory	0
BMD 315	Clinical Physiology and Pharmacology for Health Professions I	4

BMD 317	Clinical Physiology and Pharmacology for Health Professions II	4
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Choose 3-4 Semester Hours of BMD/CDS Elective Courses		6
BMD 310	Clinical Anatomy and Histology	4
BMD 320	Survey of Cell Biology for Health Professions	3
BMD 330	Clinical Microbiology for Health Professions	3
BMD 410	Clinical Biochemistry for Health Professions	3
BMD 420	Pathophysiology for Health Professions	4
BMD 430	Clinical Immunology for Health Professions	3
BMD 331	Microbiology Lab for Health Professionals	1
Total Minors Hours: 27-28		

## Courses

### BMD 150. Introduction to the Biomedical Sciences. 1 Hour.

Introduction to career paths within the Biomedical Sciences. Topics will address student needs and interests and current trends in the Biomedical Sciences. Emphasis will be placed on developing an individualized educational plan based on a student's academic and professional interests.

### BMD 201. Contemporary Issues in Biomedical Sciences. 2 Hours.

A survey of current policy topics and industry trends in biomedical sciences, health, and medicine.

### BMD 202. Survey of the Biomedical Sciences Literature. 1 Hour.

Techniques for searching, retrieving, reading, and analyzing the expert information used by biomedical researchers and health professions practitioners.

### BMD 300. Laboratory Techniques in Biotechnology I. 2 Hours.

Basic laboratory techniques in biotechnology utilizing a lab notebook, basic lab instruments, and making solutions. Basic molecular biology and mammalian cell culture techniques used in studying gene regulation.

**Prerequisites:** BMD 320 [Min Grade: C]

### BMD 310. Clinical Anatomy and Histology. 4 Hours.

Exploration of the functional anatomy of the human body through gross and microscopic studies of cells, tissues, and organ systems; survey of body systems; correlations between the structures and functions of the body's various systems; association of major embryonic developmental events with functional gross anatomy.

**Prerequisites:** BY 123 [Min Grade: C]

### BMD 315. Clinical Physiology and Pharmacology for Health Professions I. 4 Hours.

Basic concepts of physiology and pharmacology related to human organ systems and drug categories; human physiological principles and their application to pharmacology; membrane physiology, muscle physiology, physiology of the autonomic nervous system and the cardiovascular system; application of physiologic principles to drug pharmacokinetic and pharmacodynamics models.

**Prerequisites:** CH 115 [Min Grade: C] and (CH 114 [Min Grade: C] or CH 116 [Min Grade: C]) and CH 117 [Min Grade: C] and (CH 118 [Min Grade: C] or CH 119 [Min Grade: C]) and BY 123 [Min Grade: C] and BY 124 [Min Grade: C]

### BMD 317. Clinical Physiology and Pharmacology for Health Professions II. 4 Hours.

Basic concepts of physiology and pharmacology related to human organ systems and drug categories; human physiological principles and their application to pharmacology; renal, respiratory, gastrointestinal and endocrine systems; application of physiological principles to drug pharmacokinetic and pharmacodynamics models.

**Prerequisites:** BMD 315 [Min Grade: C]

**BMD 320. Survey of Cell Biology for Health Professions. 3 Hours.**

Molecular and cellular biosciences from a highly-integrated systems perspective; principles of eukaryotic cell structure and function, macromolecules, gene expression, signaling, division, differentiation, energy transformation and metabolism in cells; endocytosis, intramembrane transport, protein targeting, organelle biosynthesis, protein sorting, exocytosis, cell shape, motility, and cell-to-cell interaction; signal transduction processes and cellular functions required for cell growth and programmed cell death.

**Prerequisites:** CH 115 [Min Grade: C] and (CH 114 [Min Grade: C] or CH 116 [Min Grade: C]) and CH 117 [Min Grade: C] and (CH 118 [Min Grade: C] or CH 119 [Min Grade: C]) and BY 123 [Min Grade: C] and BY 124 [Min Grade: C] or CH 125 [Min Grade: C] and CH 126 [Min Grade: C]

**BMD 330. Clinical Microbiology for Health Professions. 3 Hours.**

Clinically-based study of bacteriology, parasitology, mycology, and virology and the human host response to each; mechanisms of microbial pathogenicity and complex interactions with the host that produce symptoms of disease.

**Prerequisites:** CH 115 [Min Grade: C] and (CH 116 [Min Grade: C] or CH 114 [Min Grade: C]) and CH 117 [Min Grade: C] and (CH 118 [Min Grade: C] or CH 119 [Min Grade: C]) and BY 123 [Min Grade: C] and BY 124 [Min Grade: C]

**BMD 331. Microbiology Lab for Health Professions. 1 Hour.**

Practice of laboratory safety, correct operation of a compound light microscope, preparation and interpretation of various stains, cultivate, isolate and identify pathogenic microorganisms, and perform and interpret simple serologic assays.

**BMD 380. Research Methods and Scientific Literacy for the Biomedical Sciences. 3 Hours.**

Introduction to basic research methodology; review of statistical methods in health professions research. Emphasis will be given to preparing students to critically evaluate medical and scientific literature as well as web-based materials.

**Prerequisites:** MA 106 [Min Grade: C] or MA 125 [Min Grade: C]

**BMD 400. Laboratory Techniques in Biotechnology II. 2 Hours.**

Laboratory techniques used in biotechnology, including cloning genes into an expression vector; transforming into *E. coli*; and transfection into mammalian cells for study of gene regulation and expression.

**Prerequisites:** BMD 300 [Min Grade: C]

**BMD 410. Clinical Biochemistry for Health Professions. 3 Hours.**

Current concepts of human biochemistry and molecular biology; protein structure and function, enzymes, intermediary metabolism, biosynthesis of lipids, and utilization of lipids; special emphasis on the molecular basis of inherited genetic diseases, acquired diseases, and clinically-related biochemistry.

**Prerequisites:** CH 235 [Min Grade: C] or (CH 234 [Min Grade: C] and CH 236 [Min Grade: C]) and CH 237 [Min Grade: C] and (CH 238 [Min Grade: C] or CH 245 [Min Grade: C]) and CH 247 [Min Grade: C]

**BMD 420. Pathophysiology for Health Professions. 4 Hours.**

Problem-oriented study of general disease processes and the major subdivisions of general pathology: cellular adaptations, tissue injury and renewal, neoplasia, environmental and nutritional pathology, and pediatric disorders; cellular alterations and inflammation, genetic, immunological, nutritional and circulatory disorders; effects of infection, chemical and physical agents, blood and vascular diseases, neoplasia and aging as they apply to selected organ systems.

**Prerequisites:** BMD 317 [Min Grade: C]

**BMD 430. Clinical Immunology for Health Professions. 3 Hours.**

Basic immunology and the fundamental principles relating to the immune response in normal and disease states; antigens, antibodies, cells and structures of the immune system; process of immunity, allergies, transplantation and diseases; emphasis on the genetics, mechanisms, and regulation of the immune system in human health and disease.

**Prerequisites:** BMD 320 [Min Grade: C] or BY 330 [Min Grade: C]

**BMD 440. Human Genetics for Health Professions. 3 Hours.**

Upper level exploration of molecular basis and clinical presentations of human genetic disorders using a systems based approach; analysis relevant to clinical diagnosis and disease monitoring; ethical and moral issues associated with gathering and use of genetic information for non-medical activities; high level predictions of genetic evolution.

**Prerequisites:** BY 330 [Min Grade: C] or BMD 320 [Min Grade: C]

**BMD 475. Capstone Experience in the Biomedical Sciences. 2-4 Hours.**

Mentored capstone project to explore an area of student interest demonstrating curriculum integration. The capstone project should culminate in a formal scholarly work. Senior Standing required.

**Prerequisites:** BMD 315 [Min Grade: C] and BMD 317 [Min Grade: C] and BMD 320 [Min Grade: C]

**BMD 478. Special Topics in Biomedical Sciences. 1-4 Hour.**

Exploration of current issues in Biomedical Sciences.

**BMD 490. Directed Readings in Biomedical Sciences. 1-3 Hour.**

Directed readings and/or literature review under the direction of a faculty member. Approval of faculty sponsor and program director required.

**BMD 495. Practicum in Biomedical Sciences. 1-6 Hour.**

Course combines the practical workplace experience gained through an internship or service learning activity with a seminar component to guide reflective assessment of the total experience. Approval of faculty sponsor and program director required.

**BMD 497. Directed Biomedical Sciences Research Studies. 1-6 Hour.**

Students will conduct a field, laboratory, or literary study project culminating in a formal paper and/or presentation as directed by the supervising instructor. Approval of faculty sponsor and program director required.

## Health Services Administration

The Department of Health Services Administration sponsors degree programs at the doctoral, master's, and baccalaureate levels, including a baccalaureate program in Health Care Management, and undergraduate minors in Health Care Management and Health Information Management.

## Health Care Management

**Program Director:** Jessica Hillman Williams, PhD, MPH

The Bachelor of Science in Health Care Management (HCM) was established at UAB in 1982. The program prepares graduates to be effective leaders in mid-level management positions in all types of health care organizations, including hospitals, ambulatory care centers, physician practices, long term care facilities, home health care agencies, and more. The curriculum serves as a foundation for success in graduate-level academic or professional degree programs, from the masters in health administration or health informatics to clinical professional programs, such as occupational and physical therapy, medicine and dentistry. The HCM program and course of study can

be adapted to the student's interests and strengths in the dynamic and evolving healthcare industry.

### Concentration Tracks

HCM concentration tracks focus a student's time and attention on defined areas of interest throughout the course of study when he or she has more specific objectives, such as executive leadership that may require professional school, clinical management that will require licensure or certification, or one of the many growing areas of specialty health care management. Concentration tracks may have higher admissions criteria - more information below.

- **General Manager** track prepares students for leadership positions managing health operations, developing a vision and strategies for growth, and ensuring patients receive high quality and efficient care. There are other specialty and fast tracks available to students based on previous academic work, current professional status, personal interests, and future goals.

- **Clinical Manager** track is designed for early career and seasoned professionals who are motivated to manage clinical units and services.

This track is restricted to graduates of certificate and/or associate degree programs who are credentialed or licensed in a health professions discipline. The required internship in this track is abbreviated, recognizing the student's familiarity with the environment while providing an opportunity to demonstrate newly acquired management and leadership skills. Graduates of this track typically apply their management and leadership skills in facilities or organizational units that provide services in their clinical discipline.

- **Pre-professional** track is designed for undergraduate students whose academic goal is completion of a master's level graduate or professional degree program such as health administration, health informatics, occupational therapy, physical therapy, biotechnology, surgical physician assistant, medical school, dental school or other graduate level health professions programs. Prerequisites for admission to identified graduate programs can be incorporated into the program curriculum. This academic track is designed to prepare students for a strong foundation and competitive advantage in applying to professional schools. *Admission to this named track has been suspended; students preparing for graduate studies should apply to the general manager track. Academic advisers will assist with planning an appropriate plan of study.*

### Fast Tracks

HCM Fast Tracks offer students a rare advantage in higher education - savings, both in terms of time and money. Students earn a bachelor's and master's degree in less time by taking advantage of the thoughtfully integrated curriculum. We have available fast track programs that accelerate your potential in Occupational Therapy, Health Informatics and Healthcare Quality and Safety. Fast tracks may have higher admissions criteria - more information below.

- **HCM/Health Informatics (HI) Fast Track** allows qualified students to complete the BS in Health Care Management and the MS in Health Informatics in 12 semesters; that's four years, including summers - less time than the average student takes to complete the BS degree alone.

- **HCM/Healthcare Quality and Safety (HQS) Fast Track** prepares qualified students to complete the BS in Health Care Management and the Master of Science in Healthcare Quality and Safety in 13 semesters - just over 4 years if the student takes summer courses while in the

program. UAB is one of only a few universities to offer a graduate program in this field.

- **HCM/Occupational Therapy Doctorate (OTD) Fast Track** allows qualified students entering UAB as a freshman to complete the BS in Health Care Management and the Clinical Doctorate in Occupational Therapy degree program in less time than completing the two degrees separately.

### Program Admission

Applications to the HCM Program are accepted by the UAB Office of Undergraduate Admissions at any time. Students may begin the program at the start of any full academic term. Information and the online application for freshman, transfer, returning, and non-traditional admissions is available at <https://www.uab.edu/students/admissions/> apply.

Students intending to enroll in the Health Care Management program must meet all undergraduate admission and academic requirements for UAB and the School of Health Professions.

Entering freshmen are admitted directly to the HCM program through the UAB Office of Undergraduate Admissions and designate concentration or fast tracks through the program's dedicated academic advisors. Admission to the program from high school requires graduation from an accredited high school with a grade point average (GPA) of 2.5 or higher on a 4.0 scale. Transfer admissions from another college or university and UAB students changing their declared major to HCM must have an overall GPA of 2.5 or higher and an institutional GPA of 2.5 or higher, if applicable.

### Eligibility for HCM Tracks

Eligibility for the HCM concentration and fast tracks further requires the following:

- The **Clinical Manager** track

- Restricted to graduates of certificate and/or associate degree programs who are credentialed or licensed in a health professions discipline. Satisfactory evidence of the credential must be provided to the HCM program office.
- GPA of 2.5 or higher on a 4.0 scale.

- The **General Manager** track

- GPA of 2.5 or higher on a 4.0 scale for freshmen and transfer students.
- UAB institutional GPA of 2.5 is required (if applicable).

- The **HCM/Health Informatics Fast Track**

- Completed 60 hours of course work.
- Overall UAB GPA of 3.0 or higher.

- The **HCM/Healthcare Quality and Safety Fast Track**

- Completed 60 hours of course work.
- Overall UAB GPA of 3.0 or higher.
- Two years of work experience in health care.

- The **HCM/Healthcare Quality and Safety Fast Track**

- Completed less than 30 hours of coursework.
- High school, overall and institutional (as applicable) GPA of 3.0 or higher.
- Eligible for placement in EH 101 and MA 105 or higher.
- ACT score of 24 or higher.

#### Additional Fast Track Academic Requirements:

- A minimum overall GPA of 3.0 and and UAB GPA of 3.0 must be maintained to remain enrolled in a Fast Track.
- Must meet the academic and grade requirements of the graduate program.
- Because of the rigid structure of the curriculum, a student may not have an opportunity to retake a course and may be dismissed from the track.
- Students unable to continue in a Fast Track may transfer into an alternative track provided admission requirements for the selected track are met.
- Application for Fast Tracks are completed through the Health Care Management program.

#### Drug Screen and Background Check

Students are required to complete a background check and drug screening learning module upon admission to the program. Students are required to complete a background check and drug screening prior to internship placement. Instructions for requesting the background check and appropriate consent forms are provided at the time of the program admission. A positive drug screen or unfavorable background check may prevent the applicant from completing the program requirements and will be evaluated in accordance with the academic policies of the school and university.

#### Academic Requirements

The minimum overall and institutional GPA required for admission to the program and designated concentration or fast track must be maintained for continued enrollment throughout the program. A student whose GPA falls below the minimum will be allowed two semesters to recover before dismissal from the major. A student who is dismissed from the HCM major in such a manner may reapply once the student has raised his or her overall and institutional GPA to the program or track minimum. A letter grade of C or higher is required for each course in the program curriculum. A minimum of 120 semester hours are required for award of the BS degree, including at least 40 semester hours in courses at the 300-level or above. No minor is required. Students may take general electives to reach the required minimum semester hours. No more than 14 semester hours of clinical education (clinical rotations or clinical practice) may be applied toward the degree. A management internship (with an organization whose service or function is related to the HCM curriculum) is required in the student's final semester of baccalaureate work. Students in the Clinical Manager Track will complete a 3-credit hour (120 contact hours) internship. All other tracks will complete a 6-credit hour (240 contact hours) internship.

### Contact Information

For more information about the Bachelor of Science in Health Care Management, contact

Health Care Management  
Department of Health Services Administration  
Telephone: (205) 934-5173

Email: [hcminfo@uab.edu](mailto:hcminfo@uab.edu)  
<http://www.uab.edu/hcm>

## Bachelor of Science with a Major in Health Care Management - General Manager Track

The General Manager Track provides a strong foundation for mid-level management in health care and related organizations, as well as preparation for graduate studies in health administration, public health, and other health-related programs.

Requirements		Hours
Required Prerequisite Courses		
HRP 101	Experience the University Transition	2
MA 105	Pre-Calculus Algebra ((or higher. MA 110 is accept for the Clinical Manager Track))	3
or MA 110	Finite Mathematics	
CMST 101	Public Speaking	3
Students must have BUS 310, or HCM 316, or both principles of accounting courses		3-6
AC 200 & AC 201	Principles of Accounting I and Principles of Accounting II	
BUS 310	Accounting and Finance for Nonbusiness Majors	
HCM 316	Accounting and Finance for Health Care	
Required Major Courses * *Does not include graduate-level coursework for the fast track curriculums		
HCM 320	Microcomputer Applications for Health Care Professionals	3
HCM 325	Healthcare Law and Ethics	3
HCM 330	Health Care Systems	3
HCM 350	Medical Terminology for Health Professionals	3
HCM 360	Statistics for Managers	3
HCM 375	Managerial Epidemiology	3
HCM 401	Organizational Studies in Health Care	4
HCM 402	Economics for Healthcare Managers	3
HCM 403	Operations Management in Health Care Organizations	4
HCM 405	Human Resource Management in Health Care Organizations	4
HCM 407	Strategic Management in Health Care Organizations	3
HCM 416	Financial Management in Health Care Organizations	3
HCM 421	Introduction to Long Term Care Administration	3
HCM 425	Healthcare Reimbursement Methods	3
HCM 435	Clinical and Administrative Information Systems	3
HCM 450	Quality Management in Health Care	3
HCM 460	Research Methods	3
HCM 480	Health Care Policy and Reform	3
HCM 481	Health Care Management Internship	6
Electives		8-11
Total Hours		82-88

## Bachelor of Science with a Major in Health Care Management - Clinical Manager Track

The track is designed for early-career and seasoned clinical professionals who are motivated to managed clinical units and services. The concentration allows for consideration of the student's past education in meeting degree requirements. The required internship is abbreviated,

recognizing that the student's familiarity with the environment while providing an opportunity to demonstrate newly-acquired management and leadership skills.

Requirements	Hours
Required Prerequisite Courses	
HRP 101 Experience the University Transition	2
MA 105 Pre-Calculus Algebra ((or higher. MA 110 is accept for the Clinical Manager Track))	3
or MA 110 Finite Mathematics	
CMST 101 Public Speaking	3
Students must have BUS 310, or HCM 316, or both principles of accounting courses	3-6
AC 200 Principles of Accounting I & AC 201 and Principles of Accounting II	
BUS 310 Accounting and Finance for Nonbusiness Majors	
HCM 316 Accounting and Finance for Health Care	
Required Major Courses	
HCM 320 Microcomputer Applications for Health Care Professionals	3
HCM 325 Healthcare Law and Ethics	3
HCM 330 Health Care Systems	3
HCM 360 Statistics for Managers	3
HCM 375 Managerial Epidemiology	3
HCM 401 Organizational Studies in Health Care	4
HCM 402 Economics for Healthcare Managers	3
HCM 403 Operations Management in Health Care Organizations	4
HCM 405 Human Resource Management in Health Care Organizations	4
HCM 407 Strategic Management in Health Care Organizations	3
HCM 416 Financial Management in Health Care Organizations	3
HCM 421 Introduction to Long Term Care Administration	3
HCM 425 Healthcare Reimbursement Methods	3
HCM 435 Clinical and Administrative Information Systems	3
HCM 450 Quality Management in Health Care	3
HCM 460 Research Methods	3
HCM 480 Health Care Policy and Reform	3
HCM 481 Health Care Management Internship	3
Electives	14-17
Total Hours	82-88

## HCM Occupational Therapy Fast Track

Requirements	Hours
<b>OT Prerequisite Courses (All prerequisite courses must have been completed within the last 8 years with a grade of "B" or better).</b>	
Biology with Lab (UAB Equivalent BY 123+L)	4
Human Anatomy with lab (UAB Equivalent BY 115+L)	4
Human Physiology with lab (UAB Equivalent BY 116+L)	4
Kinesiology (UAB Equivalent KIN 307)	4
Abnormal Psychology (UAB Equivalent PY 218)	3
Developmental or Lifespan Psychology (must be birth through death) (UAB Equivalent PY 212)	3
Sociology Elective (UAB Equivalent SOC 101) or Anthropology Elective (UAB Equivalent ANTH 101)	3
Statistics (UAB Equivalent HCM 360)	

Requirements	Hours
HRP 101 Experience the University Transition	2
MA 105 Pre-Calculus Algebra ((or higher. MA 110 is accepted for the Clinical Manager Track))	3
or MA 110 Finite Mathematics	
CMST 101 Public Speaking	3
Students must have BUS 310, or HCM 316, or both principles of accounting courses	3-6
AC 200 Principles of Accounting I & AC 201 and Principles of Accounting II	
BUS 310 Accounting and Finance for Nonbusiness Majors	
HCM 316 Accounting and Finance for Health Care	
<b>HCM Required Courses ** HCM coursework while in the fast track is insufficient to grant the BS degree without additional courses in the OTD program. If a student elects not to continue the fast track curriculum, additional HCM coursework will be needed to award the BS degree.</b>	
HCM 320 Microcomputer Applications for Health Care Professionals	3
HCM 325 Healthcare Law and Ethics	3
HCM 330 Health Care Systems	3
HCM 350 Medical Terminology for Health Professionals	3
HCM 375 Managerial Epidemiology	3
HCM 401 Organizational Studies in Health Care	4
HCM 402 Economics for Healthcare Managers	3
HCM 403 Operations Management in Health Care Organizations	4
HCM 405 Human Resource Management in Health Care Organizations	4
HCM 407 Strategic Management in Health Care Organizations	3
HCM 416 Financial Management in Health Care Organizations	3
HCM 421 Introduction to Long Term Care Administration	3
HCM 425 Healthcare Reimbursement Methods	3
HCM 435 Clinical and Administrative Information Systems	3
HCM 450 Quality Management in Health Care	3
HCM 480 Health Care Policy and Reform	3
OT 701 Theoretical Foundations for Occupational Therapy Practice	3
OT 704 Research Design for Occupational Therapy Practice	3
OT 716 Social, Economic and Political Factors that Influence Occupational Therapy	2
OT 730 Performance Skills for Occupation: Introduction	2
Total Hours	72-75

## HCM Health Informatics Fast Track

Requirements	Hours
HRP 101 Experience the University Transition	2
MA 105 Pre-Calculus Algebra ((or higher. MA 110 accepted for Clinical Manager Track))	3
or MA 110 Finite Mathematics	
CMST 101 Public Speaking	3
Students must have BUS 310, or HCM 316, or both principles of accounting courses	3-6
AC 200 Principles of Accounting I & AC 201 and Principles of Accounting II	
BUS 310 Accounting and Finance for Nonbusiness Majors	
HCM 316 Accounting and Finance for Health Care	
<b>HCM Required Courses ** HCM coursework while in the fast track is insufficient to grant the BS degree without additional courses in MSHI program. If a student elects not to continue the fast track curriculum, additional HCM coursework will be needed to award the BS degree.</b>	

HCM 320	Microcomputer Applications for Health Care Professionals	3
HCM 325	Healthcare Law and Ethics	3
HCM 330	Health Care Systems	3
HCM 350	Medical Terminology for Health Professionals	3
HCM 360	Statistics for Managers	3
HCM 375	Managerial Epidemiology	3
HCM 401	Organizational Studies in Health Care	4
HCM 402	Economics for Healthcare Managers	3
HCM 403	Operations Management in Health Care Organizations	4
HCM 405	Human Resource Management in Health Care Organizations	4
HCM 407	Strategic Management in Health Care Organizations	3
HCM 416	Financial Management in Health Care Organizations	3
HCM 421	Introduction to Long Term Care Administration	3
HCM 425	Healthcare Reimbursement Methods	3
HCM 450	Quality Management in Health Care	3
HCM 460	Research Methods	3
HCM 480	Health Care Policy and Reform	3
HCM 481	Health Care Management Internship	3,6
HI 611	Introduction to Health Informatics and Healthcare Delivery	3-4
HI 613	Analysis and Design of Health Information Systems	4
HI 614	Clinical and Administrative Systems	3
HI 599	Professional Development	0
Total Hours		78-85

## HCM Health Quality and Safety Fast Track

Requirements		Hours
HRP 101	Experience the University Transition	2
MA 105	Pre-Calculus Algebra ((or higher. MA 110 accepted for Clinical Manager Track))	3
or MA 110	Finite Mathematics	
CMST 101	Public Speaking	3
Students must have BUS 310, or HCM 316, or both principles of accounting courses		3-6
AC 200 & AC 201	Principles of Accounting I and Principles of Accounting II	
BUS 310	Accounting and Finance for Nonbusiness Majors	
HCM 316	Accounting and Finance for Health Care	
<b>HCM Required Courses</b> ** HCM coursework while in the fast track is insufficient to grant the BS degree without additional courses in HQS program. If a student elects not to continue the fast track curriculum, additional HCM coursework will be needed to award the BS degree.		
HCM 320	Microcomputer Applications for Health Care Professionals	3
HCM 325	Healthcare Law and Ethics	3
HCM 330	Health Care Systems	3
HCM 350	Medical Terminology for Health Professionals	3
HCM 360	Statistics for Managers	3
HCM 375	Managerial Epidemiology	3
HCM 401	Organizational Studies in Health Care	4
HCM 402	Economics for Healthcare Managers	3
HCM 403	Operations Management in Health Care Organizations	4
HCM 405	Human Resource Management in Health Care Organizations	4
HCM 407	Strategic Management in Health Care Organizations	3
HCM 416	Financial Management in Health Care Organizations	3

HCM 421	Introduction to Long Term Care Administration	3
HCM 425	Healthcare Reimbursement Methods	3
HCM 435	Clinical and Administrative Information Systems	3
HCM 450	Quality Management in Health Care	3
HCM 460	Research Methods	3
HCM 480	Health Care Policy and Reform	3
HCM 481	Health Care Management Internship	3,6
HCM 550	Healthcare Lean Six Sigma Green Belt Seminar	2
HQS 600	Introduction to Clinical Quality Improvement	4
Total Hours		77-83

## Proposed Program of Study for a Major in Health Care Management - General Manager Track

### Freshman

First Term	Hours	Second Term	Hours
EH 101	3	EH 102	3
MA 105 or 110	3	CMST 101	3
HRP 101	2	Core Curriculum Area III: Natural Science	4
Core Curriculum Area II: Fine Arts	3	Core Curriculum Area IV: Social and Behavioral Science	3
Core Curriculum Area IV: History <sup>1</sup>	3		
14		13	

### Sophomore

First Term	Hours	Second Term	Hours	Summer Term	Hours
HCM 316	3	Elective	3	HCM 350	3
Core Curriculum Area II: Literature	3	Core Area II Literature	3	HCM 360	3
Core Curriculum Area IV: Social and Behavioral Science	3	Core Curriculum Area IV: Social and Behavioral Science	3		
Core III Natural Science	4	HCM 320	3		
		HCM 330	3		
13		15		6	

### Junior

First Term	Hours	Second Term	Hours	Summer Term	Hours
HCM 325	3	HCM 401	4	HCM 403	4
HCM 402	3	HCM 416	3	HCM 450	3
HCM 460	3	HCM 435	3		
HCM 480	3	HCM 375	3		
Elective	3	Elective	3		
15		16		7	

### Senior

First Term	Hours	Second Term	Hours
HCM 405	4	HCM 481	6
HCM 407	3		
HCM 421	3		
HCM 425	3		
Elective	2		
15		6	

Total credit hours: 120

<sup>1</sup> A six semester hour sequence in literature or history is required; if a second literature is chosen it will apply as three of the elective hours in Core Curriculum Area II: Humanities and Fine Art; if a second history is chosen it will apply as three of the elective hours in Core Curriculum Area IV: Social and Behavioral Sciences

## Proposed Program of Study for a Major in Health Care Management - Clinical Manager Track

Freshman				
First Term	Hour	Second Term	Hours	
EH 101	3	EH 102	3	
MA 105 or 110	3	CMST 101	3	
HRP 101	2	Core Curriculum Area III: Natural Science	4	
Core Curriculum Area II: Fine Arts	3	Core Curriculum Area IV: Social and Behavioral Science	3	
Core Curriculum Area IV: History <sup>1</sup>	3			
	14		13	
Sophomore				
First Term	Hour	Second Term	Hour	Summer Term
HCM 316	3	HCM 320	3	HCM 325
Core Curriculum Area II: Literature	3	HCM 330	3	HCM 360
Core Curriculum Area III: Natural Science	4	Core Area II Literature	3	
Core Curriculum Area IV: Social and Behavioral Science	3	Core Curriculum Area IV: Social and Behavioral Science	3	
		*Elective	3	
	13		15	6
Junior				
First Term	Hour	Second Term	Hour	Summer Term
HCM 402	3	HCM 375	3	HCM 403
HCM 421	3	HCM 401	4	HCM 450
HCM 460	3	HCM 416	3	*Elective
HCM 480	3	HCM 435	3	
*Elective	3	*Elective	3	
	15		16	10
Senior				
First Term	Hour	Second Term	Hours	
HCM 405	4	HCM 481	3	
HCM 407	3			
HCM 425	3			
*Elective	5			
	15		3	

Total credit hours: 120

\* Clinical course credit completed at another institution may be applied for elective credit.

<sup>1</sup> A six semester hour sequence in literature or history is required; if a second literature is chosen it will apply as three of the elective hours in Core Curriculum Area II: Humanities and Fine Art; if a second history is chosen it will apply as three of the elective hours in Core Curriculum Area IV: Social and Behavioral Sciences

The Health Care Management program offers minor options for undergraduate students upon approval from the HCM program director.

## Minor in Clinical Coding and Reimbursement

The Clinical Coding and Reimbursement minor requires completion of 24 semester hours of course work. Students must contact the Health Care Management program office for admission to the minor, and must have

a 2.5 GPA to qualify. All courses must be completed with a grade of C or better. **NOTE: Admission to this minor is currently suspended; contact [hcminfo@uab.edu](mailto:hcminfo@uab.edu) for information.**

Requirements	Hours
HIM 318 Survey of Human Anatomy and Physiology for Coding	3
HCM 325 Healthcare Law and Ethics	3
HCM 350 Medical Terminology for Health Professionals	3
HIM 417 Pathology for Coders	3
HIM 418 Documentation Standards for Health Data	3
HCM 425 Healthcare Reimbursement Methods	3
HIM 441 Diagnostic Coding for Health Care Organizations	3
HIM 460 Coding/Classification Systems	3
Total Hours	24

## Minor in Health Care Management

The minor in Health Care Management requires completion of 21 semester hours of course work. Students must apply to the Health Care Management program for admission to the minor, and must have a 2.5 GPA to qualify. All courses must be completed with a grade of C or better.

Requirements	Hours
<u>HCM 330</u> Health Care Systems	3
<u>HCM 401</u> Organizational Studies in Health Care	4
<u>HCM 403</u> Operations Management in Health Care Organizations	4
<u>HCM 405</u> Human Resource Management in Health Care Organizations	4
<u>HCM 407</u> Strategic Management in Health Care Organizations	3
<u>HCM 480</u> Health Care Policy and Reform	3
Total Hours	21

## Minor in Health Information Management

The Health Information Management minor requires completion of 18 semester hours of course work. Students must contact the Health Care Management program office for admission to the minor, and must have a 2.5 GPA to qualify. All courses must be completed with a grade of C or better.

Requirements	Hours
<u>HCM 325</u> Healthcare Law and Ethics	3
<u>HCM 330</u> Health Care Systems	3
<u>HCM 425</u> Healthcare Reimbursement Methods	3
<u>HCM 435</u> Clinical and Administrative Information Systems	3
<u>HIM 418</u> Documentation Standards for Health Data	3
<u>HIM 475</u> Electronic Health Records	3
Total Hours	18

## Courses

### HCM 302. Principles of Management in Health Care. 3 Hours.

Basic management concepts in context of health care organizations; oral and written communication; planning and goal setting; decision-making and problem solving; personnel selection; performance appraisal.

### HCM 305. Effective Communication and Professionalism in Health Care. 2 Hours.

Professional traits, behaviors, skills, and attitudes needed to perform in a professional, ethical, and competent manner in the health care environment.

**HCM 306. Introduction to Cultural Awareness and Competency. 2 Hours.**

Dimensions of national culture, cultural awareness, stereotypes and biases; co-cultures in the United States; application of cross-cultural knowledge and skills in education, healthcare, and business.

**HCM 316. Accounting and Finance for Health Care. 3 Hours.**

Introduction to financial accounting in health care organizations; reasoning and methods of financial accounting in for-profit, not for profit and government entities; and health care industry characteristics affecting financial management.

**Prerequisites:** (MA 105 [Min Grade: C] or MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 110 [Min Grade: C] or MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**HCM 318. Law for Health Care Professionals. 3 Hours.**

Principles of law and U.S. legal system as applied in health care organizations; documentation, privacy, security, and release of health information; liability, consent, and malpractice.

**HCM 320. Microcomputer Applications for Health Care Professionals. 3 Hours.**

Word Processing, spreadsheet, database, file management, information systems, internet, and presentation applications in managerial functions.

**HCM 325. Healthcare Law and Ethics. 3 Hours.**

Principles of law and ethics in the U.S. healthcare legal system as applied in health care organizations; patient's rights, privacy, security confidentiality, informed consent, documentation and release of health information, liability, and malpractice.

**HCM 330. Health Care Systems. 3 Hours.**

Overview of U.S. health care system; implications of environmental trends and health care policy on health care organizations; introduction to financing of health care.

**HCM 350. Medical Terminology for Health Professionals. 3 Hours.**

Systematic study of medical terminology with emphasis on constructing, understanding and using medical terms. Content includes diseases, symptoms & signs of disease, diagnostic, and clinical procedures and treatment modalities.

**HCM 360. Statistics for Managers. 3 Hours.**

Basic descriptive and inferential statistics as applied in managerial processes; computer-based graphic analysis of data; use of computer-based statistical software; application of statistical process control tools. Quantitative Literacy is a significant component of this course.

**Prerequisites:** MA 105 [Min Grade: C] or MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 110 [Min Grade: C] or MA 125 [Min Grade: C] or MA 225 [Min Grade: C]

**HCM 375. Managerial Epidemiology. 3 Hours.**

Methods and applications of managerial epidemiology; measurement and epidemiological tools that inform health care management decisions.

**Prerequisites:** AHS 330 [Min Grade: C] or HCM 330 [Min Grade: C]

**HCM 401. Organizational Studies in Health Care. 4 Hours.**

Behavioral science concepts including leadership, managing change, negotiating and conflict resolution, team building, organizational assessment, marketing, and entrepreneurship in the context of health care organizations.

**Prerequisites:** (AHS 330 [Min Grade: C] or HCM 330 [Min Grade: C])

**HCM 402. Economics for Healthcare Managers. 3 Hours.**

Principles of economics of the health care system on the basis of incentives, risk management, asymmetrical information, and moral hazards; practical application of economic principles, including supply and demand, market structure and forecasting.

**Prerequisites:** AHS 330 [Min Grade: C] or HCM 330 [Min Grade: C]

**HCM 403. Operations Management in Health Care Organizations. 4 Hours.**

Operational functions of mid-level managers in health care organizations including work design and re-engineering; systems theory; development, planning, and analysis; ergonomics and work environment; quality improvement techniques.

**Prerequisites:** (AHS 330 [Min Grade: C] or HCM 330 [Min Grade: C])

**HCM 405. Human Resource Management in Health Care Organizations. 4 Hours.**

Managerial activities in health care organizations related to job descriptions, recruiting, interviewing, hiring, firing, orientation, benefits, appraisal, discipline, and developing clinical and non-clinical personnel.

**Prerequisites:** AHS 330 [Min Grade: C] or HCM 330 [Min Grade: C]

**HCM 407. Strategic Management in Health Care Organizations. 3 Hours.**

Overview of strategic management process; strategic planning in health care organizations from perspective of mid-level manager; emphasis on operational level implementation and control.

**Prerequisites:** AHS 403 [Min Grade: C] or HCM 403 [Min Grade: C]

**HCM 409. Personnel Management in Long-Term Care. 1 Hour.**

Planning for staffing and staff development of clinical and non-clinical personnel in long-term care facilities.

**Prerequisites:** AHS 405 [Min Grade: C] or HCM 405 [Min Grade: C]

**HCM 410. Long Term Care Facilities Management. 3 Hours.**

Overview of administrative responsibility for physical facilities; environmental safety; emergency preparedness and response; interdependence and functioning of medical, nursing, social, dietary, and other key resident services.

**HCM 411. Biological, Psychological, and Sociological Issues of Aging. 3 Hours.**

Overview of current gerontological-geriatric information; special needs of the elderly in receiving health care services.

**Prerequisites:** AHS 330 [Min Grade: C] or HCM 330 [Min Grade: C]

**HCM 415. Ethics for Health Care Professionals. 3 Hours.**

Overview of major ethical theories; ethical decision making models; application to patients rights, confidentiality, informed consent, professional relationships, and allocation of scarce resources. Ethics and Civic Responsibility are significant components of this course.

**Prerequisites:** (AHS 318 [Min Grade: C] or HCM 318 [Min Grade: C]) and (AHS 330 [Min Grade: C] or HCM 330 [Min Grade: C])

**HCM 416. Financial Management in Health Care Organizations. 3 Hours.**

Overview of financial management functions at the department level; budgeting and cost analysis for department-level operations and capital expenditures. Fulfills the requirements in Quantitative Literacy.

**Prerequisites:** (AHS 330 [Min Grade: C] or HCM 330 [Min Grade: C]) and (AC 200 [Min Grade: C] and AC 201 [Min Grade: C]) or BUS 310 [Min Grade: C] or HCM 316 [Min Grade: C]

**HCM 417. Financial Management for Long Term Care Administrators. 2 Hours.**

Overview of financial management practices and reimbursement issues and methodologies in long term care facilities.

**Prerequisites:** (AHS 416 [Min Grade: C] or HCM 416 [Min Grade: C]) and (AHS 421 [Min Grade: C] or HCM 421 [Min Grade: C])

**HCM 418. Legal and Regulatory Issues in Long Term Care. 3 Hours.**

Governance and administrative responsibilities for compliance with LTC licensure laws, government and accrediting regulations, and facility policies.

**Prerequisites:** HCM 325 [Min Grade: C] and HCM 350 [Min Grade: C]

**HCM 420. Long Term Care Resident Care and Quality. 2 Hours.**

Planning, managing, and evaluating programs that enhance resident quality of life in long-term care facilities.

**HCM 421. Introduction to Long Term Care Administration. 3 Hours.**

Introduction to the long term care industry and nursing facility operations through seminars, independent media research, and experiential learning.

**Prerequisites:** HCM 330 [Min Grade: C] or AHS 330 [Min Grade: C]

**HCM 425. Healthcare Reimbursement Methods. 3 Hours.**

Review of diverse financial systems within American healthcare, focus on reimbursement methods and payment systems and how they affect providers and payers. Review of major insurance programs, federal health care legislation, legal/regulatory issues, diagnosis and procedure coding systems, and the impact of coding on reimbursement, compliance and fraud and abuse.

**Prerequisites:** (AHS 350 [Min Grade: C] or HCM 350 [Min Grade: C]) and (HCM 330 [Min Grade: C] or AHS 330 [Min Grade: C])

**HCM 430. Documentation Requirements in Long Term Care. 2 Hours.**

Overview of clinical documentation requirements in long term care facilities, including the Resident Assessment Instrument, Minimum Data Set, and Patient Care Plan. Additional Focus on information privacy and security.

**Prerequisites:** (HCM 330 [Min Grade: C] or AHS 330 [Min Grade: C]) and (HCM 421 [Min Grade: C] or AHS 330 [Min Grade: C])

**HCM 431. Planning and Implementing HE. 3 Hours.**

Content and process planning, implementing, and evaluating programs in health education and health promotion. Sociological, psychological, and epidemiological foundations of health promotion programs. Development of practical skills for school, occupational, clinical, and community settings. A comprehensive program planning assessment will reinforce quantitative literacy in the profession. Quantitative Literacy is a significant component of this course.

**HCM 432. Continuum of Long-Term Care. 3 Hours.**

Survey of providers of long term and elder care, including scope of services provided, review of reimbursement methodologies, clientele served, and political issues affecting their operational practices.

**Prerequisites:** (HCM 330 [Min Grade: C] or AHS 330 [Min Grade: C]) and (HCM 421 [Min Grade: C] or AHS 421 [Min Grade: C])

**HCM 435. Clinical and Administrative Information Systems. 3 Hours.**

Overview of information systems and applications in health care organization; issues and challenges in system design and implementation.

**Prerequisites:** AHS 330 [Min Grade: C] or HCM 330 [Min Grade: C]

**HCM 450. Quality Management in Health Care. 3 Hours.**

Concepts of monitoring and evaluating the quality and appropriateness of patient care and services provided in health care organizations; overview of regulatory guidelines and industry standards; current issues in quality measurement and outcomes.

**Prerequisites:** AHS 330 [Min Grade: C] or HCM 330 [Min Grade: C]

**HCM 460. Research Methods. 3 Hours.**

Introductory research methods course for the design and conduct of interdisciplinary health services research, including study design, research ethics, descriptive and advanced statistics, and research reporting.

**Prerequisites:** (AHS 360 [Min Grade: C] or HCM 360 [Min Grade: C]) or MA 180 [Min Grade: C] or QM 214 [Min Grade: C] or PY 216 [Min Grade: C]

**HCM 474. Service Learning in Health Care Management. 2 Hours.**

Classroom and experiential learning through designed community based or clinically related service experiences. Students work with community partners to monitor patient health and welfare while gaining insight into the barriers to healthcare access, costs, and quality.

**HCM 475. Special Topics in Health Care Management. 1-4 Hour.**

Exploration of current issues in Health Care Management.

**HCM 480. Health Care Policy and Reform. 3 Hours.**

Identification and discussion of health policy issues facing the U.S. and economic implications of health policy and health care reforms over time.

**Prerequisites:** AHS 330 [Min Grade: C] or HCM 330 [Min Grade: C]

**HCM 481. Health Care Management Internship. 3,6 Hours.**

Capstone course places students in selected healthcare setting supervised by experienced preceptors. Students are exposed to day-to-day managerial functions and participate in organizational projects. Students draw upon, synthesize, and apply classroom learning to healthcare organization environments. Activities focus on the development of problem solutions, effective communications and research skills. Projects focus on Service Learning and students also explore the culture, ethical issues and community impact of the organization.

**HCM 482. Current Issues in Health Care. 3 Hours.**

Identification of current issues in the health care industry, with an emphasis on analyzing organizational impact.

**Prerequisites:** HCM 330 [Min Grade: C] or AHS 330 [Min Grade: C]

**HCM 483. Long Term Care Health Care Management Internship. 6-10 Hours.**

Supervised experience in managerial functions in selected long-term care health care organizations.

## Nutrition Sciences

The Department of Nutrition Sciences sponsors degree programs at the doctoral, master's, and baccalaureate levels, including a baccalaureate program in Biobehavioral Nutrition and Wellness, and an undergraduate minor in Nutrition Sciences.

## Biobehavioral Nutrition and Wellness

**Program Director:** Douglas "Doug" R Moellering, PhD, MS

The B.S. in Biobehavioral Nutrition and Wellness program curriculum prepares students for entry into the nutrition and wellness workforce in many types of organizations, including, nutrition and healthcare,

universities, hospitals, food and nutrition providers, insurance agencies, corporations, or for graduate and professional study in health professions, including further study in Nutrition Sciences, Dietitian Education track. Students go on to become health and wellness educators, medical or health services managers, and clinical research staff, to name just a few exciting careers, and find positions in a wide range of private and public industries. You will learn about nutrition and wellness in this program, including the biological processes and behaviors within the science of nutrition and nutrition's role in health, wellbeing, and disease prevention.

The UAB Nutrition Sciences Department has all resources you need to tailor your studies to the areas of nutrition and wellness that most interest you, including active clinical practices, research labs, and two NIH-funded interdisciplinary research centers – the UAB Nutrition and Obesity Research Center (NORC) and the UAB Diabetes Research Center (DRC). Our faculty have a wealth of expertise in nutrition-related areas, including lifecycle, metabolism, genetics, diabetes, obesity, cancer, aging, cardiometabolic disease, cardiovascular disease, personalized disease prevention, data analysis, and telehealth. If you would like to pursue a master's degree or PhD after graduation, you will be well prepared for any nutrition sciences or allied health program you choose.

### **Program Admission**

The UAB Office of Undergraduate Admissions accepts applications to the Biobehavioral Nutrition and Wellness program at any time. Students may begin the program at the start of any full academic term. Information and the online application for freshman, transfer, returning, and non-traditional admissions is available at <https://www.uab.edu/students/admissions/> apply.

Students intending to enroll in the Biobehavioral Nutrition and Wellness program must meet all undergraduate admission and academic requirements for UAB and the School of Health Professions.

Entering freshmen are admitted directly to the Biobehavioral Nutrition and Wellness program through the UAB Office of Undergraduate Admissions. Admission to the program from high school requires graduation from an accredited high school with a grade point average (GPA) of 2.75 or higher on a 4.0 scale. Transfer admissions from another college or university and UAB students changing their declared major to Biobehavioral Nutrition and Wellness must have an overall GPA of 2.75 or higher and an institutional GPA of 2.75 or higher, if applicable.

### **Academic Requirements**

The minimum overall and institutional GPA required for admission to the program (2.75) must be maintained for continued enrollment throughout the program. A student whose GPA falls below the minimum will be allowed two semesters to recover before dismissal from the major. A student who is dismissed from the Biobehavioral Nutrition and Wellness major in such a manner may reapply once the student has raised his or her overall and institutional GPA to the program or track minimum. A letter grade of C or higher is required for each course in the program curriculum.

### **Course Requirements**

The Biobehavioral Nutrition and Wellness degree requires a total of 123-5 semester hours.

<b>Requirements</b>		<b>Hours</b>
MA 106	Pre-Calculus Trigonometry (Or Higher)	3
EH 101	English Composition I	3
EH 102	English Composition II	3
CH 115	General Chemistry I	3
CH 116	General Chemistry I Laboratory	1
BY 123	Introductory Biology I	4
BY 123L	Introductory Biology I Laboratory	0
PY 101	Introduction to Psychology	3
CH 117	General Chemistry II	3
CH 118	General Chemistry II Laboratory	1
CH 235	Organic Chemistry I	3
CH 236	Organic Chemistry I Laboratory	1
BY 261	Introduction to Microbiology	4
BY 261L	Introduction to Microbiology Laboratory	0
BY 115	Human Anatomy	4
BY 116	Introductory Human Physiology	4
CHHS 141	Personal Health & Wellness	3
CMST 101	Public Speaking	3
Approved Human Behavior, Psychology, Sociology, or Anthropology Course (Choose 1 course from below)		3
PY 107	Psychology of Adjustment	
PY 305	Medical Psychology	
SW 315	Human Behavior and Social Environment	
PUH 204	Social and Behavioral Determinants of Health	
SOC 280	Introduction to Medical Sociology	
ANTH 319	Food and Culture	
HRP 101	Experience the University Transition	2
NTR 121	Well Being and You	3
NTR 201	Healthy People, Healthy Planet	3
NTR 222	Nutrition and Health	3
NTR 232	Lifecycle Nutrition	3
NTR 300	Nutrition Communication: From Science to Consumer	3
NTR 320	Nutrition and the Consumer	3
NTR 330	Nutrition and Metabolism	3
NTR 420	Nutritional Genetics	3
NTR 421	Nutrition Assessment and the Nutrition Care Process	3
NTR 433	Health and Wellness in the Information Age	3
NTR 444	Nutrition in Wellness and in Chronic Disease	3
NTR 450	Translational Research in Biobehavioral and Nutrition Science	3
NTR 490	Capstone Experience in Biobehavioral Nutrition and Wellness	3
Electives		12-14

## **Contact Information**

For more information about the Bachelor of Science in Biobehavioral Nutrition and Wellness, contact

Biobehavioral Nutrition and Wellness (BNW)  
Department of Nutrition Sciences  
Telephone: (205) 934-3006  
[BNW Program](#)

## Bachelor of Science in Biobehavioral Nutrition & Wellness

Requirements	Hours
<b>University Core Courses</b>	
Area I: Written Communication	6
Area II: Humanities and Fine Arts	12
CMST 101 Public Speaking	
Area III: Natural Sciences and Mathematics	11
MA 106 Pre-Calculus Trigonometry	
CH 115 General Chemistry I & CH 116 and General Chemistry I Laboratory	
BY 123 Introductory Biology I & 123L and Introductory Biology I Laboratory	
Area IV: History, Social and Behavioral Sciences	12
PY 101 Introduction to Psychology	
<b>Lower Level Support Courses (C or better required)</b>	<b>29</b>
CH 117 General Chemistry II & CH 118 and General Chemistry II Laboratory	
CH 235 Organic Chemistry I & CH 236 and Organic Chemistry I Laboratory	
BY 261 Introduction to Microbiology & 261L and Introduction to Microbiology Laboratory	
BY 115 Human Anatomy	
BY 116 Introductory Human Physiology	
CHHS 141 Personal Health & Wellness	
Approved Statistics <sup>1</sup>	
Approved Human Behavior, Psychology, Sociology, or Anthropology Course <sup>2</sup>	
<b>Major Courses</b>	<b>39</b>
NTR 121 Well Being and You	
NTR 201 Healthy People, Healthy Planet	
NTR 222 Nutrition and Health	
NTR 232 Lifecycle Nutrition	
NTR 300 Nutrition Communication: From Science to Consumer	
NTR 320 Nutrition and the Consumer	
NTR 330 Nutrition and Metabolism	
NTR 420 Nutritional Genetics	
NTR 421 Nutrition Assessment and the Nutrition Care Process	
NTR 433 Health and Wellness in the Information Age	
NTR 444 Nutrition in Wellness and in Chronic Disease	
NTR 450 Translational Research in Biobehavioral and Nutrition Science	
NTR 490 Capstone Experience in Biobehavioral Nutrition and Wellness	
Total Hours	109

<sup>1</sup> Choose one of the following: HCM 360, MA 180, PY 216, or QM 214 and QM 215

<sup>2</sup> Choose one of the following: PY 107, PY 305, SW 315, PUH 204, SOC 280, ANTH 319

## Proposed Program of Study for a Major in Biobehavioral Nutrition and Wellness

<b>Freshman</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
EH 101	3	EH 102	3
MA 106	3	BY 123	4
CH 115	3	BY 123L	0
CH 116	1	NTR 201	3
NTR 121	3	PY 101	3
HRP 101	2	CH 117	3
		CH 118	1
	15		17
<b>Sophomore</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
CH 235	3	BY 261	4
CH 236	1	BY 261L	0
NTR 222	3	NTR 320	3
Core Area II: Literature	3	BY 115	4
Approved Human Behavior, Psychology, Sociology, or Anthropology Course	3	Core Area II or Area IV (based on sequence)	3
PY 305			
Core Area II or Area IV (based on sequence)	3		
PY 305			
SW 315			
PUH 204			
SOC 280			
ANTH 319			
	16		14
<b>Junior</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
BY 116	4	NTR 300	3
NTR 232	3	NTR 330	3
CMST 101	3	NTR 421	3
CHHS 141	3	Core Area IV (based on sequence)	3
Approved Statistics Course	3	Core Curriculum Area IV - History <sup>1</sup>	3
	16		15
<b>Senior</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
NTR 444	3	NTR 490	3
NTR 433	3	NTR 450	3
NTR 420	3	Core Area II: Fine Art	3
Approved Physics or Electives	7	Approved Physics or Electives	6-7
	16		15-16
Total credit hours: 124-125			

<sup>1</sup> A six semester hour sequence in literature or history is required; if a second literature is chosen it will apply as three of the elective hours in Core Curriculum Area II: Humanities and Fine Art; if a second history is chosen it will apply as three of the elective hours in Core Curriculum Area IV: Social and Behavioral Sciences

## Minor in Nutrition Sciences

The Department of Nutrition Sciences offers a minor option for undergraduate students matriculating in programs in the School of Health Professions. Interested students from other schools may be admitted upon approval from the NTR minor program director. The Nutrition Sciences minor requires completion of 18 semester hours of course work, maintenance of a 2.5 GPA overall, and no grade lower than a C in minor courses.

Requirements		Hours
NTR 222	Nutrition and Health	3
NTR 232	Lifecycle Nutrition	3
NTR 330	Nutrition and Metabolism	3
Choose 9 Hours of Elective Coursework From the List Below		9
NTR 320	Nutrition and the Consumer	
NTR 420	Nutritional Genetics	
NTR 421	Nutrition Assessment and the Nutrition Care Process	
NTR 500	Communications in Nutrition	
KIN 405	Sports Nutrition	
ANTH 319	Food and Culture	
HRP 415	Mentored Research in the Health Professions	
Approved Research Experience Course		
Total Hours		18

## Courses

### NTR 121. Well Being and You. 3 Hours.

Exploration of social, environmental, and cultural influences on eating and activity habits; mindfulness and coping skills to improve health, well-being, and resilience.

### NTR 201. Healthy People, Healthy Planet. 3 Hours.

Influence of individuals, community, government, and earth on mental, emotional, and physical well-being; design of community programs and interventions in a holistic ecological framework.

### NTR 220. Contemporary Issues in Nutrition. 3 Hours.

Contemporary Issues in Nutrition is designed for non-health professional majors and will be particularly beneficial to those in education, communications, and business fields of study.

### NTR 222. Nutrition and Health. 3 Hours.

Introduction to principles of nutrition; essential nutrients and their relation to growth, maintenance, and optimal functioning of the body; dietary recommendations to promote wellness and prevent chronic disease.

### NTR 225. Promoting Nutrition and Wellness for Healthy Communities. 3 Hours.

This course will introduce students to one of the most critical health issues in the US today, poor nutrition, unhealthy life styles and their consequences including the epidemic of obesity. Students will learn about the diverse range of individuals impacted by this issue and will discover the range of prevention, education and support services that are offered. This course will cover the following aspects of unhealthy lifestyles/poor nutrition: history and systemic causes, education and prevention, including policy and advocacy. The course is also designed to present a multicultural perspective on the issues and students will be encouraged to engage in service-learning in the field, read literature, listen to speakers and interact with individuals representing a range of ages, genders, ethnicities and socioeconomic status.

### NTR 232. Lifecycle Nutrition. 3 Hours.

Role of nutrition and dietary factors on the growth, development, and maintenance of health throughout the human life cycle. Nutritional guidelines/recommendations, special nutritional needs, physiology, and nutritional health concerns for each stage of the human lifecycle, from preconception through adulthood and aging.

**Prerequisites:** NTR 222 [Min Grade: C]

### NTR 300. Nutrition Communication: From Science to Consumer. 3 Hours.

Interpreting nutrition research, including study designs and statistics, to develop nutrition messages and education materials using various media.

**Prerequisites:** NTR 222 [Min Grade: C]

### NTR 320. Nutrition and the Consumer. 3 Hours.

Contemporary nutrition topics that affect consumers, such as dietary supplements, food additives, food safety, food, genetically modified organisms in foods & integrative medicine. Techniques to communicate nutrition information to consumers.

**Prerequisites:** NTR 222 [Min Grade: C]

### NTR 330. Nutrition and Metabolism. 3 Hours.

Metabolism and functions of nutrients after mixed meal intakes, including USDA MyPlate, low-carbohydrate or low-fat diets; biosynthesis of vitamins and co-factors and whole food sources; human requirements for energy, amino acids, minerals, and vitamins; food fortification; current human nutritional challenges and diseases.

**Prerequisites:** NTR 222 [Min Grade: C]

### NTR 420. Nutritional Genetics. 3 Hours.

How behavioral practices, environmental influences, and genetic makeup interact to influence individual preferences and responses to foods. Models to incorporate the interaction of these factors in developing potential strategies to prevent disease and achieve better nutritional health.

### NTR 421. Nutrition Assessment and the Nutrition Care Process. 3 Hours.

Introduction to the Nutrition Care Process (NCP), a systematic approach to providing high-quality nutrition care. The NCP provides a framework for critical thinking and decision making. Gain factual knowledge, learn to apply course material through case study application, and explore fundamental principles in medical nutrition related content areas.

**Prerequisites:** NTR 222 [Min Grade: D]

### NTR 433. Health and Wellness in the Information Age. 3 Hours.

Using technology and informatics skills to find, evaluate, and share accurate information to provide the best care to patients, clients, and the community.

**Prerequisites:** NTR 222 [Min Grade: C]

### NTR 444. Nutrition in Wellness and in Chronic Disease. 3 Hours.

Mechanisms underlying chronic diseases; role of nutrition and other health behaviors in prevention and treatment.

**Prerequisites:** NTR 330 [Min Grade: C]

### NTR 450. Translational Research in Biobehavioral and Nutrition Science. 3 Hours.

Development of skills in accurately translating scientific evidence from basic through clinical research and implementation studies into actionable messages for the public.

**Prerequisites:** NTR 222 [Min Grade: C]

### NTR 475. Special Topics in Biobehavioral Nutrition and Wellness. 1-4 Hour.

Exploration of current issues in Biobehavioral Nutrition and Wellness.

**NTR 490. Capstone Experience in Biobehavioral Nutrition and Wellness. 3 Hours.**

Capstone experience integrating and applying the biobehavioral nutrition and wellness body of knowledge in a comprehensive group project.

# School of Nursing

**Dean:** Doreen C. Harper, PhD, RN, FAAN

**Senior Associate Dean for Academic Affairs:** Linda Moneyham, PhD, RN, FAAN

**Associate Dean for Clinical and Global Partnerships:** Maria R. Shirey, PhD, MBA, RN, NEA-BC, ANEF, FACHE, FNAP, FAAN

**Associate Dean for Research and Scholarship:** Marie A. Bakitas, DNSc, NP-C, FAAN

**Associate Dean for Technology and Innovation:** Jacqueline Moss, PhD, RN, FAAN

**Associate Dean for Graduate Clinical Education:** Aimee Holland, DNP, CRNP, WHNP-BC, NP-C, FAANP, FAAN (interim)

**Associate Dean for Undergraduate and Prelicensure Education:** Gwendolyn Childs, PhD, RN, FAAN

## Mission of the School of Nursing

The University of Alabama at Birmingham School of Nursing, as part of a research university and academic health center, shapes patient-centered health care by preparing recognized nurse leaders who excel as clinicians, researchers, and educators in Alabama, nationally and internationally.

## Approvals/Accreditation

The University of Alabama at Birmingham (UAB) is accredited by the Southern Association of Colleges and Schools (SACS). The School of Nursing is approved by the Alabama Board of Nursing. The Baccalaureate Degree Program in Nursing at the University of Alabama at Birmingham (UAB) School of Nursing is accredited by the Commission on Collegiate Nursing Education (<http://www.ccnaccreditation.org>).

## Bachelors in Nursing (BSN) Degree

Baccalaureate preparation in nursing is the basic educational level for entry into professional nursing practice. This foundational education includes both academic and professional nursing courses that provide a base for clinical competence and informed judgments about health and patient care in a variety of settings. These settings include, but are not limited to, home/community agencies, outpatient/ambulatory care, and hospital-based practice ranging from chronic to high acuity. Baccalaureate nursing education builds upon knowledge acquired from the humanities and biological, physical, social, and behavioral sciences. By engaging in state-of-the-art technologies, simulations, and other teaching strategies, the graduate is prepared to care for families and individuals of all ages. The integration of principles of nursing research and principles of leadership and management also assist the graduate to function as an informed member of an interdisciplinary health team. Graduates of the program are submitted to the state board of nursing to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN) to become a registered nurse (RN).

## Student Learning Outcomes

The BSN Curriculum is designed to prepare graduates for entry into professional nursing practice. This foundation offers both academic and professional nursing courses that provide the base for clinical competence and informed judgments about health care situations and

care of patients in both in- and out-patient settings. The curriculum prepares nurses to:

- Apply knowledge from diverse liberal arts educational content to generalist nursing care principles and practice experiences.
- Incorporate a basic understanding of organizational systems and the application of knowledge and skills needed to provide safe, quality care to individual patients and to function as part of an interprofessional team.
- Participate in and utilize structure, process, and outcome measures to evaluate the implementation of patient safety and quality improvement initiatives.
- Demonstrate understanding of the basic elements of the evidence-based practice and participate in the retrieval, appraisal, and application of best practices.
- Demonstrate skills in the ethical use of healthcare information communication technology (ICT) and how technology supports safe practice and examination of patient data for outcome analysis.
- Demonstrate skills in the ethical use of healthcare policy, advocacy, global health, legal, and regulatory issues as factors that may influence healthcare delivery and practice.
- Utilize effective intra and interprofessional communication skills to advocate for evidence-based, holistic care as a member of the healthcare team.
- Assess determinants of health in relation to multiple factors (genetics, environmental exposure, family history, individual health, and health preferences) to guide and advocate for the delivery of health promotion/disease prevention strategies.
- Apply knowledge of nursing history, nursing history, nursing standards, and one's own beliefs and values to the application of professional nursing behaviors, communication, and actions.
- Practice safe, evidence-based, compassionate, holistic, and patient and family centered care applying knowledge of leadership and healthcare delivery for individuals and communities.

## BSN Admission for Traditional Students\*

Admission decisions are competitive based on the applicant's overall academic record and criteria described below.

## Admission Criteria

- The minimum cumulative GPA **and** minimum foundation cumulative GPA for all traditional BSN applicants is **2.75** at the time of application (includes transfer students). Admission is competitive and is based on space available. A minimum cumulative GPA of 2.75 **does not guarantee** admission to the School of Nursing.
- **Students are eligible to apply when they have successfully completed a minimum of 41 semester credit hours.** Successful completion of all pre-nursing foundation courses with a "C" or above must be met prior to matriculation into the nursing program.

Students offered admission to the SON who are enrolled in pre-nursing coursework must make a "C" or better in every foundation course for the nursing major. The final minimum cumulative/overall *Nursing Foundation Coursework* GPA must be a 2.75 or greater on all coursework must be met prior to matriculation into the nursing program.

- Admission decisions are highly competitive and based on the applicant's academic record and application at the time of the application deadline. *\*All grades (UAB and other colleges/*

universities) from previous terms must be posted on applicant's UAB transcript by the application deadline.

- A **resume**, outlining health care interest/experience, campus/community involvement, leadership, employment, etc. will be due by the application deadline. Resumes should not be more than one page in length and should only include activities after graduation from high school.
- Applicants are strongly encouraged to provide **proof of work/volunteer experience in a healthcare setting** as part of the application process. The healthcare work is to be documented by letters from a supervisor (on agency letterhead) and/or time sheets and must consist of a minimum of 60 hours of paid or volunteer work in a healthcare setting. Completion of a nursing skills course does not meet this criterion for BSN applicants.
- Applicants to the School of Nursing are strongly recommended to demonstrate a **record of full-time study** and a **minimum number of course repeats/grade forgiveness options**.

## Special Options for Traditional BSN Admission

### UAB Dean's Nursing Scholars Program

- The **Dean's Nursing Scholars Program** is a special program that insures entering freshmen directly out of high school with an offer of admission during the next year's admission into the School of Nursing upon successful completion of the required undergraduate pre-nursing foundation and core classes.
- *Eligibility*
- A high school senior with a minimum high school grade point average of 3.8 in the academic classes required for admissions to UAB
- Admission through the UAB Office of Undergraduate Admissions
- Applies to UAB into a pre-nursing major

<http://www.uab.edu/nursing/home/special-initiatives/scholars-programs>

## Prior to Enrollment for Upper Division Nursing Courses

- CPR certification will be due prior to registration for upper division courses (listed are approved courses)
- American Heart Association's Basic Life Support (BLS) for Healthcare Provider Course
- Medical Clearance, a Background Check, and a Drug Screen are required prior to beginning class for all upper division nursing courses and must be maintained throughout the program until the student graduates. Failure to comply may result in administrative withdrawal from the program.

## Application Deadlines

Fall and Spring admission dates listed at - <https://www.uab.edu/nursing/home/student-information/acad-prog/application-deadlines>

All transfer students must be admitted to the University one month prior to the School of Nursing application deadline.

Applicants will receive an admissions decision a minimum of 4 weeks after application for the semester for which they are applying.

Future updates on the BSN admission process will be posted on the School of Nursing website ([www.uab.edu/nursing](http://www.uab.edu/nursing)) and will be available from your Pre-Nursing Advisor. If you have any questions concerning these changes, please feel free to contact the School of Nursing Office of Student Affairs at <http://www.uab.edu/nursing/home/student-information/contact-us>.

Traditional Students are those students who seek to enter the Undergraduate BSN program and are not a RN.

## Bachelor of Science in Nursing

### Pre-Nursing Requirements for the Traditional BSN

Requirements	Hours
<b>Required Pre-Nursing Courses</b>	
<a href="#">BY 115</a> Human Anatomy	4
<a href="#">BY 116</a> Introductory Human Physiology	4
<a href="#">BY 261</a> Introduction to Microbiology	4
<a href="#">NTR 222</a> Nutrition and Health	3
<b>Statistics</b>	
Select one of the following courses:	3
<a href="#">MA 180</a> Introduction to Statistics	
<a href="#">PY 216</a> Elementary Statistical Methods	
<b>Total Hours</b>	<b>18</b>

## Major in Nursing

Requirements	Hours
<b>Required Nursing Courses</b>	
<a href="#">NUR 310</a> Concepts of Professional Nursing	3
<a href="#">NUR 311L</a> Nursing Skills Development I	2
<a href="#">NUR 313L</a> Concepts of Professional Nursing Practicum	2
<a href="#">NUR 312L</a> Health Assessment Across the Lifespan	2
<a href="#">NUR 315</a> Population Focused Health Care	2
<a href="#">NUR 318</a> Pathophysiologic Concepts	3
<a href="#">NUR 326</a> Concepts in Adult Health Nursing I	3
<a href="#">NUR 327L</a> Concepts of Adult Health Nursing I Practicum	2
<a href="#">NUR 322</a> Concepts of Behavioral Health Nursing	3
<a href="#">NUR 323L</a> Concepts of Behavioral Health Nursing Practicum	2
<a href="#">NUR 328</a> Pharmacotherapy I	2
<a href="#">NUR 336</a> Leadership	2
<a href="#">NUR 321L</a> Nursing Skills Development II	1
<a href="#">NUR 388</a> Concepts of Adult Health Nursing II	3
<a href="#">NUR 389L</a> Concepts of Adult Health Nursing II Practicum	2
<a href="#">NUR 392</a> Concepts of Maternal Child Health Nursing	4
<a href="#">NUR 393L</a> Concepts of Maternal Child Health Nursing Practicum	3
<a href="#">NUR 338</a> Pharmacotherapy II	2
<a href="#">NUR 426</a> Concepts of Complex Nursing	2
<a href="#">NUR 427L</a> Concepts of Complex Nursing Practicum	2
<a href="#">NUR 428</a> Concepts of Community and Public Health Nursing	2
<a href="#">NUR 429L</a> Concepts of Community and Public Health Nursing Practicum	2
<a href="#">NUR 409</a> Healthcare and Information Technology	2
<a href="#">NUR 410</a> Evidence-Based Practice in Nursing	2
<a href="#">NUR 431L</a> Nursing Skills Development III	1
<a href="#">NUR 447L</a> Synthesis and Assimilation Practicum	4
<a href="#">NUR 449</a> Synthesis Review Course	1

NUR 448	Transition to Professional Nursing Practice	2
Nursing Elective		3
Total Hours		66

## Additional Requirements

### Pre-application Credit Hour Requirement

Successful completion of all core and pre-nursing requirements and a minimum of 41 semester hours are prerequisites for admission to the School of Nursing. Final coursework may be in progress.

Grade of C or greater required for all core, pre-nursing and major in nursing courses and a minimum of a 2.75 for the core, pre-nursing and major in nursing courses to be considered for application.

### Pre-application mandatory meeting with pre-nursing advisor

In order to apply to the School of Nursing, all students must meet with their pre-nursing advisor to evaluate completion of all School of Nursing requirements for application and receive a Certificate of Advisement used to obtain an application for the School of Nursing

### Freshman Year Experience

Students entering UAB with less than 24 credit hours who plan to enter the nursing program are required by the University to take a 2 hour approved Freshman Year Experience course in order to graduate. This increases the total number of credit hours to 127 that is required for graduation from the BSN program for these students

## BSN Course Requirements

### BSN Foundation Courses

Grades for these courses will be used to calculate the BSN Foundation grade point average used in the determination for admission to the BSN program; a minimum grade of C is required in each course.

Requirements	Hours
BY 115 Human Anatomy & 115L and Human Anatomy Laboratory	4
BY 116 Introductory Human Physiology & 116L and Introductory Human Physiology Laboratory	4
BY 261 Introduction to Microbiology & 261L and Introduction to Microbiology Laboratory	4
CH 105 Introductory Chemistry I & CH 106 and Introductory Chemistry I Laboratory	4
CH 107 Introductory Chemistry II & CH 108 and Introductory Chemistry II Laboratory <sup>1</sup>	4
EH 101 English Composition I	3
EH 102 English Composition II	3
MA 105 Pre-Calculus Algebra or MA 110 Finite Mathematics	3
PY 212 Developmental Psychology	3
NTR 222 Nutrition and Health	3
MA 180 Introduction to Statistics or PY 216 Elementary Statistical Methods & 216L and Elementary Statistical Methods Laboratory	3

<sup>1</sup> If a student takes microbiology at UAB, please contact your pre-nursing advisor for appropriate required course. Otherwise, a second science with lab may be substituted (excludes Astronomy and Geology).

## Additional General Studies Courses

Requirements	Hours
Arts	3
History <sup>1</sup>	6
Humanities	3
Literature <sup>1</sup>	3
Elective, Core Curriculum Area II	3
Elective, Core Curriculum Area IV	3
NUR 100 Student Success in Nursing (or other approved Freshman Year Experience course.)	2

<sup>1</sup> Student needs either a 6 hour sequence of history or literature.

## Professional Nursing Courses

These courses are taught after admission into the School of Nursing.

### Fall/Spring admission

Requirements	Hours
NUR 310 Concepts of Professional Nursing	3
NUR 311L Nursing Skills Development I	2
NUR 312L Health Assessment Across the Lifespan	2
NUR 313L Concepts of Professional Nursing Practicum	2
NUR 315 Population Focused Health Care	2
NUR 318 Pathophysiologic Concepts	3
NUR 321L Nursing Skills Development II	1
NUR 322 Concepts of Behavioral Health Nursing	3
NUR 323L Concepts of Behavioral Health Nursing Practicum	2
NUR 326 Concepts in Adult Health Nursing I	3
NUR 327L Concepts of Adult Health Nursing I Practicum	2
NUR 328 Pharmacotherapy I	2
NUR 388 Concepts of Adult Health Nursing II	3
NUR 389L Concepts of Adult Health Nursing II Practicum	2
NUR 336 Leadership	2
NUR 338 Pharmacotherapy II	2
NUR 409 Healthcare and Information Technology	2
NUR 428 Concepts of Community and Public Health Nursing	2
NUR 429L Concepts of Community and Public Health Nursing Practicum	2
NUR 392 Concepts of Maternal Child Health Nursing	4
NUR 393L Concepts of Maternal Child Health Nursing Practicum	3
NUR 410 Evidence-Based Practice in Nursing	2
NUR 426 Concepts of Complex Nursing	2
NUR 427L Concepts of Complex Nursing Practicum	2
NUR 431L Nursing Skills Development III	1
NUR 447L Synthesis and Assimilation Practicum	4
NUR 448 Transition to Professional Nursing Practice	2
NUR 449 Synthesis Review Course	1
Nursing Elective	3

## Second Degree BSN Students Course Requirements

- **Traditional Entry** <http://www.uab.edu/nursing/home/student-information/acad-prog/bsn>
- **Accelerated Entry** <http://www.uab.edu/nursing/home/student-information/acad-prog/amnp>

Individuals who have completed a previous undergraduate degree, outside the field of nursing, and who have met the UAB criteria for School of Nursing admissions, may be considered for admission to the School of Nursing at the University of Alabama at Birmingham (UAB) Bachelor of Science of Nursing (BSN) program or the Accelerated Master's into Nursing Pathway (AMNP). Second-degree students seeking the BSN degree are admitted fall and spring terms. The AMNP program is a graduate level program, and results in a Master of Science in Nursing and admits in the spring term.

## Second Degree Applicant Requirements

- Earned at least a bachelor's degree in a major other than nursing at a regionally accredited institution.
- A minimum grade of "C" in all pre-nursing foundation courses (32 hours) with a pre-nursing foundation course GPA of at least 2.75 and an overall GPA of 2.75 OR a pre-nursing foundation course GPA of at least a 2.75 and a Graduate Record Examination (GRE) General Test score of: combined score of 297 on the verbal and quantitative sections and a 4 or better on the analytical writing skills portion.
- Submit all material, follow the same processes, and adhere to the same deadlines/requirements as all other undergraduate BSN applicants.
- Admission as a degree-seeking, pre-nursing student through the UAB Office of Undergraduate admissions. The on-line application for the UAB Office of Undergraduate Admissions is available at <https://www.uab.edu/home/apply-for-uab-admission> along with contact information.
- You may meet with a Pre-Nursing Advisor prior to submitting your application to the School of Nursing.
- Once admitted as an undergraduate pre-nursing student to UAB, you will be notified through an offer of admission letter to contact your assigned Pre-Nursing Advisor at (205) 975-7529 for pre-nursing academic advisement.
- Second degree students are eligible for the Honors in Nursing Program.

The following prerequisite courses (32 credit hours) **must be successfully completed** (with a grade of C or greater) prior to the student being considered for admission to the undergraduate program in the School of Nursing:

Requirements	Hours
BY 115 Human Anatomy	4
BY 116 Introductory Human Physiology	4
BY 261 Introduction to Microbiology	4
CH 105 Introductory Chemistry I & CH 106 and Introductory Chemistry I Laboratory <sup>1</sup>	4
CH 107 Introductory Chemistry II & CH 108 and Introductory Chemistry II Laboratory <sup>1</sup>	4
MA 105 Pre-Calculus Algebra or MA 110 Finite Mathematics	3
PY 212 Developmental Psychology	3

NTR 222 Nutrition and Health	3
<b>Statistics</b>	<b>3</b>
MA 180 Introduction to Statistics	
PY 216 Elementary Statistical Methods & 216L and Elementary Statistical Methods Laboratory	
QM 214 Quantitative Analysis I	
Total Hours	32

- <sup>1</sup> If a student takes Microbiology at UAB, please contact your pre-nursing advisor for appropriate required course. Otherwise, a second science with lab may be substituted (excluding Geology and Astronomy).

Second-degree applicants must submit all material, follow the same processes and adhere to the same deadlines and requirements as all other undergraduate BSN applicants. The upper-division Nursing course requirements (66 credit hours) and the length of the program (five semesters) for second-degree applicants/students are the same as for the basic BSN applicants/students.

For information related to specific programs of study please refer to the School of Nursing catalog.

## Proposed Program of Study for a Major in Nursing

Students may deviate from this curriculum plan only with the permission of the BSN Program Coordinator/Honors Program Coordinator.

Students entering UAB with less than 24 credit hours who plan to enter the nursing program are required to take a 2 hour approved Freshman Year Experience course in order to graduate.

Freshman					
First Term	Hours	Second Term	Hours		
EH 101	3	EH 102	3		
MA 110 or 105	3	BY 115	4		
CH 105 & CH 106	4	CH 107 & CH 108	4		
PY 101	3	Core Curriculum Area IV: History	3		
13		14			
Sophomore					
First Term	Hours	Second Term	Hours		
BY 116	4	BY 261	4		
MA 180 or PY 216	3-4	NTR 222	3		
Core Curriculum Area II: Literature	3	PY 212	3		
Core Curriculum Area II: Fine Arts	3	Core Curriculum Area II: Humanities (Literature for sequence)	3		
Core Curriculum Area II: Humanities	3	Core Curriculum Area IV: Social and Behavioral Science (History for sequence)	3		
16-17		16			
Junior					
First Term	Hours	Second Term	Hours	Summer Term	Hours
NUR 310	3	NUR 326	3	NUR 388	3
NUR 311L	2	NUR 327L	2	NUR 389L	2
NUR 313L	2	NUR 322	3	NUR 409	2
NUR 312L	2	NUR 323L	2	NUR 338	2
NUR 315	2	NUR 336	2	NUR 428	2
NUR 318	3	NUR 328	2	NUR 429L	2

	NUR 321L	1	
	14	15	13
<b>Senior</b>			
<b>First Term</b>	<b>Hour</b>	<b>Second Term</b>	<b>Hours</b>
NUR 426	2	NUR 447L	4
NUR 427L	2	NUR 449	1
NUR 410	2	NUR 448	2
NUR 392	4	NUR Elective	3
NUR 393L	3		
NUR 431L	1		
	14	10	

Total credit hours: 125-126

- <sup>1</sup> The nursing elective may be taken any term prior to graduate but the recommended time is for the summer semester between the Junior and Senior year.

## Honors in Nursing

### Purpose

Provide research experiences that engage students, faculty, and staff with the community to identify and meet community needs and to enhance academic engagement.

### Eligibility

Acceptance into the Nursing Honors Program requires the student to:

- Be accepted into the School of Nursing
- Have earned a 3.40 GPA in Foundation courses
- Have earned a 3.00 GPA UAB and overall
- Have submitted the Honors Program Application Form
- Have been selected by Honors Committee from application, transcript evaluation, and interview
- BSN, Second degree BSN students, and RN-BSN Mobility students are eligible for participation in the nursing honors program

### Requirements

- Maintenance of a 3.00 GPA (UAB) and a 3.25 GPA in nursing courses through graduation.
- Completion of a minimum of 6 credit hours designated for honors clinical courses/seminars.
- An oral or poster presentation at a designated meeting in the School of Nursing, professional meeting or scientific session.

### Benefits

Students who successfully complete the program will receive a certificate of acknowledgement at the UAB Honors Convocation and will graduate "With Honors in Nursing". Students who participate in both the UAB Honors program and the School of Nursing Honors program will graduate "With University Honors in Nursing".

The UAB Honors in Nursing Program endeavors to offer specific students enrichment opportunities beyond the traditional courses. Comprised of three courses that encompass six credit hours, the program adds three additional credit hours to the standard curriculum. A detailed explanation of the three semester hours of coursework include:

A focus on the introduction to nursing research, research ethics and the fundamentals of research critique. In addition, research groups are created and assigned to an established/funded research teams (most congruent with the students identified research interest when

possible). While students do not actively participate in the research team until semester three of the program, each student group completes an annotated bibliography specific to the research question of their team.

1. A focus on the introduction to nursing research, research ethics and the fundamentals of research critique. In addition, research groups are created and assigned to an established/funded research teams (most congruent with the students identified research interest when possible). While students do not actively participate in the research team until semester three of the program, each student group completes an annotated bibliography specific to the research question of their team.
2. Additional research education that includes research terminology, design, strengths/limitations of select designs, sampling principles, data interpretation, and dissemination. At the conclusion of semester two, each group builds upon the annotated bibliography to complete a review of the literature paper specific to the primary research question of the team.
3. Completion of a 90-hour practicum as a member of their assigned research team and engagement in activities across the research spectrum. Each group develops an abstract and presents a poster at the UAB Undergraduate Research Expo that highlights the specific work completed during the practicum.

### Contact

For more information and/or admission to the Nursing Honors Program, please contact:

Leigh Bray, PhD, RN, CNL  
Assistant Professor and Nursing Honor's Program Co-Director  
Phone: 205-934-4403  
Email: leighannbray@uab.edu

Allison Jones, PhD, RN, CCNS  
Assistant Professor and Nursing Honor's Program Co-Director  
Phone: 205-934-4702  
Email: arjones3@uab.edu (samorris@uab.edu)

## Admission Requirements for the BSN Degree: RN-BSN Pathway

Admission to the RN to BSN pathway is available in the fall and spring terms. Requirements for admission include:

- Admission to UAB as an RN-BSN student through the Office of Undergraduate Admissions. Once accepted, students need to apply to the School of Nursing; contact Office of Student Success at (205) 975-7529 for an application.
- Admission grade point average of at least 2.5 on a 4.0 scale.
- A grade of at least "C" in Human Anatomy, Human Physiology, Microbiology, Descriptive Statistics and an elective (Area V courses).
- Evidence of successful completion of a regionally accredited diploma or associate degree nursing program and an active unrestricted and unencumbered license to practice as a registered nurse in the state in which you will complete the leadership project. Students who enter the RN-BSN directly from their ADN program must show proof of licensure before beginning their second semester of course work.
- Possess an unrestricted and unencumbered nursing license to practice nursing in the state where you plan to conduct your clinical practicum

- Students may begin nursing courses if 6 or less semester hours of general studies requirements are to be completed; all general studies coursed must be completed before starting their third semester of course work.
- Advisement with the Program Manager whose contact information is listed on the next page (this can be done before applying to UAB).

\*\*Student with a bachelor's degree may also qualify for the ADN to MSN option. <https://www.uab.edu/nursing/home/student-information/acad-prog/msn>

## Pre-Nursing Requirements for RN-BSN Mobility

Requirements	Hours
<b>Required Pre-Nursing</b>	
BY 115 Human Anatomy	4
BY 116 Introductory Human Physiology	4
BY 261 Introduction to Microbiology	4
PY 212 Developmental Psychology	3
<b>Statistics</b>	
Select one of the following courses:	3
MA 180 Introduction to Statistics	
MA 480 Introduction to Statistics	
PY 216 Elementary Statistical Methods	
<b>Elective</b>	
Any course not used to satisfy another requirement may be taken from any area.	3
<b>Total Hours</b>	<b>21</b>

## Major in Nursing (RN-BSN Mobility)

Requirements	Hours
<b>Required Nursing Courses</b>	
<b>Nursing Elective</b>	
NRN 401 Professional Nursing Concepts for RN's	4
NRN 402 Professional Leadership Development for RN's	3
NRN 403 Systems Leadership for RN's	3
NRN 404 Quality and Patient Safety for RN's	3
NRN 405 Evidence-Based Practice and Informatics for RN's	4
NRN 406 Applied Pathophysiology Across the Lifespan for RN's	3
NRN 407 Transitional Care Coordination Across the Lifespan for RNs	3
NRN 408 Population Health for RNs	4
Select three hours from Nursing (NUR) courses not used to satisfy other requirements.	3
<b>Total Hours</b>	<b>30</b>

## Additional Requirements

### RN License

Only students who are licensed RNs may complete the RN-BSN Option curriculum

### Pre-Application Advisor Contact

Students interested in the RN-BSN Option should contact the Student Nurse Recruiter who advises the RN-BSN Option students. Please call 205-975-7529 to speak to the advisor.

## Progression Requirements

The RN student who has successfully completed all prerequisite courses and NRN 401, NRN 405, and NRN 406 will receive equivalency credit of 36 semester hours for specified clinical nursing courses.

## Flexible Scheduling

Upper division courses in the RN-BSN pathway to BSN are fully distance accessible, offering RN students the flexibility of completing the BSN course work while maintaining their work and family responsibilities. A variety of on-line teaching methods are used including online discussions, web-based activities, and online testing. Faculty are available in person, by phone or in a virtual classroom format. Students are required to attend an on-campus orientation prior to beginning the program.

## RN-BSN Option Course Requirements

### BSN Foundation Courses

Grades for these courses will be used to calculate the BSN Foundation grade point average for admission into the School of Nursing

Requirements	Hours
BY 115 Human Anatomy (Core)	4
BY 116 Introductory Human Physiology	4
BY 261 Introduction to Microbiology	4
CH 105 Introductory Chemistry I & CH 106 and Introductory Chemistry I Laboratory	4
CH 107 Introductory Chemistry II & CH 108 and Introductory Chemistry II Laboratory	4
EH 101 English Composition I	3
EH 102 English Composition II	3
MA 105 Pre-Calculus Algebra or any Core Mathematics	3
PY 212 Developmental Psychology	3
Elective	3
Statistics	3

## Additional General Studies Courses

Requirements	Hours
Fine Art	3
Literature <sup>1</sup>	3
Humanities	3
History <sup>1</sup>	3
Introduction to Psychology	
Elective from Area IV or History (If literature sequence completed, can do elective from Area IV). <sup>1</sup>	3
Elective from Area II or Literature (If literature sequence is completed, can do an elective from Area IV) <sup>1</sup>	3

<sup>1</sup> Students need either a 6 hour sequence in literature or a 6 hour sequence history.

## Professional Nursing Courses

Requirements	Hours
NRN 401 Professional Nursing Concepts for RN's	4
NRN 402 Professional Leadership Development for RN's	3
NRN 403 Systems Leadership for RN's	3
NRN 404 Quality and Patient Safety for RN's	3
NRN 405 Evidence-Based Practice and Informatics for RN's	4

NRN 406	Applied Pathophysiology Across the Lifespan for RN's	3
NRN 407	Transitional Care Coordination Across the Lifespan for RNs	3
NRN 408	Population Health for RNs	4
Nursing Elective		3

New Footnote  
36 credit hours of validated courses from previous nursing content which is awarded after successful completion of NRN 401, NRN 405 and NRN 406.

## Admission Requirements for the UAB Nursing Community College Partnership (UABNCCP) Joint Enrollment Pathway

The UAB School of Nursing (UABSON) has partnered with Wallace State Community College (WSCC) and Jefferson State Community College (JSCC) to offer the new Joint Enrollment Pathway. This new pathway allows for students to enroll in both the associate degree in nursing program and the UABSON RN to BSN Pathway so that they earn the BSN degree at the same time they are completing the associate degree in nursing. Students enrolled at UAB who complete the general education and nursing pre-requisites courses required for the bachelor's degree can apply for the Joint Enrollment Pathway. This allows the UAB student to remain enrolled at and graduate from UAB with the bachelor's degree.

The Joint Enrollment Pathway is designed to eliminate some of the barriers to achieving a bachelor's degree in nursing. Through collaboration among UAB, WSCC, and JSCC, the students in the Joint Enrollment Pathway can complete all the general education and nursing prerequisite courses required for the bachelor's degree and Joint Enrollment at their home campus. Students has the following advantages:

- UAB students who have completed the general education and nursing prerequisite courses required for the bachelor's degree can apply for the Joint Enrollment option and remain enrolled in and graduate from UAB.
- The Joint Enrollment Pathway curriculum can be completed in five semesters of full-time study.
- Students admitted to the Joint Enrollment Pathway will complete both the Associate of Applied Science in Nursing and the RN to BSN Pathway coursework and earn the AAS and BSN degrees at the same time.
- The Associate of Applied Science in Nursing (AAS) coursework is offered on the community college campus and the RN to BSN coursework is offered in an online format through UAB School of Nursing.

## Joint Enrollment Admission Criteria

- Achieve a minimum grade of "C" or higher in all required general studies and nursing pre-requisite courses (See Joint Enrollment Pre-requisites).
- A minimum ACT composite score of 20
- A minimum cumulative GPA for all college work of 2.5 on a 4.0 scale.

## Joint Enrollment Pathway Admission Overview

- Individuals interested in the Joint Enrollment Pathway should contact the UABSON RN to BSN Joint Enrollment Pathway Program Manager by calling 205-975-7529 or using the information listed at <https://www.uab.edu/nursing/home/academics/undergraduate/joint-enrollment>
- After students have completed admission to the partner community college, they must apply separately to both the Community College Nursing Program (Wallace State Community College or Jefferson State Community College) and the UABSON RN to BSN Pathway to be considered for the Joint Enrollment Pathway.
- Applicants must first be admitted to the Community College Nursing Program and qualify for Joint Enrollment in order to be admitted to the UABSON RN to BSN Pathway.
- Joint Enrollment requires the applicant to be admitted to both the Community College and to the community college nursing program at either WSCC or JSCC, as well as to the RN to BSN Pathway at the UAB School of Nursing. In addition, the students must be admitted to the associate degree nursing program before admission to the RN to BSN Pathway can be confirmed.
- Since the Joint Enrollment Pathway requires completion of multiple applications, please refer to <https://www.uab.edu/nursing/home/academics/undergraduate/joint-enrollment> for more information.

## Joint Enrollment Pathway Course Requirements

### BSN Foundation Courses

Requirements	Hours
BY 115 Human Anatomy (Core)	4
BY 116 Introductory Human Physiology	4
BY 261 Introduction to Microbiology	4
CH 105 Introductory Chemistry I & CH 106 and Introductory Chemistry I Laboratory	4
CH 107 Introductory Chemistry II & CH 108 and Introductory Chemistry II Laboratory	4
EH 101 English Composition I	3
EH 102 English Composition II	3
MA 105 Pre-Calculus Algebra or any Core Mathematics	3
PY 212 Developmental Psychology	3
Elective	3
Statistics	3

### Additional General Studies Courses

Requirements	Hours
Fine Art	3
Literature <sup>1</sup>	3
Humanities	3
History <sup>1</sup>	3
Introduction to Psychology	
Elective from Area IV or History (If literature sequence completed, can do elective from Area IV). <sup>1</sup>	3

Elective from Area II or Literature (If literature sequence is completed, can do an elective from Area IV) <sup>1</sup>

<sup>1</sup> Students need either a 6 hour sequence in literature or a 6 hour sequence in history.

## Professional Nursing Courses

Requirements	Hours
NRN 401 Professional Nursing Concepts for RN's	4
NRN 402 Professional Leadership Development for RN's	3
NRN 403 Systems Leadership for RN's	3
NRN 404 Quality and Patient Safety for RN's	3
NRN 405 Evidence-Based Practice and Informatics for RN's	4
NRN 406 Applied Pathophysiology Across the Lifespan for RN's	3
NRN 407 Transitional Care Coordination Across the Lifespan for RNs	3
NRN 408 Population Health for RNs	4
Nursing Elective	3

New 36 credit hours of validated courses from previous nursing content which is awarded after successful completion of NRN 401, NRN 405 and NRN 406. As part of the Joint Enrollment Pathway, students will complete Nursing coursework at the partnering community college in Fundamentals of Nursing, Nursing Concepts I & II, Evidence Based Clinical Reasoning, Advanced Nursing Concepts, and Advanced Evidence Based Clinical Reasoning

## NRN- RN Nurse Mobility Courses

### NRN 401. Professional Nursing Concepts for RN's. 4 Hours.

The purpose of this course is to enhance the students' knowledge of the role of the professional nurse in meeting the health needs of society. The focus of the course is on the historical, legal, political, and ethical issues affecting the nursing profession. the course will emphasize important skills for professional; nursing, including scholarly writing and inter-professional communication. The course will examine the relationship between selected issues, trends, and theories and professional nurse, including caregiver, teacher, advocate, consumer of research, and counselor.

### NRN 402. Professional Leadership Development for RN's. 3 Hours.

The purpose of the course is to provide students with the foundation of professional leadership development., The focus of this course is on professional nursing leadership development within the inter-professional healthcare system. The emphasis is on student learning through self-reflection, team dynamic assessment, group discussion, and case analysis. Concepts included in the course, but not limited to, self-assessment, conflict resolution, difficult conversations, leadership theories, leadership behaviors, professional development, and self-reflection.

### NRN 403. Systems Leadership for RN's. 3 Hours.

The purpose of this course is to provide the Registered Nurse with the theoretical and practical knowledge needed to effectively lead within complex health care systems. The course content focuses on the bachelor-prepared nurse's contributions to a diverse and health organizational culture, patient-care quality and safety, and resource and personnel management. In addition, emphasis is placed on developing the competencies needed to collaboratively practice within inter-professional teams, foster innovation, and act as a change agent within patient care settings.

### NRN 404. Quality and Patient Safety for RN's. 3 Hours.

The purpose of this course is to provide the student with the cognitive and affective skills needed to effectively contribute to quality and safety initiatives within patient care setting(s). The focus of the course is on the professional nurse's role in creating a culture of safety, while applying quality improvement theory and models to nursing practice. The course emphasizes competencies needed to collaboratively practice within inter-professional teams to ensure patient safety and promote quality improvement.

### NRN 405. Evidence-Based Practice and Informatics for RN's. 4 Hours.

The purpose of this course is to introduce students to basic research concepts and the fundamentals of informatics to be applied to evidence-based practice. This course focuses on developing student knowledge and skills to: (1) locate and evaluate research relevant to nursing practice; (2) use a problem solving approach to examine question identified in nursing practice; and (3) identify technological solutions to enhance patient safety and outcomes. Emphasis is placed on developing a spirit of inquiry, research methods and ethics, and the role of informatics in research and healthcare.

### NRN 406. Applied Pathophysiology Across the Lifespan for RN's. 3 Hours.

The purpose of this course is to provide a foundation to assist with planning preventative health care measures and practices to maintain the health and the well-being of populations across the life-span. This course focuses on the structure and function of the human body and the concepts as it relates to health and disease across the lifespan,. The first part of the course emphasizes the basic concepts of pathophysiology: cellular level of response, genetic alterations, fluid and electrolytes, acid-base balance, and immune response and the second part of course focuses on the application of the basic concepts to body systems and disease processes across the lifespan.

### NRN 407. Transitional Care Coordination Across the Lifespan for RNs. 3 Hours.

The purpose of this course is to apply nursing knowledge and skills to promote safe, quality patient care in a variety of transitional care settings across the lifespan. The focus of this course will be to apply concepts of care coordination and transitional care in order to focus on achieving the outcomes of increasing access to care, preventing hospital readmissions, and promoting innovative, cost-effective, quality care for highly vulnerable and/or chronically ill clients across the lifespan during critical transitions. Emphasis will be upon coordination and promotion of care across the lifespan; within, between and across settings, as well as between providers. Additionally, emphasis will be placed on identification of required community resources, development of a mutually-agreeable plan of care with the client, coordination of care across the lifespan with all providers, the time-limited nature of transitional care services, client, family and caregiver education, identifying root causes of poor health outcomes, avoiding hospital readmissions and promoting optimal client outcomes.

### NRN 408. Population Health for RNs. 4 Hours.

The purpose of this course is to prepare the generalist nurse to lead population focused health promotion and prevention initiatives that address national and global health issues. The focus of the course is the identification and mitigation of health hazards, social determinants, and regulatory, legal and ethical issues that affect population health. Emphasis is on analyzing current data and best evidence to advocate through policy change for improved health status of individuals, communities, and diverse populations.

**NRN 411L. Concepts of Primary Care. 3 Hours.**

The purpose of this course is to provide an overview of primary care essentials for the baccalaureate-prepared nurse to facilitate a transition into the roles and responsibilities of the BSN-prepared nurse in primary care settings. This course will focus on content designed to highlight the knowledge, skills and abilities of the BSN-prepared nurse in primary care settings and the impact that this professional nursing role can have on the provision of quality, safe nursing care and the achievement of optimal patient outcomes. Emphasis will be placed upon the development of primary care competencies for professional nurses, assessment and evaluation of quality and safety care indicators, development and management of the inter-professional team.

**NUR-Nursing Courses****NUR 100. Student Success in Nursing. 2 Hours.**

This course will provide instruction regarding the competencies developed by the university to assist pre-nursing freshman students in making the transition from high school to college. Within the competencies specified by the university, students will be exposed to related topics in the School of Nursing (SON). Faculty expectations and student responsibilities will focus on the pre-nursing general studies and will facilitate a platform for introducing expectations of faculty in the SON. Students will be prepped for the SON admission process, emphasizing the importance of good study habits, time management, and test taking skills. Student will be given the opportunity to participate in a shadowing experience to gain a sense of the holistic approach to the nursing model of care.

**NUR 101. Survey of the Profession of Nursing. 3 Hours.**

Will provide a greater knowledge of the nursing profession to assist pre-nursing freshmen students in making their final decision regarding their application to nursing school. Within the competencies specified by the university, students will also be exposed to related topics in the School of Nursing (SON). Faculty expectations and students responsibilities will not only focus on careers in nursing but also will facilitate a platform for introducing students to nursing regulation and career opportunities. The nursing curriculum will be presented and pedagogical links will be made between selected websites and the need for that knowledge for future registered nurses. Students will also be prepped for the licensure process, emphasizing the importance of high moral character. Guest speakers representing select Advanced Practice Nursing Roles will be available to answer questions and discuss their experiences as advanced practice nurses. Students will conclude the semester with scholarly paper on the topic of their choice.

**NUR 305. Principles of Oncology Nursing. 3 Hours.**

This course provides a theoretical base for students to diagnose and manage oncology health problems in adults. Emphasis is placed on integration of knowledge of pathophysiology, clinical assessment, and nursing and medical management.

**Prerequisites:** NUR 334 [Min Grade: C] or NUR 347 [Min Grade: C]

**NUR 306. Joint Enrollment Success. 3 Hours.**

The purpose of this course is to facilitate learning and augment knowledge to help Joint Enrollment students with specific skills to support success in the nursing program. Topics addressed in this course to promote student success are time management, study skills, prioritization and critical thinking, and other strategies to support success in content-specific nursing courses. Emphasis is on enhancing foundation knowledge to prepare students for success in the Joint Enrollment Program.

**NUR 307. Interprofessional Global Health Service Learning I. 1 Hour.**

This course provides students with an opportunity to apply principles of interprofessional collaboration, community partnerships, and global health in the development of a plan to address a global health problem in collaboration with a community partner. Students apply concepts and theories related to global health, interprofessional collaboration, team building, community partnerships, and the ecological framework developing a plan to address a specific global health problem with a community partner. The course focuses on planning a service learning project that will benefit a community partner. The project is planned and carried through by an interprofessional team. The course is primarily experiential, with students' time spent on planning the project and learning leadership and project planning skills.

**NUR 308. Interprofessional Collaboration (IPC) and Community Partnerships in Global Health. 1 Hour.**

This course provides students with an understanding of principles of interprofessional collaboration and community partnerships that, together with key social and economic concepts of global health, enables them to participate in developing and implementing sustainable global health projects in collaboration with local and international community partners. Working in interdisciplinary teams, students apply concepts and theories related to global health, interprofessional collaboration, team building, community partnerships, and the socioecological framework to develop a plan to address a specific global health problem with a community partner.

**NUR 309L. Veterans Transition to Professional Nursing. 4 Hours.**

The purpose of this course is to develop the skills necessary to complete a holistic assessment and to apply fundamental nursing concepts and processes in providing safe, quality family centered nursing care in a variety of settings, focusing on medically under-served populations. The course focuses on the role of the nurse as caregiver and educator. Emphasis is on the professional attributes of the nurse, legal and ethical implications for nursing practice and beginning care competencies.

**NUR 310. Concepts of Professional Nursing. 3 Hours.**

The purpose of this course is to introduce fundamental nursing concepts and processes of professional nursing that assist in providing safe, quality nursing care to clients and their families. The course focuses on the role of the nurse as caregiver and educator. Emphasis is on the professional attributes of the nurse, legal and ethical implications for nursing practice and beginning care competencies.

**NUR 311L. Nursing Skills Development I. 2 Hours.**

The purpose of this course is to introduce the fundamental nursing skills required to provide safe, quality care. The course focuses on the role of the nurse as caregiver. Emphasis is on basic psychomotor skills and beginning care competencies.

**NUR 312L. Health Assessment Across the Lifespan. 2 Hours.**

The purpose of this course is to develop the skills necessary to complete a holistic assessment including physiological, spiritual, cultural, psychological, and developmental components. The course focuses on the role of the nurse as caregiver and educator. Emphasis is placed on the skills and clinical reasoning necessary to assess clients/patients across the lifespan.

**NUR 313L. Concepts of Professional Nursing Practicum. 2 Hours.**

The purpose of this course is to apply fundamental nursing concepts and processes in providing safe, quality family centered nursing care in a variety of settings. The course focuses on the role of the nurse as caregiver and educator. Emphasis is on the professional attributes of the nurse, legal and ethical implications for nursing practice and beginning care competencies.

**NUR 315. Population Focused Health Care. 2 Hours.**

The purpose of this course is to introduce health care delivery systems, behaviors and practices that affect the health status and well-being of populations (or the "overall health of populations). The focus is on the role of the nurse as caregiver, advocate, and collaborator. Emphasis is on strategies related to health promotion, illness and injury prevention, health literacy and cultural competency to improve the care of individuals, families, groups, communities and populations.

**NUR 318. Pathophysiological Concepts. 3 Hours.**

The purpose of this survey course is to introduce the student to the foundation pathophysiological processes associated with disease. The course focuses on understanding the pathophysiologic changes that occur in select common diseases of the neurological, cardiovascular, pulmonary, gastrointestinal, renal, and endocrine systems with an emphasis on the role of cellular injury, immunity, inflammation, fluid and electrolytes, and genetics.

**NUR 320. Social Responsibility in Global Health. 1 Hour.**

This course provides students with an understanding of key social and economic concepts of global health that, together with an understanding of interprofessional collaboration and community partnerships, will enable them to participate in developing and implementing sustainable global health projects in collaboration with local and international community partners. The course is open to undergraduate and graduate students who are enrolled in two co-requisite courses that are requirements for students participating in the interprofessional global health service learning program at the University of Alabama at Birmingham. Working in interdisciplinary teams, students apply concepts and theories related to global health, interprofessional collaboration, team building, community partnerships, and the socioecological framework to develop a plan to address a specific global health problem with a community partner.

**NUR 321L. Nursing Skills Development II. 1 Hour.**

The purpose of this course is to build on nursing skills attained in Nursing Skills Development I to provide safe, quality nursing care. The course focuses on the role of the nurse as caregiver and collaborator. Emphasis is on clinical reasoning and intermediate psychomotor skills and care competencies.

**Prerequisites:** NUR 310 [Min Grade: C] and NUR 311L [Min Grade: C] and NUR 312L [Min Grade: C] and NUR 313L [Min Grade: P] and NUR 315 [Min Grade: C]

**NUR 322. Concepts of Behavioral Health Nursing. 3 Hours.**

The purpose of this course is to introduce concepts of mental health and mental illness throughout the lifespan with consideration given to therapeutic communication and the implementation of safe, quality nursing care to clients and their families. Focus is on the roles of the nurse as caregiver, educator, counselor, advocate, and care manager. Emphasis is on the professional attributes of the nurse concerning legal, ethical, and cultural implications for nursing practice across the mental health-illness continuum.

**Prerequisites:** NUR 310 [Min Grade: C] and NUR 311L [Min Grade: C] and NUR 312L [Min Grade: C] and NUR 313L [Min Grade: P] and NUR 315 [Min Grade: C]

**NUR 323L. Concepts of Behavioral Health Nursing Practicum. 2 Hours.**

The purpose of this course is to implement therapeutic communication and safe, quality, family-centered nursing care to clients in mental health settings. Focus is on the roles of the nurse as caregiver, educator, counselor, advocate, and care manager. Emphasis is on the professional attributes of the nurse concerning legal, ethical, and cultural implications for nursing practice across the mental health-illness continuum.

**Prerequisites:** NUR 310 [Min Grade: C] and NUR 311L [Min Grade: C] and NUR 312L [Min Grade: C] and NUR 313L [Min Grade: P] and NUR 315 [Min Grade: C]

**NUR 326. Concepts in Adult Health Nursing I. 3 Hours.**

The purpose of this course is to introduce the student to alterations in regulation and homeostasis, protection and movement, oxygenation and coping and stress tolerance. The course focuses on the role of the nurse as caregiver and educator. Emphasis is on the nursing care and management of young, middle-age, and older adults.

**Prerequisites:** NUR 310 [Min Grade: C] and NUR 311L [Min Grade: C] and NUR 312L [Min Grade: C] and NUR 313L [Min Grade: P] and NUR 315 [Min Grade: C]

**NUR 327L. Concepts of Adult Health Nursing I Practicum. 2 Hours.**

The purpose of this course is to apply knowledge related to alterations in regulation and homeostasis, oxygenation, and protection and movement to the care of young, middle age, and older adults. The course focuses on the role of the nurse as caregiver, educator, and advocate. Emphasis is on the nursing care and management of young, middle-age, and older adults.

**Prerequisites:** NUR 310 [Min Grade: C] and NUR 311L [Min Grade: C] and NUR 312L [Min Grade: C] and NUR 313L [Min Grade: P] and NUR 315 [Min Grade: C]

**NUR 328. Pharmacotherapy I. 2 Hours.**

The purpose of this survey course is to introduce students to concepts of pharmacotherapy. The focus of the course is the application of principles of pharmacotherapies to select physiologic mechanisms and body systems. Course content emphasizes nursing implications related to pharmacotherapies.

**Prerequisites:** NUR 318 [Min Grade: C]

**NUR 333. Growth and Development. 3 Hours.**

The content of this course is centered around major theories of development; including physiological, psychoanalytic, social, stimulus-response, cognitive and moral. Current areas and findings of research are investigated and research designs and methods are critiqued. Self-selected in depth studies are made and shared. Contributions of the study of development functional practice of nursing are demonstrated. Admission to the School of Nursing is required.

**NUR 335. Issues in Women's Health. 3 Hours.**

This course will identify a broad range of health issues that are either unique to women or of special importance to women and will also examine the roles that women play as both providers and consumers of health care in the United States. The student will also provide with the opportunity to explore health care issues of women from adolescence through old age. The interface of gender, socio-economic disadvantages and minority status will be discussed. Feminist theory will provide the framework for exploring these issues. A primary object of this course is enabled the student to become an informed consumer of health care services.

**NUR 336. Leadership. 2 Hours.**

The purpose of this course is to introduce concepts of leadership development. The focus is on the roles of leader, advocate and collaborator. Emphasis is on the development of individual leadership knowledge and skills.

**NUR 338. Pharmacotherapy II. 2 Hours.**

This course is a continuation of NUR 328, Pharmacotherapy I. The purpose of this course is to increase student knowledge of concepts of pharmacotherapy and disease process. The focus of the course is the application of principles of pharmacotherapies to select physiologic mechanisms and body systems. Course content emphasizes nursing implications related to pharmacotherapies.

**Prerequisites:** NUR 328 [Min Grade: C]

**NUR 347. Pathophysiology for Professional Nursing Practice for RNs. 3 Hours.**

This course builds on basic anatomy and physiology to provide the adult learner with an opportunity to apply previously learned principles in explaining physiologic adaptations to pathogenic changes for the purpose of enhancing nursing care of patients. The first part of the course emphasizes the basic concepts of pathophysiology: cellular level of response, genetic alterations, fluid and electrolytes, acid-base balance, and immune response. The second part of the course focuses on the application of the basic concepts to body systems and disease processes. The relationship between pathophysiologic concepts and nursing care of clients will be emphasized throughout the course. Admission to the RN Mobility Program required.

**NUR 370. Clinical Pharmacology. 3 Hours.**

This course focuses on the analysis and utilization of principles of pharmacology and pharmacokinetics for the purpose of planning, implementing, and evaluating therapeutic pharmacological interventions as they relate to nursing practice. The unique characteristics of special populations related to therapeutic needs, as well as drug absorption, metabolism, and excretion are defined. Admission to the School of Nursing is required.

**NUR 378. Nursing of the Older Adult for RNs. 3 Hours.**

NUR 378 focuses on the unique needs of older adult patients who require nursing care in a variety of health care settings. The older adult as a heterogeneous, holistic person is emphasized in light of current and future health care needs. Concepts of healthy aging, and care in the preventive, restorative, acute and chronic domains will be explored. The professional role of the nurse as advocate is developed in diverse learning activities. Admission to the RN Mobility Program required.

**NUR 380. Spanish for Health Professionals. 3 Hours.**

Intensive conversation to acquaint health professionals with intermediate structure of Spanish. The course focuses on practical vocabulary, idiomatic expressions, medical terminology and cultural patterns of Spanish-speaking patients.

**NUR 381. Informatics and Research for Nursing Practice for RNs. 4 Hours.**

This course is designed to prepare students with the knowledge and skills to: (1) locate and evaluate research relevant to nursing practice; (2) use a problem solving approach to examine questions identified in nursing practice, and; (3) identify technological solutions to enhance patient safety and outcomes. Quantitative Literacy is a significant component of this course.

**NUR 383. Health Literacy Identifying Risk Populations. 3 Hours.**

NUR 383 is designed to provide students with a greater understanding and an improved knowledge level regarding the importance of health literacy and the challenges presented by low health literacy. Interventions and planned programs that are effective in the identification of low health literacy in America will be introduced to the student. The course will provide insight to the multidimensional nature of low health literacy and provide examples of multidisciplinary research in health literacy.

**NUR 387. Supplemental Academic Course for Support (SACS). 1-3 Hour.**

The purpose of this distance-accessible course is to introduce a structured format for students to review nursing concepts and processes related to a specific patient population. The course focuses on the role of the nurse as caregiver. Emphasis is on test-taking strategies and the review of didactic content to strengthen the student's knowledge base.

**NUR 388. Concepts of Adult Health Nursing II. 3 Hours.**

The purpose of this course is to augment previous knowledge gained in Concepts of Adult Health Nursing I related to regulation and homeostasis, protection and movement, coping and stress tolerance and oxygenation. The course focuses on the role of the nurse as caregiver, manager, collaborator, and educator. Emphasis is on the nursing care and management of young, middle-age, and older adults.

**Prerequisites:** NUR 321L [Min Grade: C] and NUR 322 [Min Grade: C] and NUR 323L [Min Grade: C] and NUR 326 [Min Grade: C] and NUR 327L [Min Grade: C] and NUR 336 [Min Grade: C]

**NUR 389L. Concepts of Adult Health Nursing II Practicum. 2 Hours.**

The purpose of this course is to apply the expand role of the nurse in providing care for patients with alterations in regulation and homeostasis, oxygenation, and protection, and movement. The course focuses on the role of the nurse as caregiver, manager, collaborator, advocate, and educator. Emphasis is on the nursing care and management of young, middle-age, and older adults.

**Prerequisites:** NUR 321L [Min Grade: C] and NUR 322 [Min Grade: C] and NUR 323L [Min Grade: C] and NUR 326 [Min Grade: C] and NUR 327L [Min Grade: C] and NUR 336 [Min Grade: C]

**NUR 390. Independent Study in Nursing. 1-6 Hour.**

Individually designed learning experiences. Must be a junior year nursing student and have a written Independent Study contract signed by the faculty and the Associate Dean.

**NUR 391. Independent Study in Nursing. 1-6 Hour.**

Individually designed clinical learning experiences. Must be a junior year nursing student and have a written Independent Study contract signed by the faculty and the Associate Dean.

**NUR 392. Concepts of Maternal Child Health Nursing. 4 Hours.**

The purpose of this course is to build upon knowledge gained in previous nursing and pre-nursing courses in the care of childbearing and childrearing families. This course focuses on the role of the nurse as educator, caregiver, collaborator, and advocate. The course emphasis is on the application of theoretical and empirical knowledge from nursing and the scientific and humanistic disciplines to the nursing care of neonates, infants, children, adolescents, and adult women in diverse care settings.

**Prerequisites:** NUR 388 [Min Grade: C] and NUR 389L [Min Grade: C] and NUR 409 [Min Grade: C] and NUR 428 [Min Grade: C] and NUR 429L [Min Grade: P]

**NUR 393L. Concepts of Maternal Child Health Nursing Practicum. 3 Hours.**

The purpose of this course is to provide nursing practice opportunities to build upon knowledge and skills gained in previous nursing, pre-nursing and Concepts of Maternal Child Health Nursing. This course focuses on implementing the roles of the nurse as educator, caregiver, collaborator, and advocate. The course emphasizes the application of theoretical and empirical knowledge to the nursing care of neonates, infants, children, adolescents and adult women in diverse care settings.

**Prerequisites:** NUR 388 [Min Grade: C] and NUR 389L [Min Grade: P] and NUR 409 [Min Grade: C] and NUR 428 [Min Grade: C] and NUR 429L [Min Grade: P]

**NUR 397. Community and Public Health Nursing for RNs. 4 Hours.**

In this theory course, students will analyze theories, processes, issues, demographic data and epidemiological trends that affect the population aggregates within communities. Emphasis is on professional role development to promote nursing care focused on illness and injury prevention, health promotion, health maintenance, health education, and coordination of care for diverse aggregate groups in various community settings. Ethics and Civic Responsibility are significant components of this course.

**NUR 401. Caring For America's Heroes: An Introduction to the Veteran's Healthcare Administration System. 3 Hours.**

This course is designed to increase the student's understanding of long term and high acuity internal and external environmental variables which affect the health of the unique population of adult patients, veterans, within the Veterans Healthcare Administration (VHA). Knowledge gained in this elective course can be applied to the care of VHA patients in this and subsequent didactic and practicum nursing courses.

**NUR 402. Interpersonal Communication: Interviewer Skills-building via Community Collaboration. 3 Hours.**

This course content and experiences are designed to foster improvement in interpersonal communication, with an emphasis on refining interviewer skills (IPC:1-5). Course objectives will be achieved via didactic lessons in interpersonal communication concepts, evidence, and theory, as well as through complementary self-assessment, structured reflection, evaluation, discussion, and skills-building within and outside of scheduled class sessions.

**NUR 403. Primary Health Care in Low Resource Countries. 3 Hours.**

This course is designed for the Advanced Health Care Provider who plans to deliver primary health care in countries considered to be low resource areas as designated by the World Health Organization. These students will study the epidemiology, pathophysiology, diagnosis, and management of infectious and parasitic diseases throughout the global community. In addition, nutritional deficiencies and obstetric problems will be reviewed. Emphasis will be placed on those health problems which are not common in high resource countries. Implementation of the World Health Organization's Integrated Management standards will be included in the study of each disease as they apply to adults adolescents, and children. Potential personal safety issues for world travelers, and information designed to alleviate these issues will be studied. Each student will focus on a specific country or global area for a more in-depth learning experience. Restrictions Nursing ONLY.

**NUR 404. Concepts of Solid Organ Transplantation for Nursing Practice. 3 Hours.**

The purpose of this elective course is to introduce nursing students to the care of patients before, during, and after solid-organ transplantation. Patient care considerations and complication associated with solid-organ transplantation are discussed. Students will have an opportunity for transplant nursing field experience and will receive exposure to the functions of the inter-professional transplant team. Donation and procurement processes will also be covered.

**Prerequisites:** NUR 326 [Min Grade: C] or NRN 401 [Min Grade: C] or NUR 474 [Min Grade: C]

**NUR 405. Concepts of Perioperative Nursing. 3 Hours.**

The purpose of this course is to introduce the undergraduate student to perioperative nursing. It will include principles of aseptic technique, safe usage of equipment and instrumentation in the OR, considerations for the safe care of the perioperative patient, and other pertinent surgical topics. The perioperative foundation will be based on knowledge and skills provided by an online course, simulation labs, and clinical experiences. This course will focus on obtaining knowledge and skills to provide safe, quality client-family centered nursing care to individuals in the perioperative environment.

**NUR 406. Introduction to Design Thinking for Innovation in Healthcare. 3 Hours.**

The purpose of this course is to provide undergraduate nursing students the opportunity to apply principles of design thinking to propose solutions to significant problems in healthcare settings. The focus of the course is to foster skills needed for inter-professional collaboration and teamwork to develop an innovative product or process that will improve healthcare deliver. The emphasis is on implementing a five-step process of design thinking (empathy, problem, definition, ideation, prototyping, testing) to create innovative approaches to problem solving.

**NUR 409. Healthcare and Information Technology. 2 Hours.**

The purpose of this course is to integrate concepts of nursing informatics introduced in previous nursing coursework to enhance patient safety and quality outcomes. The focus is on the role of the nurse as caregiver, educator, collaborator, advocate, and consumer of research. The course emphasizes healthcare and information technologies.

**Prerequisites:** NUR 310 [Min Grade: C] and NUR 311L [Min Grade: C] and NUR 312L [Min Grade: C] and NUR 313L [Min Grade: P] and NUR 315 [Min Grade: C]

**NUR 410. Evidence-Based Practice in Nursing. 2 Hours.**

The purpose of this course is to provide the student with skills to apply evidence to practice. The course focuses on the role of the nurse as consumer of research. The emphasis of the course is on providing the foundation for identifying potential clinical problems, searching the literature for potential evidence-based solutions, and evaluating the quality of the research literature.

**Prerequisites:** NUR 310 [Min Grade: C] and NUR 311L [Min Grade: C] and NUR 312L [Min Grade: C] and NUR 313L [Min Grade: C] and NUR 315 [Min Grade: C]

**NUR 411L. Concepts of Primary Care. 3 Hours.**

The purpose of this course is to provide an overview of primary care essentials for the baccalaureate-prepared nurse to facilitate a transition into the roles and responsibilities of the BSN-prepared nurse in primary care settings. This course will focus on content designed to highlight the knowledge, skills and abilities of the BSN-prepared nurse in primary care settings and the impact that this professional nursing role can have on the provision of quality, safe nursing care and the achievement of optimal patient outcomes. Emphasis will be placed upon the development of primary care competencies for professional nurses, assessment and evaluation of quality and safety care indicators, development and management of the inter-professional team.

**NUR 412. Caring for the Medically Complex Child. 1-3 Hour.**

The purpose of this course is to provide students in nursing and other health-related disciplines a comprehensive background in the needs of the medically complex child. The course focuses on options for care, community resources, and transition of care from pediatrics to adult. The emphasis of the course is on the role of the health care provider in providing comprehensive care to this vulnerable population.

**NUR 413. Medically Complex Adult. 1-3 Hour.**

The purpose of this course is to enhance the understanding of professional nursing practice and augment entry-level clinical knowledge, skills, and attitudes necessary for the medical-surgical specialty. The course focuses on the role of the professional nurse, communication, critical thinking, prioritization, organizational and time management skills. Emphasis is on the nursing care and management of young, middle-age, and older adults.

**NUR 414L. Concepts of Telehealth. 3 Hours.**

The purpose of this elective course is to provide an overview of telehealth competencies for the baccalaureate-prepared nurse to facilitate a transition into the roles and responsibilities of the professional nurse in the delivery, management, and coordination of primary care telehealth services. Emphasis will be placed on competency development in nursing assessment, diagnosis, planning, implementation and evaluation as the Registered Nurse presenter and care coordinator for the prevention and management of chronic disease. The course will focus on strengthening the impact that professional nurses have on the provision of safe, ethical, quality nursing care and the achievement of optimal patient outcomes.

**NUR 418. Men's Health Across Lifespan. 3 Hours.**

The purpose of this course is to provide an expansion of knowledge of health related issues for the pre-adolescent, adolescent, adult, and aging male population. The focus of this course is on physiologic and psychologic development, age related health complications, emotional challenges of adolescence, social determinants of health, policy, sexual health and related issues, and complications specific to aging males. The emphasis of the course is on promoting the progression of knowledge of health related issues of the male population.

**NUR 419. Health Issues in Culturally Diverse Populations in the United States. 3 Hours.**

This course provides students with an overview of health issues and health disparities confronting culturally diverse populations in the United States. The course also addresses genetic, cultural, historical and demographic factors that influence these health issues and disparities, implications for culturally effective health care, and for development of health policy.

**NUR 425. Concepts of Addiction Across the Lifespan. 3 Hours.**

The purpose of this course is to explore the concept of substance use, misuse and addiction across the lifespan from a nursing perspective. The course will focus on exploring substance use, misuse and addictions nursing, and will include: the epidemiology of substance use, misuse and addiction, a review of addictive substances and medications, an overview of the pathophysiological effects of substance use, misuse, addiction, and overdose, pertinent legislation, and the impact of substance use, misuse and addiction on the professional registered nurse. Emphasis will be placed upon the nurse's role in screening, brief intervention, and referral to treatment for patients across the lifespan experiencing substance use, misuse, and addiction.

**NUR 426. Concepts of Complex Nursing. 2 Hours.**

The purpose of this course is to integrate and apply knowledge from previous courses to the care of patients and their families experiencing complex health conditions. The course focuses on the role of the nurse as caregiver, manager, collaborator, advocate, leader, and educator. Emphasis is on the nursing care and management of diverse patients and families with complex health conditions.

**Prerequisites:** NUR 388 [Min Grade: C] and NUR 389L [Min Grade: P]

**NUR 427L. Concepts of Complex Nursing Practicum. 2 Hours.**

The purpose of this course is to apply the expanded role of the nurse in providing family centered nursing care for clients and their families experiencing complex health conditions. The course focuses on the role of the nurse as caregiver, manager, collaborator, advocate, leader, and educator. Emphasis is on the nursing care and management of complex health issues for patients across the life-span in a variety of settings.

**Prerequisites:** NUR 388 [Min Grade: C] and NUR 389L [Min Grade: P]

**NUR 428. Concepts of Community and Public Health Nursing. 2 Hours.**

The purpose of this course is to provide a foundation for culturally competent care to populations in a community. The focus is on the roles of educator, caregiver, advocate, coach, collaborator, and consumer of research. Emphasis is on protecting and enhancing the health of local, state, national, and global populations.

**Prerequisites:** NUR 321L [Min Grade: C] and NUR 322 [Min Grade: C] and NUR 323L [Min Grade: P] and NUR 326 [Min Grade: C] and NUR 336 [Min Grade: C] and NUR 327L [Min Grade: P]

**NUR 429L. Concepts of Community and Public Health Nursing Practicum. 2 Hours.**

The purpose of this course is to apply content from previous courses to advance the mission on social justice in health care through community engagement with vulnerable, at-risk individuals and populations. The focus is on the professional roles of caregiver, educator, advocate, health coach, counselor, leader, collaborator, and interprofessional team member. Emphasis is on injury and illness prevention, health promotion, health maintenance, health literacy, and disaster preparedness for population aggregates in local, national, and global communities.

**Prerequisites:** NUR 321L [Min Grade: C] and NUR 322 [Min Grade: C] and NUR 323L [Min Grade: P] and NUR 326 [Min Grade: C] and NUR 336 [Min Grade: C] and NUR 327L [Min Grade: P]

**NUR 431L. Nursing Skills Development III. 1 Hour.**

The purpose of this course is to build on nursing skills attained in NUR 321L to provide safe, quality care. The course focuses on the role of the nurse as caregiver and collaborator. Emphasis is on critical inquiry, clinical reasoning, problem solving and advanced psychomotor and care competencies.

**Prerequisites:** NUR 388 [Min Grade: C] and NUR 389L [Min Grade: P]

**NUR 433. Complementary and Integrative Therapies in Nursing. 3 Hours.**

The purpose of this course is to provide an overview of Complementary and Integrative Therapies. Baccalaureate Nursing students in this course will explore the role of the nurse in providing holistic care for patients. Emphasis is on the nursing care of therapies, research, and ethical issues.

**Prerequisites:** NUR 310 [Min Grade: C] and NUR 313L [Min Grade: C]

**NUR 434. Perspectives in Global Health Leadership. 3 Hours.**

This course is designed to provide students with an understanding of global aspects of health care leadership. The course will focus on identification of characteristics of global health care leaders, leadership theories, and strategies to develop one's own personal leadership abilities. The course will provide students with a unique opportunity to interact with health care leaders from countries around the world, and develop projects related to an aspect of global health care leadership of interest to each student.

**NUR 437. Principles of Genetics. 3 Hours.**

This elective course provides the foundation to examination, integration, and evaluation of genetic principles to future advances in genetic health and counseling. Opportunity is given to apply ethical principles in decision making related to nursing care of families with genetic health patterns or problems. Must be enrolled in the School of Nursing.

**NUR 439. Complementary Therapies and Integrative Health Care. 3 Hours.**

The focus of this elective course is on holistic nursing utilizing complementary and alternative therapies and integrative health care as an emerging paradigm in the health care arena. This course will examine both the concepts of integrative health care and major complementary therapies, including theoretical basis and research support, actions, uses, contraindications, and side effects. The socio-cultural, economic, legal and ethical issues associated with complementary therapies will be included as well as standards for practice and available resources. Students will be encouraged to explore ways in which they can counsel patients regarding complementary therapies as well as potential inclusion of the therapies in their own practice.

**NUR 442. Health, Education, and Social Welfare in a Global Community. 3 Hours.**

The purpose of this course is to provide students with a cross-cultural experience in which they will spend time in a selected global community while learning about health, educational and social welfare issues. Students will participate in pre-trip seminar in Birmingham or on-line prior to travel. The seminar(s) will focus on an overview of the course, a model of assessing culture and an overview of selected global community's culture. Students will also participate in seminars on a variety of health, education and social welfare topics provided by the course instructor and by resource persons from the selected global community.

**NUR 444. Principles of Developmental Care Newborn Infants. 3 Hours.**

Provides students with an overview of principles of individualized care for newborns and infants. The course also addresses principles of family-centered care as a key component of developmental care. Students review concepts and theories related to molecular biology, fetal, infant and family development, psychology, and sociology in assessing and planning care to promote optimal development of high risk infants and families. Students explore roles of nurses and other interdisciplinary team members in developmental care, are assessed, and develop plans to promote organizational change in order to incorporate developmental care principles in a clinical setting.

**Prerequisites:** NUR 392 [Min Grade: C] and NUR 393L [Min Grade: P]

**NUR 446L. Nursing of the Child and Adolescent Practicum. 2 Hours.**

NUR 446L provides clinical nursing practice opportunities with children/adolescents within the context of the family in selected hospital and community settings and the nursing simulations laboratory. Students apply knowledge of physical, nutritional, developmental, psychological, cognitive, psychosocial, educational, and spiritual needs of children adapting to common and complex environmental variables that affect health. Students implement the roles of the professional nurse as caregiver, educator, advocate, and collaborator in providing nursing care to children and adolescents in a variety of settings.

**Prerequisites:** NUR 365 [Min Grade: C] and NUR 366L [Min Grade: C] and NUR 385 [Min Grade: C] and NUR 386L [Min Grade: C] and NUR 370 [Min Grade: C] and (NUR 374 [Min Grade: C] or NUR 484 [Min Grade: C])

**NUR 447L. Synthesis and Assimilation Practicum. 4 Hours.**

The purpose of this course is the synthesis and assimilation of skills and clinical reasoning drawn from all previous nursing courses and is intended to prepare students to function independently in the management and provision of nursing care to an assigned cohort of patients. The focus of the course is on the professional roles of caregiver, educator, consumer of research, advocate, counselor, leader, and inter- and intra-professional team member. The course emphasizes quality and safety in the provision of nursing care.

**Prerequisites:** NUR 409 [Min Grade: C] and NUR 410 [Min Grade: C] and NUR 426 [Min Grade: C] and NUR 427L [Min Grade: P] and NUR 428 [Min Grade: C] and NUR 429L [Min Grade: P] and NUR 431L [Min Grade: C]

**NUR 448. Transition to Professional Nursing Practice. 2 Hours.**

The purpose of this course is to facilitate the transition of the student into the role of a professional nurse. The course focuses on all professional nursing roles. Emphasis is on leadership and management theories and models, resource allocation and management, delegation, legal implications of practice, continuous quality improvement, healthcare systems, and contemporary issues in healthcare.

**Prerequisites:** NUR 409 [Min Grade: C] and NUR 410 [Min Grade: C] and NUR 426 [Min Grade: C] and NUR 427L [Min Grade: P] and NUR 428 [Min Grade: C] and NUR 429L [Min Grade: P] and NUR 431L [Min Grade: C]

**NUR 449. Synthesis Review Course. 1 Hour.**

The purpose of this course is to prepare the student to successfully complete the NCLEX® examination. The course focuses on all professional nursing roles. Emphasis is on the synthesis of knowledge from all nursing courses as well as the humanities, and the social, behavioral, and natural sciences.

**Prerequisites:** NUR 409 [Min Grade: C] and NUR 410 [Min Grade: C] and NUR 426 [Min Grade: C] and NUR 427L [Min Grade: P] and NUR 428 [Min Grade: C] and NUR 429L [Min Grade: P] and NUR 431L [Min Grade: C]

**NUR 450. Honors Seminar I - Introduction to Nursing Research. 1 Hour.**

The purpose of this course is to provide the student with introductory knowledge of nursing research. The course focuses on the role of the nurse researcher with emphasis on providing the foundation for understanding the role of nursing research in nursing practice and in healthcare, conducting ethical research, and searching the literature for an area of research interest.

**NUR 451. Honors Seminar II - Exploring Nursing Research. 2 Hours.**

This course is designed to prepare students with the knowledge and skills to: (1) locate and examine nursing research relevant to a specific nursing problem; (2) discuss the quality of qualitative and quantitative research evidence; and (3) discuss common nursing research designs and methodologies.

**Prerequisites:** NUR 450 [Min Grade: C]

**NUR 452L. Honors Seminar III - Research Immersion. 3 Hours.**

This course provides opportunities for participation in an ongoing research project. Course content includes information about the role of teams in research, the role of the nurse in leading research teams, and guidelines for preparation of manuscripts and presentations. Course activities include discussion research projects and exploration of the student's role as a team member. Professional expectations include dissemination of research experiences with peers and communities of interest.

**Prerequisites:** NUR 450 [Min Grade: C] and NUR 451 [Min Grade: C]

**NUR 457. Leadership and Management in Professional Nursing for RNs. 3 Hours.**

This course focuses on leadership and management theories and models, resource allocation and management, delegation, conflict resolution, legal implications of practice, managed care, evaluation of practice, continuous quality improvement, healthcare systems, and contemporary issues in the workplace. Emphasis is placed on the integration of all professional role behaviors, application of research, and leadership/management skills.

**NUR 458L. Leadership Development Practicum for RNs. 2 Hours.**

This practicum is designed to enable RN students to build on their existing clinical expertise, broaden their exposure to different specialty areas, and apply theory learned throughout the BSN curriculum to meet the needs of individual clients, client groups, other health care providers, and the public at large. As a capstone course for the RN Mobility Program, specific experiences will provide the student with opportunities to develop leadership/management skills while working with aggregate groups within the community and to demonstrate discipline-specific proficiency related to writing, quantitative literacy, and ethic/civic responsibility.

**Prerequisites:** NUR 457 [Min Grade: C] (Can be taken Concurrently)

**NUR 459L. Enhanced Clinical Nursing for the RN. 1-3 Hour.**

This practicum course permits the practicing RN to augment previous nursing knowledge and expand their current role as a professional nurse. The course focuses on the role of the bachelor's prepared nurse as caregiver, manager, collaborator, advocate, and educator.

**NUR 462. Neonatal Behavior Assessment in Clinical Nursing Practice. 2 Hours.**

This elective course provides students with the knowledge and skills of neonatal behavioral assessment. Focus is placed upon concepts underlying the Brazelton Neonatal Behavioral Assessment Scale, behavioral characteristics of newborns, and cultural differences and assessment of low and high risk neonates.

**NUR 465. Concepts of Management of the High Risk Neonate. 3 Hours.**

This course provides theoretical concepts essential to the nursing management of high-risk neonates and families. Students examine the impact of environmental variables on the biophysical, psychological, socio-cultural, spiritual, development, and educational needs of the neonate. The focus of the course is on the concepts of health promotion, maintenance, and restoration of the high-risk neonate and family as they adapt to environmental variables. Students examine legal, historical, political, socio-cultural, ethical, technological, and economic issues related to the care of high-risk neonates and their families. In addition, students analyze current research and the role of the professional nurse in providing care to high risk neonates and families.

**Prerequisites:** (NUR 365 [Min Grade: C] and NUR 366L [Min Grade: C])

**NUR 473. Intervention Approaches to Family Violence Across the Lifespan. 3 Hours.**

The purpose of this course is to provide an overview of contemporary issues in family violence in the U.S. This course focuses on intervention and prevention responses, best practices and public policy addressing family violence. Emphasis is placed on multidisciplinary responses to addressing the public health problem of family violence.

**NUR 474. Transition to Professional Nursing Practice. 4 Hours.**

Using an online format, this course is designed to enhance the registered nurse's knowledge of the role of the professional nurse in meeting the health needs of society. Historical, legal, political, and ethical issues affecting the profession will be examined. The relationship between selected issues, trends, and theories and professional nursing practice will be analyzed. Students will examine behaviors related to various roles of the professional nurse, including caregiver, teacher, advocate, research consumer, and counselor. Additionally, this course addresses communication skills necessary to a professional nurse including writing and computer literacy. Writing and Ethics and Civic Responsibility are significant components of this course.

**NUR 475. Health Assessment Across the Lifespan for RNs. 4 Hours.**

The structure of the course allows the student opportunity for directed and self-directed learning experiences. In an online classroom, students are guided in a series of learning activities designed to increase the knowledge and skill of the professional nurse related to health assessment of individuals and family. In addition to physical assessment, students will review other components of a holistic assessment including spiritual, cultural, psychological, and developmental assessment. Admission to the RN Mobility Program is required.

**NUR 478. Sexuality Issues in Health and Illness: A Lifespan Approach. 3 Hours.**

This elective course includes the ethical, social, biological and psychological concepts of human sexuality. Open to non-nursing majors with permission of instructor.

**NUR 481. Advanced Spanish for Health Professionals. 3 Hours.**

This advanced course emphasizes and expands intensive conversation, technical readings and vocabulary pertinent to the medical field. The course focuses on practical vocabulary, idiomatic expressions, medical terminology and cultural patterns of Spanish-speaking patients.

**Prerequisites:** NUR 380 [Min Grade: C]

**NUR 490. Independent Study in Nursing. 1-6 Hour.**

Independent Study in Nursing. Must be a senior year nursing student and have a written Independent Study contact signed by the Associate Dean.

**NUR 491. Independent Study in Nursing. 1-6 Hour.**

Independent Study in Nursing. Must be a senior year nursing student and have a written Independent Study contact signed by the Associate Dean.

**NUR 496. Didactic Independent Study for Delayed Progression. 1 Hour.**

The purpose of this course is to augment knowledge gained in nursing courses related to test taking, delegation, prioritization and critical thinking. The course focuses on the role of the nurse as caregiver, manager, collaborator, and education. Emphasis is on the nursing care and management of young, middle-age, and older adults.

**NUR 499. Living with Loss. 3 Hours.**

This elective course includes loss, grief, body-image changes, loss due to chronic conditions, and loss of life in childhood and adulthood, explored from the viewpoint of health-care professionals.

## School of Public Health

**Dean:** Paul C. Erwin, MD, DrPH

**Associate Dean for Academic**

**Affairs:** Erika (Ela) Austin, PhD, MPH

**Assistant Dean for**

**Undergraduate Education:** Amy

Hutson Chatham, PhD, MSPH

**Academic Advisors:** Nicole

Gravitt, MA & Michelle Henry, MA, NCC

**Website:** [www.uab.edu/soph](http://www.uab.edu/soph)

## Why Public Health?

Public Health is the science of protecting and promoting the health and safety of communities through education, policy, and research. Coursework in Public Health gives students the skills to analyze and communicate critical Public Health information to diverse audiences. Whether it's warning about emerging epidemics like Ebola or Zika virus, developing educational campaigns to help patients manage chronic conditions like diabetes or heart disease, or helping communities advocate for cleaner air and water, Public Health is a hands-on field that **makes a difference**. Students earning the Bachelor of Science in Public Health go on to work in their communities, in healthcare settings, or for agencies like the CDC or WHO – anywhere that broad knowledge of the biological, environmental, social, and behavioral influences on health is needed.

Founded in 1978, the UAB School of Public Health was established to improve the health and living conditions of the people of Birmingham; it is currently the **only** accredited School of Public Health in the state. For 40 years, the School has expanded to serve the state, the region, and the world. The Bachelor of Science in Public Health was established in 2013 to train students entering the Public Health workforce, which is currently experiencing a critical shortage of workers. After graduation, many students choose to pursue additional Public Health training at the graduate level or professional degrees in Nursing, Medicine, or other health professions.

**The School also offers Accelerated Learning Opportunities for motivated students wishing to complete both an undergraduate degree (in any field) and the Master of Public Health degree within 5 years. See the [SOPH Accelerated Learning Opportunities website](#) for more details.**

## Bachelor of Science in Public Health Degree Competencies

Upon completing the Bachelor of Science in Public Health degree, students will be able to:

- Define the history and philosophy of public health as well as its core values, concepts, and functions across the globe and in society.
- Describe the basic concepts, methods, and tools of public health data collection, use, and analysis; and why evidence-based approaches are an essential part of public health practice.
- Recognize the concepts of population health, and the basic processes, approaches, and interventions that identify and address the major health-related needs and concerns of populations.

- Identify the underlying science of human health and disease including opportunities for promoting and protecting health across the life course.
- Address the socio-economic, behavioral, biological, environmental, and other factors that impact human health and contribute to health disparities.
- Apply the fundamental concepts and features of project implementation, including planning, assessment, and evaluation.
- Describe the fundamental characteristics and organizational structures of the U.S. health system as well as the differences in systems in other countries.
- Recognize the basic concepts of legal, ethical, economic, and regulatory dimensions of health care and public health policy, and the roles, influences, and responsibilities of the different agencies and branches of government.
- Implement the basic concepts of public health-specific communication, including technical and professional writing and the use of mass media and electronic technology.

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## Bachelor of Science in Public Health Degree Concentrations

The Bachelor's degree is designed to give students a foundational understanding of what public health is and what public health practitioners do. We offer concentrations in the following three areas:

- Environmental Health Sciences
- Global Health Studies
- Public Health (general)

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## Bachelor of Science in Public Health

The BS in Public Health offers a broad introduction to Public Health research and practice, drawing on the multiple disciplines within Public Health. Accredited by the Council on Education for Public Health, the BS in Public Health prepares students to:

- Identify key health challenges facing a community, based on evaluation and synthesis of public health information
- Recognize the importance of evidence-based strategies to address public health challenges facing a community
- Advocate for improved health in the community, both orally and in writing, to diverse audiences

Students pursuing the BS in Public Health select a concentration in Environmental Health Sciences, Global Health Studies, or Public Health (a general concentration providing flexibility to pursue coursework in multiple areas of Public Health).

### Program Completion Requirements

- Credit hours required in Public Health major: 24 hours plus a 1-hour First Year Experience course
- Credit hours required in concentration: 21 hours (including at least one course designated as Experiential Learning)
- All PUH courses completed with a grade of C or higher
- Credit hours in institutional general education or core curriculum: 41 hours

- Credit hours in required or free electives: 33 hours
- Total credit hours required for completion: 120 hours

Requirements	Hours
First Year Experience (for students entering UAB w/ less than 24 credit hours earned)	
<u>PUH 101</u> Transitioning to College, Exploring Public Health	1
<b>Public Health Core Courses (24 hours)</b>	
<u>PUH 201</u> Introduction to Public Health	3
<u>PUH 202</u> Introduction to Global Health	3
<u>PUH 204</u> Social and Behavioral Determinants of Health	3
<u>PUH 210</u> Agent, Host, Environment	3
<u>PUH 230</u> Public Health Data and Methods	3
<u>PUH 305</u> Public Health Practice	3
<u>PUH 307</u> Public Health Systems	3
<u>PUH 495</u> Public Health Capstone Experience	3
Total Hours	25

## Environmental Health Sciences Concentration

A concentration in Environmental Health Sciences prepares students to protect workers, communities, and the environment. Common career paths include occupational health and safety, emergency preparedness response, environmental monitoring and assessment, and a wide range of positions with Health Departments or agencies focused on protecting the environment.

Requirements	Hours
<u>PUH 220</u> Environmental Factors in Public Health	3
<u>PUH 321</u> Workplace Environment	3
<u>PUH 322</u> Environmental Justice and Ethics	3
<u>PUH 333</u> Food, Water, and Air	3
<u>PUH 422</u> Fundamentals of Toxicology	3
Concentration elective hours (select from any PUH or GHS course not already taken; 1 course may be from outside the School of Public Health with advisor permission). The concentration hours should include at least 6 hours from the 400-level in PUH or GHS and at least 1 course designated as Experiential Learning.	6
Total Hours	21

## Global Health Studies Concentration

A concentration in Global Health Studies prepares students to advocate for the health and well-being of disadvantaged populations, both globally and here in our own community. Common career paths include work with non-governmental organizations (NGOs), ministries of health, or the WHO, focusing on issues like maternal and child health, infectious disease surveillance, disaster response, and humanitarian crises.

Requirements	Hours
<u>PUH 333</u> Food, Water, and Air	3
<u>PUH 403</u> Immigrant, Migrant, and Refugee Health	3
<u>PUH 432</u> Global Health Cases	3
<u>PUH 434</u> Global Communicable Disease Challenges	3

Concentration elective hours (select from any PUH or GHS course not already taken; 1 course may be from outside the School of Public Health with advisor permission). The concentration hours should include at least 6 hours from the 400-level in PUH or GHS and at least 1 course designated as Experiential Learning.

Total Hours 21

## Public Health Concentration

Public Health draws on a variety of disciplines (science, math, social/behavioral science, communications, economics, etc.) to investigate a broad range of health-related topics. The general concentration in Public Health allows students the flexibility to pursue their varied interests within this constantly evolving field. This concentration is ideal for students looking to be inspired to pursue a career where they can make a difference in their community.

Requirements	Hours
Concentration elective hours (select from any PUH or GHS course; 1 course may be from outside the School of Public Health with advisor permission). The concentration hours should include at least 6 hours from the 400-level in PUH or GHS and at least 1 course designated as Experiential Learning. <sup>1</sup>	21
Total Hours	21

<sup>1</sup> **Students may select one course from outside the School of Public Health from the list below (or another course approved by the advisor) to apply towards the public health concentration hours, if not already being used for the overall degree hours:**  
ANTH 319, ANTH 330, ANTH 447, CHHS 141, CHHS 342, CHHS 402, CHHS 404, CHHS 408, CHHS 421, CHHS 491, DCS 101, DCS 250, EPR 414, GEO 109, GEO 415, GEO 491, HC 110, HC 112, HCM 305, HCM 318, HCM 402, HCM 415, HIM 415, MG 305, NTR 222, NTR 320, NUR 383, PHL 115, PHL 116, PHL 270, SOC 275, SOC 278, SOC 280, SOC 282, SOC 283, SOC 317, SOC 431, SPA 180, SW 208, SW 428

## Minor in Public Health

Public Health offers a multidisciplinary perspective that complements all majors. Any student interested in health – whether from a clinical or community perspective – should consider a minor in Public Health. The minor is especially well-suited for students interested in applying to medical school, nursing programs, or any other clinical field. For students in STEM majors, the Public Health minor helps to illustrate how science can be used to protect and promote the health of populations. For students in the social and behavioral sciences, business, and education, the Public Health minor provides insight into how these disciplines can be used to promote the public's health.

## Program Completion Requirements

The minor includes four required core courses in public health (12 credit hours) and 6 elective hours selected by the student in consultation with their public health academic advisor. #All public health courses must be completed with a grade of C or higher.

Requirements	Hours
<b>Required Public Health Courses</b>	
<u>PUH 201</u> Introduction to Public Health	3
<u>PUH 202</u> Introduction to Global Health	3
<u>PUH 204</u> Social and Behavioral Determinants of Health	3

PUH 210	Agent, Host, Environment	3
<b>Elective Hours</b>		
6 additional hours of health-related coursework (1 course may be from outside the School of Public Health; advisor permission required). <sup>1</sup>		6
Total Hours		18

- <sup>1</sup> **Approved Electives:**  
 ANTH 319, ANTH 330, ANTH 422, ANTH 447, ANTH 445, BY 426, CHHS 141, CHHS 342, CHHS 402, CHHS 408, CHHS 404, CHHS 408, CHHS 421, CHHS 432, CHHS 491, DCS 101, DCS 250, EC 306, EPR 414, GEO 109, GEO 415, GEO 491, HC 110, HCM 305, HCM 318, HCM 402, HCM 415, HIM 415, HY 483, MESO 209, MG 305, NTR 222, NTR 320, PHL 115, PHL 116, PHL 270, SPA 180, SOC 275, SOC 278, SOC 280, SOC 282, SOC 283, SOC 317, SOC 431, SOC 470, SOC 480, SW 208, SW 428, PUH 202, PUH 204, PUH 205, PUH 210, PUH 220, PUH 250, PUH 302, PUH 307, PUH 321, PUH 322, PUH 331, PUH 333, PUH 340, PUH 341, PUH 342, PUH 350, PUH 352, PUH 353, PUH 354, PUH 405, PUH 421, PUH 422, PUH 432, PUH 436, PUH 441, PUH 442, PUH 450

The School of Public Health offers an Honors designation to those students who show exceptional commitment to serving the community through engagement in public health research or practice. Eligible students will be responsible for meeting the following criteria:

- Maintaining a minimum institutional GPA of 3.0 and **minimum Public Health major GPA of 3.5.**
- Completing **100-150 hours of service to the community**, tracked in BlazerPulse (note: this total does not include hours completed in fulfillment of any required PUH course, e.g., PUH 305 or PUH 495). The number of hours required will depend on when students declare the Public Health major, with approximately 50 hours required per year in the major. These hours can take the form of a formal internship or field placement, volunteer hours at one or more community sites, participation in community-based research, etc. Students will be assisted in finding community partners but will be responsible for logging their own hours in BlazerPulse.
- Enrolling in **PUH 292: Seminars in Public Health**, a one-credit course during which students attend seminars offered in the School of Public Health. This course can be completed up to three times for a total of three credit hours. In addition to attending School seminars, this course also includes three assignments focused on professional development and engagement.
- Participating in a **culminating experience** during which the students reflect on their engagement with the community. The form of this experience is not specified but could include: a presentation at a public forum (such as the UAB Undergraduate Research Expo), participation on a student panel, production of a podcast about their service, development of an experiential essay, etc.

Students interested in pursuing an Honors designation in Public Health should speak with their Academic Advisor soon after declaring the major.

## Sample Program of Study for a Major in Public Health

Students are encouraged to work with their academic advisor to help development an individualized completion plan taking into consideration the initial course placements and academic goals.

<b>Freshman</b>			
First Term	Hours	Second Term	Hours
FYE		1 EH 102	3
EH 101		3 BY 101	3
MA 105		3 BY 102	1
Core Area III course		4 Core Area IV course	3
Core Area II course		3 Core Area II course	3
		Core Area IV course	3
	14		16

<b>Sophomore</b>			
First Term	Hours	Second Term	Hours
PUH 201		3 PUH 204	3
PUH 202		3 PUH 210	3
Core II Area course		3 Core Area II course	3
Core Area IV course		3 Core Area IV course	3
General Elective Course		3 General Elective Course	3
Option		Option	
	15		15

<b>Junior</b>			
First Term	Hours	Second Term	Hours
PUH 230		3 PUH 307	3
PUH 305		3 PUH Concentration Course	3
PUH Concentration Course		3 PUH Concentration Course	3
General Elective Course		3 General Elective Course	3
Option		Option	
General Elective Course		3 General Elective Course	3
Option		Option	
	15		15

<b>Senior</b>			
First Term	Hours	Second Term	Hours
PUH Concentration Course (400-level)		3 PUH 495	3
PUH Concentration Course		3 PUH Concentration Course (400-level)	3
General Elective Course		3 PUH Concentration Course	3
Option			
General Elective Course		3 General Elective Course	3
Option		Option	
General Elective Course		3 General Elective Course	3
Option		Option	
	15		15

Total credit hours: 120

## EPI-Epidemiology Courses

### EPI 222. Public Health Issues in Physical Activity and Obesity. 3 Hours.

The purpose of this course is to provide an overview of the components of health and fitness within the context of the epidemiological evidence establishing the links between various types of health behaviors and risk factors (e.g., physical activity, body composition, diet, sleep, etc.) and health outcomes.

## GHS-Global Health Studies Courses

### **GHS 320. Global Health Service Learning. 3 Hours.**

This course provides students with an opportunity to apply principles of interprofessional collaboration, community partnerships, and global health in the development and implementation of a project to address a global health problem in collaboration with a community partner. The global health problem may be addressed in collaboration with a partner at a local site, at a site within the U.S., or at an international site. Students apply concepts and theories related to global health, interprofessional collaboration, team building, community partnerships, and the ecological framework developing and implementing a plan to address a specific global health problem with a community partner.

### **GHS 420. Field Studies: Jamaica. 3 Hours.**

This course is designed for students interested in global health, whether from public health, medicine, nursing, or other allied graduate programs. Key details about this course include: 1) It is focused on community-based approaches to public health, this course emphasizes the integration and application of classroom, laboratory and field experiences in order to foster problem-solving skills for infectious disease ecology, surveillance and control in resource-constrained settings. 2) Lectures will be given online prior to the beginning of the course and briefings will be held in UWI facilities while in Jamaica. 3) The three primary field projects will be mosquito surveillance, STD/HIV care and prevention, and water & sanitation. 4) In Jamaica, students will attend briefings, acquire laboratory identification skills and use field techniques to generate and analyze data.

### **GHS 429. Intensive Global Health Training - SIFAT. 3 Hours.**

Become a better Global Citizen by learning critical issues on Household Energy use in the developing world that affect health, environmental sustainability, gender equity, economics, and the development of millions of families and communities globally. Eight days, twelve hours a day.

### **GHS 430. Global Health Training, SIFAT. 6 Hours.**

This two week intensive field training course will take place at SIFAT's 176-acre international training campus in Lineville, AL. Students will attend didactic sessions and participate in hands-on activities and simulations. SIFAT trainers are experienced in international development and cross-cultural dynamics.

## PUH-Public Health Courses

### **PUH 101. Transitioning to College, Exploring Public Health. 1 Hour.**

This First Year Experience (FYE) course is for students majoring in or interested in Public Health. It is designed to introduce freshmen to the tools and techniques that will enhance their transition to college and improve their academic success. Goal setting, time management, faculty/peer interaction, and other relevant academic skills will be addressed. Students will also gain an understanding of the various educational opportunities and career options associated with Public Health.

### **PUH 201. Introduction to Public Health. 3 Hours.**

Public health protects and promotes the health of people and communities. This course reviews the history and philosophy underlying public health, introduces core concepts and values in public health, and highlights the essential functions of public health in society. Offered each semester.

### **PUH 202. Introduction to Global Health. 3 Hours.**

This course introduces concepts and considerations relevant to public health in resource-constrained international settings while critically assessing historic, current, and projected efforts to improve population health globally. Topics include global burden of disease, measuring population health, global epidemiologic trends, health of vulnerable populations, comparative health systems, and governmental and non-governmental efforts to address health. This course meets the Core Curriculum requirements for Area IV: Social and Behavioral Sciences. Offered each semester.

### **PUH 204. Social and Behavioral Determinants of Health. 3 Hours.**

This course examines the social and behavioral factors that impact human health at the individual, community, and population levels. The role of social and behavioral factors and the conceptual tools used by public health to understand their influence on health behaviors and resulting health disparities will be a central focus of the course. Offered each semester.

### **PUH 205. Adolescent Health. 3 Hours.**

This undergraduate course will provide an overview of critical health issues in adolescence and review the potential of emerging perspectives to advance adolescent health and promote positive youth development. This course is designed to provide students with the most current knowledge of issues influencing the health and well-being of adolescents. Theoretical frameworks that draw on an ecological perspective will provide a better understanding of how families, peers, schools, neighborhoods, and the larger community influence risk and protective factors in youth. Adolescence is a time of growth and experimentation, a period marked by establishing autonomy and confronting new challenges. Emphasis will be placed on the promotion of positive youth development, and the relevance of adolescent health issues for the science of health behavior and the broader public health arena.

### **PUH 210. Agent, Host, Environment. 3 Hours.**

This course provides the scientific basis for the study of public health. It will examine how various agents (viruses, bacteria, toxins, carcinogens) affect the biology of human hosts. Particular emphasis will be placed on the role of environmental factors in shaping the interaction between agents and hosts, leading to human disease. Offered each semester.

**Prerequisites:** BY 115 [Min Grade: C] or (BY 101 [Min Grade: C] and BY 102 [Min Grade: C]) or BY 123 [Min Grade: C]

### **PUH 220. Environmental Factors in Public Health. 3 Hours.**

This course examines the sources, exposure routes, and health outcomes associated with biological, chemical, and physical agents in the environment (both naturally occurring and man-made). The course will focus on how these agents impact air, water, and food quality to cause disease, along with regulations and policies designed to protect the public's health from their harmful effects.

### **PUH 230. Public Health Data and Methods. 3 Hours.**

This course provides a hands-on introduction to the concepts and tools related to collecting and analyzing public health data. A substantial portion of the course will focus on communicating public health data to a variety of audiences to illustrate the critical role that evidence plays in public health research and practice. Offered each semester.

**PUH 250. Biostatistics. 3 Hours.**

This course introduces the statistical approaches most commonly used in public health, medicine, and other health-related fields. The critical role of probability in inference and estimation will be examined, along with key univariate and bivariate statistics (e.g., t-tests, correlation, regression, etc.).

**Prerequisites:** MA 102 [Min Grade: C] or MA 105 [Min Grade: C] or MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 110 [Min Grade: C] or MA 125 [Min Grade: C] or MA 225 [Min Grade: C]

**PUH 292. Seminars in Public Health. 1-3 Hour.**

Seminar will explore current public health issues and topics locally, regionally, nationally and globally; case studies in epidemiology, issues and causes of chronic and infectious diseases, how the environment interacts with health, and how social and behavioral factors affect personal health.

**PUH 299. Special Topics in Public Health. 1-6 Hour.**

This special topics course will be used in the undergraduate program to cover emerging issues or specialized content not represented in the main curriculum.

**PUH 302. Epidemiology. 3 Hours.**

This course introduces the central role of epidemiology in public health research and practice. Students will learn to use the basic tools of epidemiology (e.g., prevalence and incidence, measures of association) and epidemiologic study designs to understand how epidemiologists study patterns of disease in populations and identify outbreaks. Offered once a year.

**Prerequisites:** (MA 102 [Min Grade: C] or MA 105 [Min Grade: C] or MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 110 [Min Grade: C] or MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**PUH 305. Public Health Practice. 3 Hours.**

This course provides an overview of how public health practitioners work with communities to improve health outcomes. It will focus on the stages of public health project implementation, from planning to needs assessment and evaluation. Students will gain hands-on experience with public health advocacy, navigating community dynamics and cultural contexts, and professionalism/ethics. Offered fall and spring.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 307. Public Health Systems. 3 Hours.**

This course provides a comprehensive overview of the characteristics and structures of the US Health System, focusing on the legal, ethical, economic, and regulatory aspects of health care and public health policy. The course will also examine the contributions of federal agencies (Centers for Disease Control, Department of Health and Human Services), state/county health departments, and public and private health care providers (hospitals, long-term care facilities, physicians and nurses) to protecting and promoting health at the population level. Offered fall and spring.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 321. Workplace Environment. 3 Hours.**

This course will explore known physical and chemical hazards found in the workplace. We will begin with the importance of key events and milestones in the history of worker safety and health and explore the ethical, legal, and social implications associated with the workplace environment. We will review the roles and responsibilities of government, non-government agencies, private organizations, businesses, and industry in worker safety and health. Offered once a year.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C] and PUH 220 [Min Grade: C]

**PUH 322. Environmental Justice and Ethics. 3 Hours.**

In this course, students will investigate the disproportionate burdens of environmental contamination and the resulting health disparities affecting communities of color across the U.S. and internationally. Using a broad range of examples we will look at the incidents that led to the emergence of environmental justice as a grass roots movement, much of which came from towns and peoples of the Deep South. Offered once a year.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C] and PUH 220 [Min Grade: C]

**PUH 331. The Rise of Noncommunicable Diseases Globally. 3 Hours.**

This course provides an introduction to selected key topics in chronic diseases burden endured globally. We will address the following questions: How is it that people in some countries live twice as long as in others? Why is there a rising epidemic of NCDs such as cancer, heart and lung disease, obesity, and diabetes spreading globally? What are the burdens posed by these diseases? What steps are being taken to control it? What key tools are at our disposal? Who are the global actors and stakeholders addressing this global health epidemic? What is the link between globalization and the rise of NCDs? Offered once a year.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 333. Food, Water, and Air. 3 Hours.**

The service learning course will examine food, water, air, with a focus on complex role they play in sustainable human development. While learning about food, water, and air in the classroom, students will gain further understanding of these topics by working with non-profit organizations in Birmingham that address food security, clean water, and clean air. Topics include issues of availability, access, and use of food in the local, domestic and global context, as well as current responses and potential solutions; water resources and sustainability, as well as water use, pollution, and treatment, and; outdoor and indoor air quality issues. The course will also focus on helping students develop a skill set for global citizenship that includes opportunities for advocacy, leadership, and critical thinking. Offered once a year.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 340. Profession of Public Health. 3 Hours.**

The purpose of this course is to assist students in planning and pursuit of their career goals. Students will interface with public health professionals to identify the skills needed for specific career paths and map out action items needed to gain those skills. The course will provide students the opportunity to gain tangible skills including, but not limited to: Ethics of Public Health, Oral and Written Communication, Personal Presentation Skills, Leadership Styles and Working in Teams and Project Management while addressing a current public health challenge.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 341. Public Health Preparedness and Emergency Management. 3 Hours.**

This course will provide participants with an understanding of Public Health Emergency Preparedness (PHEP), exercise development, and evaluation. During this course you will learn how to identify threats within your community, determine what capabilities are most needed to prepare for and meet these threats, and how to develop and evaluate exercises to test knowledge, skills and abilities.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 220 [Min Grade: C]

**PUH 342. Public Health Disasters. 3 Hours.**

This will be a hybrid of environmental disasters and history and consequences of world disasters.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 350. Intermediate Biostatistics. 3 Hours.**

This intermediate-level course will provide students with hands-on experience conducting analyses using statistical software. Selecting appropriate statistical tests and testing model assumptions will be a key focus, along with developing clear interpretations of results.

**Prerequisites:** (MA 102 [Min Grade: C] or MA 105 [Min Grade: C] or MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 110 [Min Grade: C] or MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and PUH 250 [Min Grade: B]

**PUH 352. Risk Reporting: Interpreting and Writing Medical News. 3 Hours.**

The main tool that scientists use to describe their work is the peer-reviewed research article. These articles are written for a specialist audience of other scientists and clinicians. However, human research is of interest to patients, policies makers, and other non-scientists. Accurate and appropriate interpretation and evaluation of scientific findings is vitally important to their implementation. In this course students will learn how to read and interpret scientific publications, to critically evaluate scientific publications and media coverage of the publications, and to write articles describing scientific findings in ways that are accessible for a general audience. The first part of the semester will consist of lectures and class discussions including guest lectures by science writers.

The later part of the semester will include student-lead discussions of scientific and mass-market articles. Evaluation will be based on reading quizzes, class participation and submission of discussion questions before class periods, written assignments interpreting and evaluating scientific and mass-market articles, and a midterm and final exam.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 220 [Min Grade: C] and PUH 302 [Min Grade: C]

**PUH 353. The Domestic Hot Zone: Major Diseases Affecting the U.S.. 3 Hours.**

Though infectious diseases still contribute greatly to morbidity in the United States, in the 20th century the causes of mortality in the United States began to shift—known as the epidemiologic transition—from infectious diseases to chronic diseases such as heart disease, cancer, stroke, and diabetes. These four diseases alone account for nearly three-quarters of a trillion dollars in medical expenditure and cause over 1.3 million deaths annually. The purpose of this class is to provide students with detailed knowledge regarding the major diseases that affect the United States, covering both major chronic and infectious diseases. Each week will focus on a disease or family of diseases, and will cover the epidemiology of the disease as well as looking at historical trends in disease incidence and mortality and how the trends have changed in recent years. Students will be graded through the use of take-home assignments, a mid-term examination, and a final examination.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 354. Scratching the Itch: Introduction to Infection Control and Hospital Epidemiology. 3 Hours.**

This course is designed to focus specifically on concepts involved with performing epidemiological surveillance and research within a hospital setting. With the recent advent of policies set forth by the Affordable Care Act, emphasis has been placed on surveillance and prevention of nosocomial infections in hospitals throughout the country. The course will introduce students to the methodology of infection control in a hospital setting, including how patients are tested for infectious diseases, surveillance methodology, and how an outbreak investigation in a hospital is performed. The course will involve guest lecturers from different departments of the hospital, including but not limited to Infection Control, Patient Safety and Quality, Clinical Laboratory, and Environmental Control. Each week will cover a given topic (e.g., bloodstream and catheter-associated infections, multi-drug resistant pathogens, respiratory diseases). The students will be graded through the use of take-home assignments, a mid-term examination, two case studies, and a group project involving a nosocomial outbreak investigation of an infectious disease of the course master's choice.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 220 [Min Grade: C] and PUH 302 [Min Grade: C]

**PUH 391. Directed Study in Public Health. 1-6 Hour.**

This experiential learning opportunity is open to undergraduate students interested in conducting an in-depth exploration of an approved Public Health topic under the supervision of an SOPH faculty mentor. Students must complete the SOPH agreement form for independent academic work at least two weeks prior to the start of the designated semester. This form specifies the scope of work, regular assignments, and final product that must be completed to receive academic credit.

**PUH 392. Seminar in Public Health. 1-3 Hour.**

Seminar will explore current public health issues and topics locally, regionally, nationally and globally; case studies in epidemiology, issues and causes of chronic and infectious diseases, how the environment interacts with health, and how social and behavioral factors affect personal health.

**PUH 398. Undergraduate Research in Public Health. 1-6 Hour.**

This experiential learning opportunity involves participation in a research project under the supervision of an SOPH faculty mentor; this could involve a student-initiated project or collaboration on existing research. Students must complete the SOPH agreement form for independent academic work at least two weeks prior to the start of the designated semester. This form specifies the scope of work, regular assignments, and final product that must be completed to receive academic credit.

**PUH 399. Special Topics in Public Health. 1-6 Hour.**

This special topics course will be used in the undergraduate program to cover emerging issues or specialized content not represented in the main curriculum.

**PUH 403. Immigrant, Migrant, and Refugee Health. 3 Hours.**

This course will introduce students to the inter-relationships between migration and health, focusing on the myriad of health issues experienced by migrant populations. The course will focus on both communicable and non-communicable health issues among migrating populations. The course will examine health issues among all types of migrant populations with a particular focus on the categories of 'displaced peoples', and the resultant state and humanitarian responses surrounding health and social (public health) services. This course frames global health in broad terms to include the underlying social and economic conditions, including climate change, economic underdevelopment, and political instability, which displace people, or motivates them to migrate, and which present barriers to achieving health, mental health, and wellbeing in immigrant, migrant, and refugee communities. We explore how violence, social suffering, health, disease, and mental health are intertwined with displacement and migration.

**PUH 405. Managing Public Health Programs. 3 Hours.**

This course is designed to prepare future managers and leaders in the public health arena. The course will provide students with knowledge relevant to managing public health organizations, non-profits, or NGOs, while identifying functions and concepts of management, leadership, and governance.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 421. Nature vs. Nurture: Genes, Environment and Health. 3 Hours.**

This didactic lecture course will examine how components of the world around us impact our lives and health. The classic battle of nature (genes) vs. nurture (environment) is being replaced with the understanding of how our exposure to our environment impacts gene expression, which can increase (or decrease) our own likelihood of disease. Using everyday, real-world examples we will study the environment-gene interaction and how this helps determine why some people are more disease prone than others. Each example will focus on the underlying science and the medical consequence of exposure, and will also examine exposure prevention strategies for individuals and practical legislation to reduce environmental contamination. Examples will vary from year to year, but damaging examples may include nanoparticles, smog, medical radiation, drugs and alcohol, pesticides, noise, indoor air pollution, toxic metals, plastics, food and water contamination, and sexually transmitted infections. We will also discuss how the environment can positively impact gene expression, and will include discussions of functional foods (i.e. nutraceuticals such as soy, green tea and garlic) and other alternative medicinal therapies. BY 116 or equivalent; completion of or registration in BY210 or BY330 is recommended.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 210 [Min Grade: C] and PUH 220 [Min Grade: C]

**PUH 422. Fundamentals of Toxicology. 3 Hours.**

Basic principles in toxicology will be covered including: dose-response relationships; absorption, distribution, storage, biotransformation and elimination of toxicants; target organ toxicity; mutagenesis and carcinogenesis; and an overview of fate and transport of contaminants in the environment. The course will focus on contaminants of environmental and public health interest and will include the fascinating roles toxins have played in human history.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 210 [Min Grade: C] and PUH 220 [Min Grade: C]

**PUH 432. Global Health Cases. 3 Hours.**

This course uses case studies to examine the impact of health conditions that transcend national borders. The focus will be on the political and economic impact of public health crises.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 434. Global Communicable Disease Challenges. 3 Hours.**

This course is designed to introduce students to the major infectious diseases of public health importance globally. Since we cannot cover all infections in depth in the time allowed, we will highlight major categories of infections as well as focus on a few major infections that together cause the greatest morbidity and mortality in children or adults worldwide. The purpose of this course is to equip participants with up-to-date knowledge of resources on major infections of global importance, and their prevention and control strategies.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 436. Maternal and Child Health in Africa and Asia. 3 Hours.**

Despite significant advances in global health over the last fifty years, the burden of disease among the maternal and child health (MCH) population in certain areas of the world remains alarmingly high. While child mortality has declined over the last fifty years, maternal and neonatal mortality has seen relatively little improvement, especially in Sub Saharan Africa and South Asia, which bears a disproportionate share of the global burden of maternal and child health disease. Maternal health is especially critical due to the far ranging impact of a maternal death on the family, community, and society. Fortunately, high impact, cost-effective solutions exist to address these highly preventable maternal and child deaths. In this course we will discuss those successful MCH interventions and policies in addition to identifying different barriers and challenges to the implementation and scale up of MCH services in Africa and Asia.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 441. Public Health Law and Policy. 3 Hours.**

PUH 441 will be an introductory course in public health law and policy designed for undergraduate students in public health. There are no prerequisites for this course. The purpose of the course is to introduce non-lawyers to the United States legal system and to the basic principles of law relevant to public health practitioners. It is intended to provide students with basic legal knowledge to assist them in communicating with attorneys about potential legal issues that may arise in formulating policy and exercising leadership in health care organizations. An overarching theme of the course is the tension between community interests and individual rights.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 220 [Min Grade: C]

**PUH 442. Children and Families: Issues in Health, Poverty, and Policies. 3 Hours.**

This interdisciplinary course will provide students with basic knowledge about current issues in health and society, both globally and domestically that impact the Maternal and Child Health (MCH) population, which broadly includes women of reproductive age, infants, children, and families. The course will include a specific focus on the role of poverty in the health issues of this population.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 450. Statistical Programming and Database Analysis. 3 Hours.**

This class provides an introduction into the commonly used statistical programs and teaches the fundamentals of database design. By the end of the class, students will be able to design and build research databases. Students will also be taught how to conduct statistical analyses using EXCEL and SAS.

**Prerequisites:** PUH 250 [Min Grade: C]

**PUH 491. Directed Study in Public Health. 1-6 Hour.**

This experiential learning opportunity is open to junior and senior level undergraduate students interested in conducting an in-depth exploration of an approved Public Health topic under the supervision of an SOPH faculty mentor. Students must complete the SOPH agreement form for independent academic work at least two weeks prior to the start of the designated semester. This form specifies the scope of work, regular assignments, and final product that must be completed to receive academic credit.

**PUH 492. Seminar in Public Health. 1-6 Hour.**

Seminar will explore current public health issues and topics locally, regionally, nationally and globally; case studies in epidemiology, issues and causes of chronic and infectious diseases, how the environment interacts with health, and how social and behavioral factors affect personal health.

**PUH 494. Internship/Fieldwork in Public Health. 3 Hours.**

Students who meet eligibility requirements may take three hours of academic credit per semester for participating in an advisor approved internship experience.

**PUH 495. Public Health Capstone Experience. 3 Hours.**

Through completion of an individually-designed service learning project, this course provides students with the opportunity to apply public health competencies through engagement, study, and reflection. Students will apply their public health knowledge and skills to assist a community partner and present a final report on their experience. This course should be taken within the last two semesters of graduation; students must have completed at least 27 hours of PUH coursework prior to enrolling.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C] and PUH 230 [Min Grade: C] and PUH 305 [Min Grade: C] and PUH 307 [Min Grade: C]

**PUH 496. Exploring Population Health. 6 Hours.**

Public health is what we do together as a society to ensure the conditions in which everyone can be healthy. This course will provide students an opportunity to learn about both historical and contemporary public health issues, their effects on population health, and how public health systems are working to solve the health issues affecting our communities today. This course will focus on the Southeast United States. Students will tour historically significant sites, visit communities and community-based organizations, attend featured presentations around both contemporary and historical public health issues, as well as visit local, state, tribal and federal public health agencies to learn about their structure, programs, service delivery models, and approaches to addressing issues of public health. The sum of this experience will illustrate the interdisciplinary nature of public health practice and the need to add attention to the social determinants of health – the conditions in the social, physical, and economic environment in which people are born, live, work and age – in order to achieve health equity. Travel is required for this course. Undergraduate students must have completed their sophomore year before registering for PUH 496.

**PUH 498. Undergraduate Research in Public Health. 1-6 Hour.**

This experiential learning opportunity involves participation in a research project under the supervision of an SOPH faculty mentor; this could involve a student-initiated project or collaboration on existing research. Students must complete the SOPH agreement form for independent academic work at least two weeks prior to the start of the designated semester. This form specifies the scope of work, regular assignments, and final product that must be completed to receive academic credit.

**PUH 499. Special Topics in Public Health. 1-6 Hour.**

This special topics course will be used in the undergraduate program to cover emerging issues or specialized content not represented in the main curriculum.

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## Accounting

### Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V Guide for [Business](#): 21 semester hours

### UAB Contact:

Name	Laura Tull
Title	Director of Transfer Student Success, Collat School of Business
Phone	(205) 934-8812
Email	<a href="mailto:laurawtull@uab.edu">laurawtull@uab.edu</a>

Please print this document and attach it to the Business Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Business at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

# Anthropology

## Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V Guide for Anthropology: 9 semester hours

Remaining 10 semester hours should be taken from:

### Alabama Community College Course / UAB Course Equivalents / Semester Hours

**ANT 220** Cultural Anthropology / ANTH 101 Introduction to Cultural Anthropology / 3

**ANT 210** Physical Anthropology / ANTH 102 Introduction to Physical Anthropology / 3

**ANT 230** Intro to Archeology / ANTH 106 Introduction to Archeology / 3

Approved courses not previously completed in Areas I-IV / 1

### UAB Contact:

Name	Greg Mumford, Ph.D.
Title	Undergraduate Advisor
Phone	(205) 934-0490
Email	gmumford@uab.edu

Please print this document and attach it to the Anthropology Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Anthropology at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Art History

These requirements apply to UAB's major in Art with a concentration in Art History.

## Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for Art History: 9 Semester Hours

Remaining 10 semester hours should be taken from:

### Alabama Community College System Courses/ UAB Course Equivalents/Semester Hours

- **FR 101 + FR 102** Introduction to French I & II / FR 101 / FR 101L + FR 102 / FR 102L Introductory French I & II + Lab / 8 OR
- **GRN 101 + GRN 102** Introduction to German I & II / GN 101 / GN 101L + GN 102 / GN 102L Introductory German I & II + Lab / 8 OR
- **SPA 101 + SPA 102** Introductory Spanish I & II / SPA 101 / SPA 101L + SPA 102 / SPA 102L Introductory Spanish I & II + Lab / 8

- Remaining hours may be satisfied by electives chosen from approved course list in Areas II-IV / 2

### UAB Contact:

Name	Professor Richard Gere
Title	Chair, Department of Art & Art History
Phone	(205) 975-3492
Email	rgere@uab.edu

Please print this document and attach it to the Art History Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Art with a concentration in Art History at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Art Studio, B.A.

These requirements apply to UAB's major in Art with a concentration in Art Studio.

## Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V Guide for Art Studio, B.A.: 18 semester hours

Remaining 1 semester hours should be taken from:

### Alabama Community College Course / UAB Course Equivalents / Semester Hours

Approved courses not previously completed in Areas I-IV / 1

### UAB Contact:

Name	Professor Richard Gere
Title	Chair, Department of Art & Art History
Phone	(205) 975-3492
Email	rgere@uab.edu

Please print this document and attach it to the Art Studio B.A. Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Art with a concentration in Art Studio at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Art Studio, B.F.A

These requirements apply to UAB's B.F.A. major in Art with a concentration in Art Studio.

## Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V Guide for Art Studio, B.F.A.: 18 semester hours

Remaining 1 semester hours should be taken from:

**Alabama Community College Course / UAB Course  
Equivalents / Semester Hours**

Approved courses not previously completed in Areas I-IV / 1

## UAB Contact:

Name	Professor Richard Gere
Title	Chair, Department Art & Art History
Phone	(205) 975-3492
Email	<a href="mailto:rgere@uab.edu">rgere@uab.edu</a>

## Program Admission Requirements:

Admission to the B.F.A. program requires a portfolio review of the student's work submitted to the B.F.A. committee of the Department of Art and Art History. Portfolios are reviewed twice a year, in the fall and spring semesters, following announced deadlines for application to the program. Students must receive a C or higher grade in all studio courses.

Please print this document and attach it to the Art Studio, B.F.A. Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a BFA major in Art with a concentration in Art Studio at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Biology

These requirements apply to UAB's majors in Biology including concentrations in: Marine Science & Molecular Biology

## Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for Biology: 9 Semester Hours

Remaining 10 semester hours should be taken from:

**Alabama Community College System Courses/ UAB Course  
Equivalents/Semester Hours**

- **MTH 1xx** Any math prerequisite to Calculus/ **MA 1xx** Any math prerequisite to Calculus I / 3-4 OR
- **MTH 125** - Calculus I / MA 125 - Calculus I / 4
- **PHL 206** or **PHL 210** - Ethics & Society/Ethics & Health Sciences/ PHL 115 or PHL 116 - Contemporary Moral Issues or Bioethics / 3

*Organic Chemistry Sequence*

- **CHM 221** - Organic Chemistry I/ CH 235 & CH 236 - Organic Chemistry I/Lab / 4
- **CHM 222** - Organic Chemistry II/ CH 237 & CH 238 - Organic Chemistry II/Lab / 4

*Introductory Physics Sequence (trigonometry or calculus based)*

- **PHY 201** - General Physics I/ PH 201 - College Physics I / 4

- **PHY 202** - General Physics II/ PH 202 - College Physics II / 4
- **PHY 213** - General Physics w/ Calculus I/ PH 221 - General Physics I / 4
- **PHY 214** - General Physics w/ Calculus II/ PH 222 - General Physics II / 4

## UAB Contact:

Name	Tyna Adams, Ph.D.
Title	Academic Advisor
Phone	(205) 934-6025
Email	<a href="mailto:tmadams2@uab.edu">tmadams2@uab.edu</a>

Please print this document and attach it to the Biology Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Biology at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Biomedical Engineering

These requirements apply to UAB's major in Biomedical Engineering including concentrations in Biomechanics and Biomaterials & Tissue Engineering

## Area V Transfer Student Pre-Professional & Elective Courses (28 semester hours)

Hours approved by the STARS approved Area V guide for Biomedical Engineering: 26 Semester Hours

Remaining 2 hours should be completed with:

**Alabama Community College System Courses/ UAB Course  
Equivalents**

- **EGR 125** Modern Graphics for Engineers (3 hours)/ME 102 Engineering Graphics (2 hours)

## UAB Contact:

Name	Alan Eberhardt, PhD
Title	Associate Chair, Department of Biomedical Engineering
Phone	(205) 976-0165
Email	<a href="mailto:aeberhar@uab.edu">aeberhar@uab.edu</a>

## Admission Requirements

Students declaring their intention to major in biomedical engineering may be classified as pre-engineering majors until they fulfill specific academic requirements. For a complete description of admission and other school wide requirements see the School of Engineering section of the Undergraduate Catalog <http://catalog.uab.edu/undergraduate/>.

Please print this document and attach it to the Biomedical Engineering Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Biomedical Engineering at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Biomedical Science

### Area V Transfer Student Pre-Professional & Elective Courses (19-23 semester hours)

Hours approved by the STARS approved Area V guide for Biomedical Science: 19-26 Semester Hours

#### UAB Contact:

Name	SHP Office of Student Services
Title	Academic Advisors
Phone	(205) 934-4194
Email	shp@uab.edu

Please print this document and attach it to the Biomedical Sciences Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Biomedical Sciences at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Chemistry

These requirements apply to UAB's majors in Chemistry including concentrations in: Biochemistry, Forensic Chemistry, Chemical Education and Polymer Chemistry.

### Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for Chemistry: 12 Semester Hours

Remaining 7 semester hours should be taken from:

#### Alabama Community College System Courses / UAB Course Equivalents / Semester Hours

- **MTH 126** - Calculus II/ MA 126 - Calculus II / 4

#### *Physics Sequence/ Physics Sequence*

- **PHY 201** - General Physics I/ PH 201 - College Physics I / 4
- **PHY 202** - General Physics II/ PH 202 - College Physics II / 4

OR

- **PHY 213** - General Physics w/ Calculus I/ PH 221 - General Physics I / 4
- **PHY 214** - General Physics w/ Calculus II/ PH 222 - General Physics II / 4

Remaining 7 semester hours should be taken from:

#### Alabama Community College System Courses / UAB Course Equivalents / Semester Hours

#### *Organic Chemistry Sequence/Organic Chemistry Sequence*

- **CHM 221** - Organic Chemistry I/ CH 235 & CH 236 - Organic Chemistry I/Lab / 4
- **CHM 222** - Organic Chemistry II/ CH 237 & CH 238 - Organic Chemistry II/Lab /4
- For students interested in **forensic chemistry or biochemistry** at UAB, **BIO 103** is recommended.

#### UAB Contact:

Name	James R. Grimes
Title	Academic Advisor
Phone	(205) 934-7529
Email	chemadvise@uab.edu

Please print this document and attach it to the Chemistry Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Chemistry at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Civil Engineering

These requirements apply to UAB's major in Biomedical Engineering including the concentration in Sustainable Engineering Design & Construction

### Area V Transfer Student Pre-Professional & Elective Courses (27 semester hours)

Hours approved by the STARS approved Area V guide for Civil Engineering: 11 Semester Hours

Remaining 16 hours should be completed with:

#### Alabama Community College System Courses/ UAB Course Equivalents

- CHM 111 College Chemistry I (4 hours) / CH 115/116 General Chemistry I & Lab (4 hours)
- CHM 112 College Chemistry II (4 hours) / CH 117/118 General Chemistry II & Lab (4 hours)
- EGR 125 Modern Graphics for Engineers (3 hours) / ME 102 Engineering Graphics (2 hours)
- EGR 157 Computer Methods for EGR Using MATLAB (3 hours) or CIS 251 C++ Programming (3 hours) / EGR 150 Computer Methods in Engineering (3 hours)
- MTH 265 Elementary Statistics (3 hours) / MA 180 Introduction to Statistics (3 hours)

#### UAB Contact:

Name	Andy Sullivan, MS
Title	Undergraduate Program Director
Phone	(205) 934-8430
Email	asullivan@uab.edu

## Admission Requirements

Students declaring their intention to major in Civil Engineering may be classified as pre-engineering majors until they fulfill specific academic requirements. For a complete description of admission and other school wide requirements see the School of Engineering section of the Undergraduate Catalog <http://catalog.uab.edu/undergraduate/>.

Please print this document and attach it to the Civil Engineering Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Civil Engineering at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Communication Studies

These requirements apply to UAB's major in Communication Studies including concentrations in: Communication Management, Mass Communication Broadcasting, Mass Communication Journalism, Mass Communication Public Relations, and Sports Communication.

Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for Communication Studies: 12 Semester Hours

Remaining 7 semester hours should be taken from:

### Alabama Community College System Courses / UAB Course Equivalents / Semester Hours

- **SPH 105** - Theories of Human Communication/ CMST 105 - Intro to Human Communication / 3

Remaining hours may be satisfied by electives chosen from the approved course list in Areas II-IV. / 4

## UAB Contact

Name	Timothy R. Levine, Ph.D.
Title	Professor/Chairman, UAB Department of Communication Studies
Phone	(205) 934-3877
Email	<a href="mailto:levinet@uab.edu">levinet@uab.edu</a>

Please print this document and attach it to the Communication Studies Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Communication Studies at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Computer Science

These requirements apply to UAB's major in Computer Science including its specialization in Computer Networking.

## Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for Computer Science: 14 Semester Hours

Remaining 9 semester hours should be taken from:

### Alabama Community College System Courses/ UAB Course Equivalents/Semester Hours

- **CIS 255** - Java Programming/ CS 103 & CS 103L - Introduction to Science in Python/Lab
- **CIS 285** - Object Oriented Programming/ CS 203 & CS 203L - Object Oriented Programming/Lab

### Additional recommended courses:

### Alabama Community College System Courses/ UAB Course Equivalents/Semester Hours

- **PHL 206** - Ethics and Society/ PHL 115 - Contemporary Moral Issues / 3
- **SPH 106** - Fundamentals of Speech Communication/ CMST 101 - Public Speaking / 3
- **OR**
- **SPH 107** - Fundamentals of Public Speaking/ CMST 101 - Public Speaking / 3

## UAB Contact:

Name	Dr. John Johnstone
Title	Undergraduate Program Director
Phone	(205) 975-5633
Email	<a href="mailto:jkj@uab.edu">jkj@uab.edu</a>

A GPA of 2.0 or better is required for students transferring into this major.

Please print this document and attach it to the Computer Science Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Computer Science at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Criminal Justice

Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for Criminal Justice: 9 Semester Hours

Remaining 10 semester hours should be taken from:

### Alabama Community College System Courses / UAB Course Equivalents / Semester Hours

- **CRJ 160** - Introduction to Security/ CJ E1 - CJ Major Elective / 3
- **CRJ 216** - Police Org/ Administration/ CJ E2 - CJ Major Elective / 3

- **CRJ 230** - Criminalistics/ CJ 250 - Criminalistics: An Overview / 3
- Remaining hour may be satisfied by electives chosen from approved course list in Areas II-IV / 1

### UAB Contact:

Name	Martha Earwood, M.S.C.J.
Title	Undergraduate Program Director
Phone	(205) 934-0016
Email	<a href="mailto:mearwood@uab.edu">mearwood@uab.edu</a>

Please print this document and attach it to the Criminal Justice Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Criminal Justice at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Early Childhood or Elementary Education

Area V Transfer Student Pre-Professional & Elective Courses (19-23 semester hours)

Hours approved by the STARS approved Area V guide for Elementary or Early Childhood Education: 16 Semester Hours

### Alabama Community College System Course/ UAB Equivalent / Semester Hours

- **Additional Natural Science** Course beyond Core Curriculum. Select from Approved Area III Natural Sciences / 4
- **Three additional math courses** beyond Core Curriculum (MTH 231 Mathematics for Elementary Teachers I and MTH 232 Mathematics for Elementary Teachers II recommended, and would count toward satisfying part of this requirement.) / 9

Remaining semester hours should be taken from:

- **PSY 200** - General Psychology / PY 101 Intro to Psychology / 3

### UAB Contact:

Name	Tashara Walker
Title	Director, Office of Student Services
Phone	(205) 934-7530
Email	<a href="mailto:tawalker@uab.edu">tawalker@uab.edu</a>

### Admission Requirements:

All students interested in obtaining a "Class B" certificate must make application for admission to the Teacher Education Program prior to the term in which they are completing prerequisites to the Teacher Education Program.

Please print this document and attach it to the Early Childhood or Elementary Education Articulation Guide. Together, this document and

the articulation guide comprise the articulation agreement for a major in Early Childhood and Elementary Education at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Economics

### Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V Guide for Business: 21 semester hours

### UAB Contact:

Name	Laura Tull
Title	Director of Transfer Student Success, Collat School of Business
Phone	(205) 934-8812
Email	<a href="mailto:laurawtull@uab.edu">laurawtull@uab.edu</a>

Please print this document and attach it to the Business Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Business at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Electrical Engineering

Area V Transfer Student Pre-Professional & Elective Courses (23 semester hours)

Hours approved by the STARS approved Area V guide for Electrical Engineering: 15 Semester Hours

Remaining 8 hours should be completed with:

### Alabama Community College System Courses/ UAB Course Equivalents

- EGR 125 Modern Graphics for Engineers (3 hours) / ME 102 Engineering Graphics (2 hours)
- EGR 157 Computer Methods for EGR Using MATLAB (3 hours) or CIS 251 C++ Programming (3 hours) / EGR 150 Computer Methods in Engineering (3 hours)
- MTH 265 Elementary Statistics (3 hours) / MA 180 Introduction to Statistics (3 hours)

### UAB Contact:

Name	Leon Jololian, PhD
Title	Undergraduate Program Director
Phone	(205) 934-8440
Email	<a href="mailto:leon@uab.edu">leon@uab.edu</a>

## Admission Requirements

Students declaring their intention to major in Electrical Engineering may be classified as pre-engineering majors until they fulfill specific academic requirements. For a complete description of admission and other school wide requirements see the School of Engineering section of the Undergraduate Catalog <http://catalog.uab.edu/undergraduate/>.

Please print this document and attach it to the Electrical Engineering Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Electrical Engineering at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Elementary Education

### Area V Transfer Student Pre-Professional & Elective Courses (19-23 semester hours)

Hours approved by the STARS approved Area V guide for Elementary or Early Childhood Education: 13 Semester Hours

#### Alabama Community College System Course/ UAB Equivalent / Semester Hours

- **Additional Natural Science Course** beyond Core Curriculum. Select from Approved Area III Natural Sciences / 4
- **Three additional math courses** beyond Core Curriculum (MTH 231 Mathematics for Elementary Teachers I and MTH 232 Mathematics for Elementary Teachers II recommended, and would count toward satisfying part of this requirement.) / 9

Remaining semester hours should be taken from:

- **PSY 200** - General Psychology / PY 101 Intro to Psychology / 3

#### UAB Contact:

Name	Tashara Walker
Title	Director, Office of Student Services
Phone	(205) 934-7530
Email	<a href="mailto:tawalker@uab.edu">tawalker@uab.edu</a>

## Admission Requirements:

All students interested in obtaining a "Class B" certificate must make application for admission to the Teacher Education Program prior to the term in which they are completing prerequisites to the Teacher Education Program.

Please print this document and attach it to the Early Childhood or Elementary Education Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Elementary Education at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## English

These requirements apply to UAB's majors in English including concentrations in: Literature, Creative Writing, Linguistics and Professional Writing.

### Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for English: 9 Semester Hours

Remaining 10 semester hours should be taken from electives chosen from approved course list in Areas II-IV.

#### UAB Contact:

Name	Margaret Jay Jesse, Ph.D.
Title	Director of Undergraduate Studies
Phone	(205) 975-3751
Email	<a href="mailto:mjjessee@uab.edu">mjjessee@uab.edu</a>

Please print this document and attach it to the English Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in English at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Finance

### Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V Guide for Business: 21 semester hours

#### UAB Contact:

Name	Laura Tull
Title	Director of Transfer Student Success, Collat School of Business
Phone	(205) 934-8812
Email	<a href="mailto:lauratull@uab.edu">lauratull@uab.edu</a>

Please print this document and attach it to the Business Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Business at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Foreign Language French Track

These requirements apply to UAB's major in Foreign Language including concentrations/tracks in: French

Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for Foreign Language: 12 Semester Hours

Remaining 7 semester hours should be taken from:

**Alabama Community College System Courses/ UAB Course Equivalents**

- Any Introductory Foreign Language 101 course other than French

**UAB Contact:**

Name	Julian Arribas, Ph.D.
Title	Professor of Spanish, Chair, Department Foreign Languages & Literatures
Phone	(205) 934-5642
Email	jarribas@uab.edu

Please print this document and attach it to the Foreign Language Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Foreign Language with a French Track at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Foreign Language Spanish Track

These requirements apply to UAB's major in Foreign Language including concentrations/tracks in: Spanish and Applied Professional Spanish

Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for Foreign Language: 12 Semester Hours

Remaining 7 semester hours should be taken from:

**Alabama Community College System Courses/ UAB Course Equivalents**

- Any Introductory Foreign Language 101 course other than Spanish

**UAB Contact:**

Name	Julian Arribas, Ph.D.
Title	Professor of Spanish; Chair, Department of Foreign Languages & Literatures
Phone	(205) 934-5642
Email	jarribas@uab.edu

Please print this document and attach it to the Foreign Language Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Foreign Language with a Spanish or Applied Professional Spanish Track at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Health Care Management

### Area V Transfer Student Pre-Professional & Elective Courses (19-23 semester hours)

Hours approved by the STARS approved Area V guide for Health Care Management: 9 Semester Hours

The remaining 10 hours may be satisfied by electives chosen from the approved course list in Areas II-IV. / 10

**UAB Contact:**

Name	SHP Office of Student Services and Advising
Title	Academic Advisors
Phone	(205) 934-4194
Email	shp@uab.edu

### Admission Requirements:

Students declaring their intention to enter a major in the School of Health Professions must apply both to the Office of Undergraduate Admissions and to the specific program of study. Deadline dates, official documentation and academic requirements vary by program. For a complete description see <http://catalog.uab.edu/undergraduate/>

Please print this document and attach it to the Health Care Management Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Health Care Management at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## High School Education English Language Arts

### Area V Transfer Student Pre-Professional & Elective Courses (19-23 semester hours)

Hours approved by the STARS approved Area V guide for English/ Language Arts: 12 Semester Hours

**Alabama Community College System Course/ UAB Equivalent / Semester Hours**

- ENG 251** American Literature I /EH 223 American Literature / 3 **OR**
- ENG 252** American Literature II /EH 224 American Literature II / 3
- ENG 271** World Literature I /EH 217 World Literature I / 3 **OR**
- ENG 272** World Literature II /EH 218 World Literature II / 3
- ENG 261** English Literature I /EH 221 British and Irish Literature I: Before 1800 / 3

- **ENG 262** English Literature II /EH 222 British and Irish Literature II: 1800 - Present / 3

Remaining semester hours should be taken from:

- **MCM 100** - Introduction to Mass Communication / CMST 103 Survey of Mass Communication / 3
- **MCM 102** - Writing for the Mass Media / CMST 210 Newswriting & Reporting / 3
- **PSY 200** - General Psychology / PY 101 Intro to Psychology / 3

**\*Students must earn a "C" or higher in all English courses.**

### UAB Contact:

Name	Tashara Walker
Title	Director, Office of Student Services
Phone	(205) 934-7530
Email	<a href="mailto:tawalker@uab.edu">tawalker@uab.edu</a>

### Admission Requirements:

All students interested in obtaining a "Class B" certificate must make application for admission to the Teacher Education Program prior to the term in which they are completing prerequisites to the Teacher Education Program.

Please print this document and attach it to the English/Language Arts Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in High School Education with a Concentration in English Language Arts at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## High School Education Social Science

### Area V Transfer Student Pre-Professional & Elective Courses (19-23 semester hours)

Hours approved by the STARS approved Area V guide for Social Studies Education: 9 Semester Hours

#### Alabama Community College System Course/ UAB Equivalent / Semester Hours

- **SOC 200** Introduction to Sociology /SOC 100Introduction to Sociology / 3
- **HIS 201** U S History I /HY 120 The U S to 1877 / 3
- **HIS 202** U S History II /HY 121 The U S Since 1877 / 3

Remaining semester hours should be taken from:

- **POL 211** American National Government /PSC 101 Introduction to American Government / 3
- **POL 220** State and Local Government / PSC 221 American State and Local Government / 3

- **GEO 200** Geography of North America / **GEO 221** Geography of North America / 3

**\*Students must earn a C or higher in all history courses.**

### UAB Contact:

Name	Tashara Walker
Title	Director, Office of Student Services
Phone	(205) 934-7530
Email	<a href="mailto:tawalker@uab.edu">tawalker@uab.edu</a>

### Admission Requirements:

All students interested in obtaining a "Class B" certificate must make application for admission to the Teacher Education Program prior to the term in which they are completing prerequisites to the Teacher Education Program.

Please print this document and attach it to the Social Science Education Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in High School Education with a Concentration in General Social Sciences at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## History

### Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for History: 9 Semester Hours

Remaining 10 semester hours should may be satisfied by electives chosen from approved course list in Areas II-IV.

### UAB Contact:

Name	Jonathan Wiesen, Ph.D.
Title	Chair, Department of History
Phone	(205) 934-5634
Email	<a href="mailto:jwiesen@uab.edu">jwiesen@uab.edu</a>

Please print this document and attach it to the History Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in History at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Industrial Distribution

### Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V Guide for Business: 21 semester hours

**UAB Contact:**

Name	Laura Tull
Title	Director of Transfer Student Success, Collat School of Business
Phone	(205) 934-8812
Email	<a href="mailto:laurawtull@uab.edu">laurawtull@uab.edu</a>

Please print this document and attach it to the Business Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Business at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Information Systems****Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)**

Hours approved by the STARS approved Area V Guide for Business: 21 semester hours

**UAB Contact:**

Name	Laura Tull
Title	Director of Transfer Student Success, Collat School of Business
Phone	(205) 934-8812
Email	<a href="mailto:laurawtull@uab.edu">laurawtull@uab.edu</a>

Please print this document and attach it to the Business Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Business at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**International Studies****Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)**

Hours approved by the STARS approved Area V guide for International Studies: 12 Semester Hours

Remaining 7 semester hours should be taken from:

**Alabama Community College System Courses/ UAB Course Equivalents**

Students must demonstrate second-year proficiency in a foreign language.

- **FRN 101** - Introductory French I/ FR 101 - FR 101L - Intro to French I + Lab / 4
- **FRN 102** - Introductory French II/ FR 102 - FR 102L - Intro to French II + Lab / 4
- **FRN 201** - Intermediate French I/ FR 201 - Intermediate French I / 4

- **FRN 202** - Intermediate French II/ FR 202 - Intermediate French II / 4
- **GRN 101** - Introductory German I/ GN 101 - GN 101L - Intro to German I + Lab / 4
- **GRN 102** - Introductory German II/ GN 102 - GN 102L - Intro to German II + Lab / 4
- **GRN 201** - Intermediate German I/ GN 201 - Intermediate German I / 4
- **GRN 202** - Intermediate German II/ GN 202 - Intermediate German II / 4
- **JPN 101** - Introductory Japanese I/ JPA 101 - JPA 101L - Intro to Japanese I + Lab / 4
- **JPN 102** - Introductory Japanese II/ JPA 102 - JPA 102L - Intro to Japanese II + Lab / 4
- **SPA 101** - Introductory Spanish I/ SPA 101 - SPA 101L - Intro to Spanish I + Lab / 4
- **SPA 102** - Introductory Spanish II/ SPA 102 - SPA 102L - Intro to Spanish II + Lab / 4
- **SPA 201** - Intermediate Spanish I/ SPA 201 - Intermediate Spanish I + Lab / 4
- **SPA 202** - Intermediate Spanish II/ SPA 202 - Intermediate Spanish II + Lab / 4

**UAB Contact:**

Name	Renato Corbetta, Ph.D.
Title	Director, International Studies
Phone	(205) 934-2336
Email	<a href="mailto:corbetta@uab.edu">corbetta@uab.edu</a>

Please print this document and attach it to the International Studies Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in International Studies at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Kinesiology Bioenergetics Concentration****Area V Transfer Student Pre-Professional & Elective Courses (19-23 semester hours)**

Hours approved by the STARS approved Area V guide for Kinesiology: 19 Semester Hours

**Alabama Community College System Courses/ UAB Course Equivalents / Semester Hours**

- **BIO 201** Human Anatomy & Physiology & **BIO 202** Human Anatomy & Physiology II /BY 115 Human Anatomy & BY 116 Human Physiology / 8\*
- **BIO 220** General Microbiology /BY 261 Introduction to Microbiology and BY 261L Introduction to Microbiology Lab/ 4

- **CHM 105 Introductory** to Organic Chemistry /CH 107 Introductory Chemistry II and CH 108 Introductory Chemistry II Lab / 4
- **HED 221 Personal Health /CHHS 141 Personal Health / 3 OR**
- **HED 224 Personal Health / CHHS 141 Personal Health / 3**

Remaining semester hours should be taken from:

- **HED 230 Safety & First Aid /CHHS 140 First Aid / 3 OR**
- **HED 231 First Aid /CHHS 140 First Aid / 3**
- **PED 200 Foundations of Physical Education /KIN 136 Intro to Physical Education / 3**
- **HEC 140 Principles of Nutrition /NTR 222 Nutrition and Health / 3**
- **MTH 265 Elementary Statistics /MA 180 Intro to Statistics / 3**
- **PED 103 Weight Training /KIN 115 Weight Training / 1**
- **PED 140 Beginning Swimming /KIN 101 Beginning Swimming / 1 OR**
- **PED 141 Swimming /KIN 102 Intermediate Swimming / 1 OR**
- **PED 148 Lifeguard Training /KIN 103 Lifeguard Training / 1**

*\*Students must complete a two-course Anatomy and Physiology sequence (BIO 201 and 202) for this major. Because there is no UAB equivalent to BIO 201 and 202 individually, students transferring from Alabama community colleges should take both BIO 201 and 202 at their community college or wait to begin this sequence at UAB. Students must earn a grade of "C" or higher in all math, science, and major courses.*

UAB Contact:

Name	Tashara Walker
Title	Director, Office of Student Services
Phone	(205) 934-7530
Email	<a href="mailto:tawalker@uab.edu">tawalker@uab.edu</a>

Please print this document and attach it to the Kinesiology & Exercise Science Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Kinesiology with a Concentration in Bioenergetics at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Kinesiology Exercise Science Concentration

### Area V Transfer Student Pre-Professional & Elective Courses (19-23 semester hours)

Hours approved by the STARS approved Area V guide for Kinesiology: 17 Semester Hours

### Alabama Community College System Courses/ UAB Course Equivalents / Semester Hours

- **BIO 201 Human Anatomy & Physiology & BIO 202 Human Anatomy & Physiology II /BY 115 Human Anatomy & BY 116 Human Physiology /8\***
- **PED 200 Foundations of Physical Education /KIN 136 Intro to Physical Education / 3**
- **HED 230 Safety & First Aid /CHHS 140 First Aid / 3 OR**
- **HED 231 First Aid /CHHS 140 First Aid / 3**
- **HED 221 Personal Health /CHHS 141 Personal Health / 3 OR**
- **HED 224 Personal /Community Health /CHHS 141 Personal Health / 3**

Remaining semester hours should be taken from:

- **MTH 265 Elementary Statistics /MA 180 Intro to Statistics / 3**
- **PED 103 Weight Training /KIN 115Weight Training / 1**
- **PED 106 Aerobics /KIN 131 Aerobics / 1 OR**
- **PED 107 Aerobics Dance /KIN 131 Aerobics / 1 OR**
- **PED 108 Aerobics Dance /KIN 131Aerobics / 1**
- **PED 140 Beginning Swimming /KIN 101 Beginning Swimming / 1 OR**
- **PED 141 Swimming /KIN 102 Intermediate Swimming / 1 OR**
- **PED 148 Lifeguard Training /KIN 103 Lifeguard Training / 1**

*\*Students must complete a two-course Anatomy and Physiology sequence (BIO 201 and 202) for this major. Because there is no UAB equivalent to BIO 201 and 202 individually, students transferring from Alabama community colleges should take both BIO 201 and 202 at their community college or wait to begin this sequence at UAB. Students must earn a grade of "C" or higher in all math, science, and major courses.*

### UAB Contact:

Name	Tashara Walker
Title	Director, Office of Student Services
Phone	(205) 934-7530
Email	<a href="mailto:tawalker@uab.edu">tawalker@uab.edu</a>

Please print this document and attach it to the Kinesiology & Exercise Science Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Kinesiology with a Concentration in Exercise Science at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Kinesiology Fitness Leadership Concentration

### Area V Transfer Student Pre-Professional & Elective Courses (19-23 semester hours)

Hours approved by the STARS approved Area V guide for Kinesiology:  
11 Semester Hours

#### Alabama Community College System Courses/ UAB Course Equivalents / Semester Hours

- **BIO 201** Human Anatomy & Physiology & **BIO 202** Human Anatomy & Physiology II / BY 115 Human Anatomy & BY 116 Human Physiology / 8\*
- **HED 230** Safety & First Aid /CHHS 140 First Aid / 3 **OR**
- **HED 231** First Aid /CHHS 140 First Aid / 3

Remaining semester hours should be taken from:

- **PED 200** Foundations of Physical Education /KIN 136 Intro to Physical Education / 3
- **PED 103** Weight Training /KIN 115 Weight Training / 1
- **PED 106** Aerobics /KIN 131 Aerobics / 1 **OR**
- **PED 107** Aerobics Dance /KIN 131 Aerobics / 1 **OR**
- **PED 108** Aerobics Dance /KIN 131 Aerobics / 1
- **PED 140** Beginning Swimming /KIN 101 Beginning Swimming / 1 **OR**
- **PED 141** Swimming /KIN 102 Intermediate Swimming / 1 **OR**
- **PED 148** Lifeguard Training /KIN 103 Lifeguard Training / 1
- **HED 221** Personal Health /CHHS 141 Personal Health / 3 **OR**
- **HED 224** Personal /Community Health /CHHS 141 Personal Health / 3
- **HED 199** Ecological Approach Health and Fitness /KIN 222 Concepts of Health and Fitness / 3
- **MTH 265** Elementary Statistics /MA 180 Intro to Statistics / 3

*\*Students must complete a two-course Anatomy and Physiology sequence (BIO 201 and 202) for this major. Because there is no UAB equivalent to BIO 201 and 202 individually, students transferring from Alabama community colleges should take both BIO 201 and 202 at their community college or wait to begin this sequence at UAB. Students must earn a grade of "C" or higher in all math, science, and major courses.*

### UAB Contact:

Name	Tashara Walker
Title	Director, Office of Student Services
Phone	(205) 934-7530
Email	<a href="mailto:tawalker@uab.edu">tawalker@uab.edu</a>

Please print this document and attach it to the Kinesiology & Fitness Leadership Articulation Guide. Together, this document and the

articulation guide comprise the articulation agreement for a major in Kinesiology with a Concentration in Fitness Leadership at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Kinesiology P-12 Physical Education Concentration

### Area V Transfer Student Pre-Professional & Elective Courses (19-23 semester hours)

Hours approved by the STARS approved Area V guide for Kinesiology:  
17 Semester Hours

#### Alabama Community College System Courses/ UAB Course Equivalents / Semester Hours

- **BIO 201** Human Anatomy & Physiology & **BIO 202** Human Anatomy & Physiology II / BY 115 Human Anatomy & BY 116 Human Physiology / 8\*
- **HED 230** Safety & First Aid /CHHS 140 First Aid / 3 **OR**
- **HED 231** First Aid /CHHS 140 First Aid / 3
- **PED 200** Foundations of Physical Education /KIN 136 Intro to Physical Education / 3
- **MTH 265** Elementary Statistics /MA 180 Intro to Statistics / 3

Remaining semester hours should be taken from:

- **PED 103** or **104** Weight Training /KIN 115 Weight Training / 1
- **PED 140** Swimming or **PED 141** Swimming or **PED 148** Lifeguard Training /KIN 101/KIN 102/KIN 103 Aquatics Courses / 1
- **PED 106** Aerobics or **PED 107** Aerobics Dance or **PED 108** Aerobics Dance /KIN 131 Aerobics / 1

*\*Students must complete a two-course Anatomy and Physiology sequence (BIO 201 and 202) for this major. Because there is no UAB equivalent to BIO 201 and 202 individually, students transferring from Alabama community colleges should take both BIO 201 and 202 at their community college or wait to begin this sequence at UAB. Students must earn a grade of "C" or higher in all math, science, and major courses.*

### UAB Contact:

Name	Tashara Walker
Title	Director, Office of Student Services
Phone	(205) 934-7530
Email	<a href="mailto:tawalker@uab.edu">tawalker@uab.edu</a>

### Admission Requirements:

All students interested in obtaining a "Class B" certificate must make application for admission to the Teacher Education Program prior to the

term in which they are completing prerequisites to the Teacher Education Program.

Please print this document and attach it to the Physical Education Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Kinesiology with a Concentration in Physical Education Teacher Certification at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Management

### Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V Guide for Business: 21 semester hours

#### UAB Contact:

Name	Laura Tull
Title	Director of Transfer Student Success, Collat School of Business
Phone	(205) 934-8812
Email	<a href="mailto:laurawtull@uab.edu">laurawtull@uab.edu</a>

Please print this document and attach it to the Business Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Business at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Marketing

### Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V Guide for Business: 21 semester hours

#### UAB Contact:

Name	Laura Tull
Title	Director of Transfer Student Success, Collat School of Business
Phone	(205) 934-8812
Email	<a href="mailto:laurawtull@uab.edu">laurawtull@uab.edu</a>

Please print this document and attach it to the Business Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Business at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Materials Engineering

These requirements apply to UAB's major in Materials Engineering including concentrations in Biomaterials, Metallurgy and Polymer Matrix Composites

### Area V Transfer Student Pre-Professional & Elective Courses (28 semester hours)

Hours approved by the STARS approved Area V guide for Materials Engineering: 22 Semester Hours

Remaining 6 hours should be completed with:

#### Alabama Community College System Courses/ UAB Course Equivalents

- EGR 157 Computer Methods for EGR Using MATLAB (3 hours) / EGR 150 Computer Methods in Engineering (3 hours)
- Science/Math/Engineering elective (3 hours) - Various courses will be accepted including:
  - BIO 103 Principles of Biology I (4 hours)
  - Chemistry courses at levels above what is required in Areas III and V
  - Physics courses at levels above what is required in Areas III and V

#### UAB Contact:

Name	Haibin Ning, PhD
Title	Undergraduate Program Director
Phone	(205) 934-4850
Email	<a href="mailto:ning@uab.edu">ning@uab.edu</a>

### Admission Requirements

Students declaring their intention to major in Materials Engineering may be classified as pre-engineering majors until they fulfill specific academic requirements. For a complete description of admission and other school wide requirements see the School of Engineering section of the Undergraduate Catalog <http://catalog.uab.edu/undergraduate/>.

Please print this document and attach it to the Materials Engineering Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Materials Engineering at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Mathematics

These requirements apply to UAB's major in Mathematics with tracks in: Traditional Mathematics, Applied Mathematics and Scientific Computation and Mathematical Reasoning

### Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for Mathematics: 9 Semester Hours

Remaining 10 semester hours should be taken from:

**Alabama Community College System Courses/ UAB Course Equivalents / Semester Hours**

- **MTH 238** - Applied Differential Equations I/ MA 252 - Intro to Differential Equations / 3
- **Additional Mathematics course for major:** The standard track in the major requires a junior level linear algebra course, so MTH 237 Linear Algebra is not appropriate. However, MTH 237 will count in the applied mathematics and scientific computation track./ MA 260 Introduction to Linear Algebra / 3
- Remaining Hours may be satisfied by electives chosen from approved course list in Areas II-IV / 4

**UAB Contact:**

Name	Jeanne S. Hutchison, Ph.D.
Title	Undergraduate Advisor
Phone	(205) 934-2154
Email	<a href="mailto:htuchiso@math.uab.edu">htuchiso@math.uab.edu</a>

Please print this document and attach it to the Mathematics Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Art with a concentration in Art History at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Mechanical Engineering

### Area V Transfer Student Pre-Professional & Elective Courses (24 semester hours)

Hours approved by the STARS approved Area V guide for Mechanical Engineering: 15 Semester Hours

Remaining 9 hours should be completed with:

**Alabama Community College System Courses/ UAB Course Equivalents**

- CHM 112 College Chemistry II (4 hours) / CH 117/118 General Chemistry II & Lab (4 hours)
- EGR 125 Modern Graphics for Engineers (3 hours) / ME 102 Engineering Graphics (2 hours)
- EGR 157 Computer Methods for EGR Using MATLAB (3 hours) or CIS 251 C++ Programming (3 hours) / EGR 150 Computer Methods in Engineering (3 hours)

UAB Contact:

Name	Pasquale Cinnella, PhD
Title	Undergraduate Program Director
Phone	(205) 934-8460
Email	<a href="mailto:pc1@uab.edu">pc1@uab.edu</a>

## Admission Requirements

Students declaring their intention to major in Mechanical Engineering may be classified as pre-engineering majors until they fulfill specific academic requirements. For a complete description of admission and other school wide requirements see the School of Engineering section of the Undergraduate Catalog <http://catalog.uab.edu/undergraduate/>.

Please print this document and attach it to the Mechanical Engineering Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Mechanical Engineering at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Music

These requirements apply to UAB's major in Music as well as Music with concentrations in Music Technology or Music Education

### Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for Music: 17 Semester Hours

Remaining hours may be satisfied by electives chosen from approved course list in Areas II-IV

**UAB Contact:**

Name	Denise Gainey, Ph.D.
Title	Associate Chair, Department of Music
Phone	(205) 975-0558
Email	<a href="mailto:dschmidt@uab.edu">dschmidt@uab.edu</a>

Please print this document and attach it to the Music Articulation Guide.

Together, this document and the articulation guide comprise the articulation agreement for a major in Music at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Neuroscience

Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for Neuroscience: 19 Semester Hours

**UAB Contact:**

Name	Whitney Woodard
Title	Academic Advisor
Phone	(205) 934-6135
Email	<a href="mailto:wmwoodard@uab.edu">wmwoodard@uab.edu</a>

## Admission Requirements:

Neuroscience has additional admission requirements beyond those at UAB.

- High school students with 28 or higher on the ACT and a GPA of at least 3.5 will be considered for immediate acceptance into the Neuroscience Program after their application is received and reviewed. Students may compensate for an ACT score of less than 28 with exceptional classroom performance including scores of 4 or 5 on certain AP exams.
- Others may choose to attend UAB for a year and will then be evaluated for admission based on excellent classroom performance. We are especially interested in performance in the following courses: Biology 123 and 124 and Chemistry 115 and 117. Current UAB students whose high school credentials meet the minimum requirements and/or whose performance in college courses is excellent may apply at any time.

Please print this document and attach it to the Neuroscience Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Neuroscience at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Nursing

### Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for Nursing: 12 Semester Hours

Remaining 7 semester hours should be taken from:

#### Alabama Community College System Courses/ UAB Course Equivalents / Semester Hours

- **HEC 140** - Nutrition/ NTR 222 - Nutrition and Health / 3
- **PED 224** - Principles of Nutrition/NTR 222 - Nutrition and Health / 3
- **MTH 265** - Elementary Statistics/ MA 180 - Introduction to Statistics / 3
- Approved courses not previously completed in Areas I-IV / 1

*Students must complete a two-course Anatomy and Physiology sequence (BIO 201 and 202) for this major. Because there is no UAB equivalent to BIO 201 and 202 individually, students transferring from Alabama community colleges should take both BIO 201 and 202 at their community college or wait to begin this sequence at UAB. Students must earn a grade of "C" or higher in all math, science, and major courses.*

### UAB Contact:

Name	John P Updegraff
Title	Director of Student Success

Phone	(205) 934-7529
Email	<a href="mailto:jupde22@uab.edu">jupde22@uab.edu</a>

## Admission Requirements:

### APPLICATION REQUIREMENTS FOR NURSING MAJORS AT UAB:

- The minimum cumulative GPA for BSN applicants is **2.75** at the time of application (includes transfer students). Admission is competitive and is based on the space available. A minimum cumulative GPA of 2.75 **does not guarantee** admission to the School of Nursing.
- **Students are eligible to apply when they have successfully completed a minimum of 41 semester credit hours.** Successful completion of each nursing foundation course with a "C" or above must be met prior to matriculation into the nursing program.
- Students offered admission to the SON who are enrolled in pre-nursing coursework to satisfy the minimum 41-hour requirement must make a "C" or better in every nursing foundation course for the nursing major in order to begin coursework at the School of Nursing. The final minimum cumulative GPA must be 2.75 or greater on all coursework.
- Admission decisions are competitive and based on the applicant's academic record and application at the time of the application deadline. *\*All grades (UAB and other colleges/ universities) from previous terms must be posted on the applicant's UAB transcript by the application deadline.*
- A **resume**, outlining health care interest/experience, campus/ community involvement, leadership, employment, etc. will be due by the application deadline.
- Applicants are strongly encouraged to provide **proof of work/ volunteer experience in a healthcare setting** as part of the application process. The healthcare work is to be documented by letters from a supervisor (on agency letterhead) and/or timesheets of paid or volunteer work in a healthcare setting. Completion of a nursing skills course does not meet this criterion.
- Applicants to the School of Nursing are strongly recommended to demonstrate a record of full-time study and a minimum number of course repeats/grade forgiveness options.
- **Meeting minimum School of Nursing admission requirements does not guarantee admission to the program.** Admission is based upon the academic record, admission application (and all supporting documents), and space availability. When the number of applicants who meet minimum requirements exceeds the number of student spaces available, the best-qualified applicants will be admitted.
- Attendance at the BSN Information Session and orientation is mandatory for all BSN students entering the program.

## Philosophy

These requirements apply to UAB's major in Philosophy as well as Philosophy with an Ethics Track

### Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for Philosophy: 9 Semester Hours

Remaining 10 hours may be satisfied by electives chosen from approved course list in Areas II-IV.

### UAB Contact:

Name	David Sellers
Title	Academic Advisor
Phone	(205) 934-6135
Email	<a href="mailto:daseller@uab.edu">daseller@uab.edu</a>

Please print this document and attach it to the Philosophy Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Philosophy at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Physics

These requirements apply to UAB's major in Physics including concentrations in: Advanced Physics, Applied Physics, Computational Physics and Biophysics.

### Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for Physics: 9 Semester Hours

Remaining 10 semester hours should be taken from:

#### Alabama Community College System Courses/ UAB Course Equivalents / Semester Hours

- **MTH 126** - Calculus II/ MA 126 - Calculus II / 4
- **CHM 111** - College Chemistry I/ CH 115 & CH 116 - General Chemistry I/Lab / 4
- **CHM 112** - College Chemistry II/ CH 117 & CH 118 - General Chemistry II/Lab / 4

### UAB Contact:

Name	James R. Grimes
Title	Academic Advisor
Phone	(205) 934-7529
Email	<a href="mailto:physadvise@uab.edu">physadvise@uab.edu</a>

Please print this document and attach it to the Physics Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Physics at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Political Science

These requirements apply to UAB's major in Political Science including concentrations in: American Politics and Political Theory, Global Politics and Policy and Human Rights and Social Justice.

### Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for Political Science: 9 Semester Hours

Remaining 10 semester hours should be taken from:

#### Alabama Community College System Courses/ UAB Course Equivalents / Semester Hours

- **POL 230** - Comparative Government/ PSC 102 - Introduction to Comparative Politics / 3
- **POL 236** - Survey of International Relations/ PSC 103 - Introduction to International Relations / 3
- **POL 240** - Political Theory/ PSC 104 - Introduction to Political Theory / 3
- Remaining hour may be selected from other Areas II-IV approved courses / 1

### UAB Contact:

Name	Rachel Daniel
Title	Academic Advisor
Phone	(205) 934-6135
Email	<a href="mailto:rdaniel1@uab.edu">rdaniel1@uab.edu</a>

Please print this document and attach it to the Political Science Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Political Science at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Psychology

### Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for Psychology: 9 Semester Hours

Remaining 10 semester hours should be taken from:

#### Alabama Community College System Courses / UAB Course Equivalents / Semester Hours

- **PSY 210** - Human Growth & Development/ PY 212 - Developmental Psychology / 3
- **PSY 230** - Abnormal Psychology/ PY 218 - Abnormal Psychology / 3
- Remaining hours may be satisfied by electives chosen from approved course list in Areas II-IV / 1

### UAB Contact

Name	Maria Hopkins, Ph.D.
Title	Director, Undergraduate Studies
Phone	(205) 975-9456
Email	<a href="mailto:mhopkins@uab.edu">mhopkins@uab.edu</a>

Please print this document and attach it to the Psychology Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Psychology at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Public Health

These requirements apply to UAB's major in Public Health including concentrations in: General Public Health, Environmental Health Sciences and Global Health Studies.

### Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for Public Health: 19 Semester Hours

UAB Contact:

Name	Nicole Gravitt
Title	Program Manager II
Phone	(205) 934-7759
Email	<a href="mailto:ngravitt@uab.edu">ngravitt@uab.edu</a>

Please print this document and attach it to the Public Health Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Public Health at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Social Work

### Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for Social Work: 9 Semester Hours

Remaining 10 hours may be satisfied by electives chosen from approved course list in Areas II-IV. PSY 200, SOC 200, HIS 202 are recommended.

#### UAB Contact:

Name	Christopher (Kip) Hubbard
Title	Academic Advisor
Phone	(205) 934-6135
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Please print this document and attach it to the Social Work Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Social Work at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Sociology

These requirements apply to UAB's major in Sociology including concentrations in Social Psychology and Medical Sociology.

### Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for Sociology: 9 Semester Hours

Remaining 10 hours may be satisfied by electives chosen from approved course list in Areas II-IV.

UAB Contact:

Name	Chris Biga, Ph.D.
Title	Director of Undergraduate Programs
Phone	(205) 934-8408
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Please print this document and attach it to the Sociology Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Sociology at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Theatre

These requirements apply to UAB's major in Theatre including concentrations in: General Theatre, Pre-Professional Design and Technology, Pre-Professional Performance.

### Area V Transfer Student Pre-Professional & Elective Courses (19 semester hours)

Hours approved by the STARS approved Area V guide for Theatre: 12 Semester Hours

Remaining 7 semester hours may be satisfied by electives chosen from approved course list in Areas II-IV.

#### UAB Contact:

Name	Kelly Allison
Title	Chair, Department of Theatre
Phone	(205) 934-3236
Email	<a href="mailto:kallison@uab.edu">kallison@uab.edu</a>

Please print this document and attach it to the Art History Articulation Guide. Together, this document and the articulation guide comprise the articulation agreement for a major in Art with a concentration in Art History at the University of Alabama at Birmingham.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Addenda

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