

School of Medicine, Joint Health Sciences Division  
Department of Cell, Developmental, and Integrative Biology:

## MS Anatomical Sciences Program 2019-2020



## STUDENT HANDBOOK

# Contents

Introductory Materials.....	4
Departmental Chair Welcome: .....	4
CDIB Introduction.....	5
SECTION 1 – SCHOOL AND UNIVERSITY INFORMATION .....	6
ACADEMIC CALENDAR .....	6
ACADEMIC HONOR CODE (UAB) .....	6
ASKIT .....	6
ATTENDANCE .....	7
BLAZERID / BLAZERNET / EMAIL BLAZERID .....	7
BLAZER EXPRESS.....	8
BOOKSTORE .....	8
CAMPUS ONECARD .....	8
CAMPUS MAP .....	8
CANVAS LEARNING MANAGEMENT SYSTEM.....	8
COUNSELING SERVICES .....	8
CONDUCT (STUDENT ADVOCACY, RIGHTS AND CONDUCT (SARC)) .....	8
DISABILITY SUPPORT SERVICES (DSS).....	8
EMERGENCIES .....	9
UAB Police .....	9
DIVERSITY, EQUITY AND INCLUSION (DEI) .....	9
FERPA .....	9
FINANCIAL AID .....	9
FOOD SERVICES.....	10
GRADUATE SCHOOL .....	10
GRADUATION .....	10
STUDENT HEALTH AND WELLNESS .....	10
INSTITUTIONAL REVIEW BOARD FOR HUMAN USE (IRB) .....	10
INTELLECTUAL PROPERTY .....	10
LACTATION CENTERS.....	10
LIBRARIES AND LEARNING RESOURCE CENTER .....	10
Lister Hill Library of the Health Sciences.....	11
Mervyn H. Sterne Library .....	11
ONESTOP STUDENT SERVICES.....	11
PARKING.....	11
PLAGIARISM AND TURNITIN .....	11
RECREATION CENTER .....	11
SOCIAL MEDIA .....	11
TUITION AND FEES .....	12
WEATHER .....	12

Webpage .....	12
B-ALERT .....	12
Hotline .....	12
WBHM .....	12
WITHDRAWAL FROM COURSE / PROGRAM .....	13
SECTION 2 – PROGRAM INFORMATION .....	13
PROGRAM OVERVIEW .....	13
Degree Conferred .....	13
Length of Study .....	13
Term of Enrollment .....	13
Program Mission .....	13
ADMISSION REQUIREMENTS .....	13
FACULTY AND STAFF .....	14
Program Directors: .....	14
Education Faculty: .....	14
CURRICULUM .....	15
CIRTL CORE .....	15
ANATOMY CORE .....	15
GRADUATION REQUIREMENTS .....	17
ASSESSMENTS AND EVALUATIONS .....	17
STUDENT RESPONSIBILITIES TO THE PROGRAM .....	17
PROGRAM RESPONSIBILITIES TO THE STUDENT .....	17
PROBATION AND DISMISSAL .....	18
PROFESSIONAL CONDUCT .....	18
REMEDATION AND READMISSION .....	18
ESSENTIAL REQUIREMENTS .....	19
REGISTRATION .....	20
SCHOLARSHIPS AND LOANS .....	20
ANSC POLICIES ACADEMIC PROGRESS .....	21
INCOMPLETE & DEFERRED CREDIT POLICY .....	21
PREGNANCY POLICY .....	21

## Introductory Materials

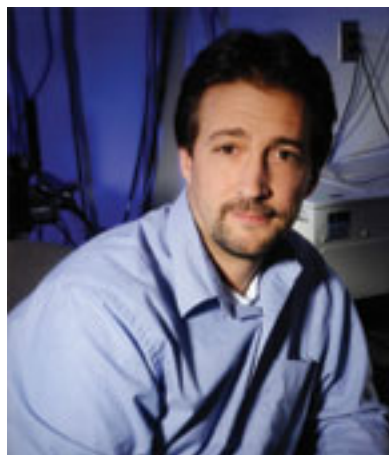
### Departmental Chair Welcome:

Welcome to the Department of Cell, Developmental, and Integrative Biology (CDIB)! It's a great time to be a scientist. Advancements in biomedical research are occurring at an unprecedented pace. Our newly advanced capacities to probe and modify genomes, to visualize changes in cell behavior, and to assess protein function are providing new opportunities to have a major impact on human health.

CDIB is one of six basic science departments in the School of Medicine. The CDIB faculty direct well-funded biomedical research programs that study cell and developmental biology, cancer biology, exercise physiology, immunology, cartilage and bone biology, regenerative medicine, and neuroscience. Our research programs are advancing science in many fields by uncovering new mechanisms of disease through the application of cutting-edge technologies.

Our faculty are committed to excellence in biomedical education and are actively engaged in multiple programs in the professional, graduate and undergraduate schools, as well as being engaged in multiple outreach activities that impact K-12 education programs in the Birmingham area and across the state. Our goal is to provide exceptional education and training programs that prepare graduate students, postdoctoral fellows and junior faculty for the challenges of a productive career at the forefront of biomedical research and education.

I am thrilled that you will be joining our department and enhancing our strength and diversity. As you know, knowledge of anatomy underpins the clinical sciences. However, I was deeply impressed by the diverse backgrounds and goals of this inaugural class. I sincerely hope you will enjoy your time as members of the CDIB community and will take advantage of all that the course, the department and the university have to offer. Welcome to CDIB!



Brad Yoder, PhD

Chair, CDIB

Director Cell, Molecular, and Developmental Biology Graduate Theme

Director T32 Training Program in Cell and Molecular Biology

Director, P30 Hepatorenal Fibrocystic Disease Core Center

1900 University Blvd., THT 926A, Birmingham Al, 35924

byoder@uab.edu

## CDIB Introduction

The Department of Cell, Developmental and Integrative Biology (CDIB) is a nationally ranked basic science department within the prestigious UAB School of Medicine. In recognition of their research and teaching successes, our outstanding CDIB faculty have earned numerous awards, both locally and nationally. From a financial standpoint, our faculty currently manage in excess of \$16M in annual direct costs from extramural funding to support their research programs. Furthermore, our distinguished educators deliver educational content within six schools across UAB and, as a result, have a major impact in countless lives.

Cell, Developmental and Integrative Biology faculty make lasting, noteworthy contributions to the University's educational mission both within and beyond the institution. Our educational endeavors range from K-12 and adult educational outreach, to lectures and preceptorships in multiple courses across campus, to leadership roles within the professional and graduate schools. We are excited to bring the thrill of scientific discovery to elementary students through our outreach, to pursue excellence in the formation of future scientists and clinicians through our lecturing, course and mentoring activities, and to enhance the skills of established professionals through our continuing adult education programs.

The Department of Cell, Developmental and Integrative Biology (CDIB) is a preeminent leader among the Joint Health Sciences departments in the UAB School of Medicine and nationally through persistent excellence in rigorous, well-funded research programs and scholarly activities leveraging our renowned expertise in cell and developmental biology, cancer biology, exercise physiology, immunology, cartilage and bone biology, regenerative medicine, and neurosciences. The fundamental mission of the department is to strengthen and expand knowledge throughout the interdisciplinary biomedical sciences by providing a robust and dynamic research environment for all basic and translational science researchers; by training and educating the future generations of biomedical scientists, physicians, and physician-scientists; and by creating a diverse and positive work environment that will encourage, motivate, and inspire faculty, staff, and trainees to greater levels of excellence, wherein productivity is limited by only our creativity and enthusiasm.

## SECTION 1 – SCHOOL AND UNIVERSITY INFORMATION

### ACADEMIC CALENDAR

All dates related to registration, payments of tuition and fees drop/add dates, other administrative requirements, and official school holidays are recorded on the UAB Academic Calendar available at <http://www.uab.edu/academiccalendar>

### ACADEMIC HONOR CODE (UAB)

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. Academic misconduct undermines the purpose of education. Such behavior is a serious violation of the trust that must exist among faculty and students for a university to nurture intellectual growth and development. Academic misconduct can generally be defined as all acts of dishonesty in an academic or related matter. Academic dishonesty includes, but is not limited to, the following categories of behavior:

ABETTING is helping another student commit an act of academic dishonesty. Allowing someone to copy your quiz answers or use your work as their own are examples of abetting.

CHEATING is the unauthorized use or attempted use of unauthorized materials, information, study aids, the work of others, or computer-related information.

PLAGIARISM means claiming as your own the ideas, words, data, computer programs, creative compositions, artwork, etc., done by someone else. Examples include improper citation of referenced works, the use of commercially available scholarly papers, failure to cite sources, or copying another person's ideas.

FABRICATION means presenting falsified data, citations, or quotations as genuine.

MISREPRESENTATION is falsification, alteration, or the misstatement of the contents of documents, academic work, or other materials related to academic matters, including work substantially done for one class as work done for another without receiving prior approval from the instructor.

Violations of the UAB Academic Honor Code are punishable by a range of penalties, from receiving a failing grade on an assignment, to an F in the course, to dismissal. Any course grade of F for academic misconduct supersedes any other grade or notation for that class. 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.

For more information go to: <https://www.uab.edu/students/one-stop/policies/academic-honor-code>

### ASKIT

AskIT is the technology help desk for faculty, staff, and students. They provide free support via telephone, email, or in-person. You will be asked to supply your BlazerID when you request assistance.

Phone: (205) 996-5555

Email: [askit@uab.edu](mailto:askit@uab.edu)

Website: [https://uabprod.service-now.com/service\\_portal](https://uabprod.service-now.com/service_portal)

## ATTENDANCE

Class attendance is expected in all programs. Specific class, laboratory or clinical site attendance requirements may be more stringent than university guidelines. Refer to the program requirements in this handbook and in course syllabi for policies.

The UAB policy for undergraduates follows: “The University of Alabama at Birmingham 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 an 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. In these instances, instructors must devise a system for reasonable accommodation including, for example, policies allowing for dropped exams/quizzes, make-up exams, rescheduling of student classroom presentations or early or later submission of written assignments.”

## BLAZERID / BLAZERNET / EMAIL BLAZERID

All students receive a unique identifier, the BlazerID, established at: [www.uab.edu/blazerid](http://www.uab.edu/blazerid). Your BlazerID is required for accessing BlazerNET and other campus resources. To activate one's BlazerID, select “Activate Accounts.” BlazerNET is the official portal of the UAB information network and is accessible from any Internet accessible computer, on- or off-campus. Access BlazerNET from UAB home page [www.uab.edu](http://www.uab.edu) then choose UAB Quicklinks. Your UAB email is the official communication medium for courses, news, information and announcements. UAB student email is provided through Microsoft Office 365, a cloud based system. Students have 50 GB of email space and 25 GB of free file 1 TB storage.



## **BLAZER EXPRESS**

The UAB Blazer Express Transit System provides transportation throughout the UAB campus. With a valid UAB ID badge, students can enjoy fare-free bus transportation. All buses are ADA-accessible and can seat approximately 35 riders. For an updated schedule, route maps, and hours of operation please go to <https://www.uab.edu/blazerexpress/>

## **BOOKSTORE**

There is one bookstore located on the UAB campus, offering a wide variety of products and services to students, including online purchasing and shipping. The bookstore stocks UAB memorabilia and college wear in addition to all required textbooks and course material.

## **CAMPUS ONECARD**

The UAB OneCard is the official university identification card. It is used for personal identification, for entry to campus events and the recreation center, for library checkout, and other UAB services. It also serves as a declining balance card for the UAB meal plans and for Blazer Bucks accounts. Additional information is available at <http://www.uab.edu/onecard>

## **CAMPUS MAP**

UAB's campus map can be found at the following: <http://www.uab.edu/map/>

## **CANVAS LEARNING MANAGEMENT SYSTEM**

The Canvas Learning Management System is the platform used for managing instructional materials online. Canvas course sites are accessed through BlazerNET or at <https://www.uab.edu/elearning/canvas> Students should monitor their course sites routinely for communication from faculty and manage course assignments.

## **COUNSELING SERVICES**

The Counseling and Wellness Center offers no cost, confidential counseling for UAB students related to physical, emotional, social, intellectual, or spiritual concerns. The Center is located in Student Health and Wellness Center at 1714 9th Ave. South. For more information, call 205-934-5816 or <https://www.uab.edu/students/counseling/>

## **CONDUCT (STUDENT ADVOCACY, RIGHTS AND CONDUCT (SARC))**

Student Advocacy, Rights and Conduct (SARC) is responsible for upholding the integrity and purpose of the university through the fair and consistent application of policies and procedures to students' behavior to ensure a community that respects the dignity and right of all persons to reach their highest potential. SARC delivers programs and services in order to promote student safety and success, the pursuit of knowledge, respect for self and others, global citizenship, personal accountability and integrity, and ethical development. The UAB student conduct code may be accessed online: <https://www.uab.edu/students/conduct/student-conduct-code>

## **DISABILITY SUPPORT SERVICES (DSS)**

"DSS provides an accessible university experience through collaboration with UAB partners. These partnerships create a campus where individuals with disabilities have equal access to programs, activities, and opportunities by identifying and removing barriers, providing individualized services, and facilitating accommodations." "DSS serves as the university-appointed office charged with providing



institution-wide advisement, consultation, and training on disability-related topics which include legal and regulatory compliance, universal design, and disability scholarship.” To apply for accommodations, contact DSS. Note: You must have your Blazer ID and password.

Telephone: (205) 934-4205 or (205) 934-4248 (TDD)

Fax: (205) 934-8170

Email: [dss@uab.edu](mailto:dss@uab.edu)

Website: <http://www.uab.edu/students/disability/>

## EMERGENCIES

Report suspicious or threatening activity to the UAB Police Department immediately. Law officers are available 24 hours, seven days a week. Also, more than 300 emergency blue light telephones connected directly to the police dispatch are located throughout campus.

**UAB Police:** Dial 911 from a campus phone

or call: 934-3535; 934-HELP (4357); or 934-4434

Emergencies affecting campus are communicated via the following:

Weather & Emergency Hotline: (205) 934-2165

University home web page: [www.uab.edu](http://www.uab.edu)

Webpage: [www.uab.edu/emergency](http://www.uab.edu/emergency)

Announcements on BlazerNET

Twitter@UABALERT: [www.twitter.com/uabalert](http://www.twitter.com/uabalert)

[facebook.com/UABALERT](https://www.facebook.com/UABALERT)

Cell phone messages and SMS text – register for B-ALERT notices via [www.uab.edu/balert](http://www.uab.edu/balert)

## DIVERSITY, EQUITY AND INCLUSION (DEI)

The mission of DEI is to “... champion equity and inclusion and, in particular, to advocate for inclusive excellence and equity so that UAB students, faculty, staff, community partners and friends can flourish and excel.” Inspired by “... what we value, what we learn from research and what we teach and share with the world.” DEI’s goal is “... to inspire our people to take a courageous step to inspire equity and inclusive excellence throughout our state, nation and world, every day.” Dr. Paulette Patterson Dilworth is the Vice President responsible for the activities of this office. Information: <https://www.uab.edu/dei/>

## FERPA

The Family Educational Rights and Privacy Act (FERPA) of 1974 provides protection for all educational records related to students enrolled in an educational program. Information about your rights and protection of your records is available at the following sites:

<https://sa.uab.edu/enrollmentservices/ferpa/>; If you have questions or concerns about FERPA issues, you may email [FERPA@uab.edu](mailto:FERPA@uab.edu), or contact the SHP Office for Student Recruitment, Engagement and Success.

## FINANCIAL AID

Located at 1700 University Blvd., Lister Hill Library, Room G20. Hours of Operation are from 8:00 am to 5:00 pm Monday thru Friday. Phone: (205) 934-8223; Fax: (205) 975-6168. Additional information can be located on the website <https://www.uab.edu/students/paying-for-college/>.

## FOOD SERVICES

Dining facilities available on campus, closest to the anatomy buildings include:

Commons on the Green – located on the Campus Green, south of 9th Avenue and the Campus Recreation Center

Einstein's Bagels – located at the plaza entrance to the Learning Resource Center. Hours vary per semester.

Hill Student Center Food Court.

## GRADUATE SCHOOL

The UAB Graduate School offers doctoral programs, post-master's specialist programs, and master's level programs. Graduate programs are coordinated through the Graduate School and students must adhere to the Graduate School policies and procedures. Graduate School information for current students is available at [www.uab.edu/graduate/](http://www.uab.edu/graduate/).

## GRADUATION

All students must complete an application for degree six months prior to graduating. For more information and important deadlines please go to [www.uab.edu/commencement/degree-applications](http://www.uab.edu/commencement/degree-applications).  
<http://www.uab.edu/commencement/>

## STUDENT HEALTH AND WELLNESS

The University provides prevention, counseling, and treatment services to students through the UAB Student Health and Wellness located at 1714 9th Avenue South. The clinic is open from 8:00 a.m. – 5:00 p.m. Monday – Friday, but is closed between noon and 1:00 p.m. daily. Detailed information about services and operating practices is located on the SHS website at [www.uab.edu/studenthealth](http://www.uab.edu/studenthealth). Appointments may be scheduled by calling 205-934-3581.

## INSTITUTIONAL REVIEW BOARD FOR HUMAN USE (IRB)

Student researchers must comply with all requirements for protection of human subjects. Detailed information is available on the IRB website <http://www.uab.edu/irb>

## INTELLECTUAL PROPERTY

Intellectual property refers to an asset that originated conceptually, such as literary and artistic works, inventions, or other creative works. These assets should be protected and used only as the creator intends. Training materials defining inventor status, patent criteria, and other intellectual property issues is available at <http://www.uab.edu/research/administration/offices/OSP/Pages/Training.aspx>

## LACTATION CENTERS

Through the work of the UAB Commission on the Status of Women, the University has provided several lactation centers for students, faculty, and staff across the campus. Locations of the centers are available at <https://www.uab.edu/women/resources/campus-lactation-centers>

## LIBRARIES AND LEARNING RESOURCE CENTER

UAB's libraries house excellent collections of books, periodicals, microforms, and other media. have online remote access to catalogs and online collections. Computers are available for student use during regular hours of operation. Learning Resource Center (LRC) The School of Health Professions Learning Resource Center (LRC) provides a unique set of enterprise solutions that promote an exciting, intriguing

and innovative learning environment. It provides a state-of-the-art media studio; audio/visual support; and information technology management of public, classroom and testing labs. Web: <http://www.uab.edu/lrc/> Located: 1714 9th Avenue S. Phone: (205) 934-5146 Email: [shplrc@uab.edu](mailto:shplrc@uab.edu) Hours: Monday – Thursday 7:00 am – 8 pm; Friday 7 am – 5:30 pm; closed weekends

**Lister Hill Library of the Health Sciences** This is the largest biomedical library in Alabama, and one of the largest in the south. Located across the crosswalk from the School, the LHL has extension libraries in University Hospital and The Kirklin Clinic. Dedicated librarians hold “office hours” in the Learning Resource Center weekly. Location: 1700 University Boulevard Phone: (205) 934-2230 Website: [www.uab.edu/lister/](http://www.uab.edu/lister/)

**Mervyn H. Sterne Library** A collection of more than one million items supporting teaching and research in the arts and humanities, business, education, engineering, natural sciences and mathematics, and social and behavioral sciences. Location: 913 13th Street South Website: [www.mhsl.uab.edu](http://www.mhsl.uab.edu) Phone: (205) 934-6364 (Reference) (205) 934-4338 (User Services)

## ONESTOP STUDENT SERVICES

If you have questions or need assistance with an academic or administrative process, the UAB OneStop is where to go! Advisers will help you solve your problem or do the legwork for you if another UAB resource is needed. OneStop is located in the Hill Student Center 1400 University Blvd. You may contact the OneStop office by phone or email at (205) 934-4300; 855-UAB-1STP; (855) 822-1787. [onestop@uab.edu](mailto:onestop@uab.edu). Additional information is available at <https://www.uab.edu/students/one-stop/>

## PARKING

Student vehicles must be registered with UAB Parking and Transportation Services, located at 608 8th Street South. The office is open Monday – Friday from 7:30 a.m. – 5:00 p.m. Parking is allocated on a first-come, first-served basis. Parking fees are established by location, payable by semester or year, and are billed to the student’s account. Additional information is available at [www.uab.edu/parking](http://www.uab.edu/parking).

## PLAGIARISM AND TURNITIN

Plagiarism is academic misconduct that will result in a grade of zero and may result in dismissal from the program and UAB (see Grievance Procedures for Violations of Academic Standards). All papers submitted for grading in any program may be reviewed using the online plagiarism monitoring software. Please note that all documents submitted to Turnitin.com are added to their database of papers that is used to screen future assignments for plagiarism.

## RECREATION CENTER

The campus Recreation Center, located at 1501 University Blvd, Birmingham, AL 35294, is open to faculty, staff, students, and their families. A valid student identification card or membership card is required for access. Facilities include basketball courts, racquetball courts, weight rooms, swimming pools, exercise rooms, and indoor track. Check the website for information about hours and services at <http://www.uab.edu/campusrecreation>

## SOCIAL MEDIA

Social media can serve as useful communication tools. However, professional students should use the forums judiciously. The School’s Academic Affairs Committee published the following guidelines: The

Academic Affairs Committee proposes the following for social networking vehicles. Online communities like provide opportunities to share and explore interests that enrich the higher education learning experience. However, use them with discretion. UAB social media users are expected to act with honesty, integrity, and respect for others. Professional Use - Only UAB employees authorized by their departments may use social networking Web sites to conduct University business. The authorized employee/position will serve as the point of contact for the web site. In keeping with University policy<sup>1</sup>, the authorized employee may post on a social network profile: the University's name, school, department, and/or unit information, a University email address or University telephone number for contact purposes, or post official department information, resources, calendars, and events. The employee should use care that any personal opinions or opposition to the University either by direct statement or perception not be published. General Use - The following guidelines are strongly suggested: 1. Use networking sites legally and appropriately. Consider your personal obligation as a citizen of the university. Use proper conduct in your posts regarding the university and your colleagues/fellow students. 2. Consider the use of a student, staff or faculty member to monitor any departmental social pages. All parties need to understand the guidelines presented. 3. Remember, you cannot ensure who does and does not have access to your information. Any text or photo placed online is available to anyone in the world – even if you limit access to your site. 4. Information that you post online may continue to stay on the World Wide Web even after you erase or delete that information from your profiles or blog. Do not post anything that could reflect negatively on you, your family, your friends, and the university. 5. Do not post any confidential or sensitive information online. 6. By agreeing to the terms of use, online communities have your permission to republish your content worldwide and share information with advertisers, third parties, law enforcement, and others. 7. You are legally responsible for your posts on the social networking sites. Be discreet, respectful, and as accurate/factual as you can be in any comments or content you posted online. 8. Potential employers, admissions officers, and scholarship committees often search social networking sites to screen candidates. Your profile will be a part of how others know you.

## TUITION AND FEES

Tuition and fees for the University are published annually under the “Current Students” tab of the UAB website. They may be paid through BlazerNET. There are two tuition rates: Alabama resident (in-state) and Non-resident (out-of-state). Non-resident tuition is charged for on-site courses such as: clinical practicums, independent study courses, and project courses. Some programs have specific fees attached to programs, courses or laboratories. Payment deadlines for each semester are published on the official academic calendar and on the UAB website at <http://www.uab.edu/whentopay/>. Please note that failure to meet payment deadlines can result in being administratively withdrawn from courses.

## WEATHER

Severe weather situations that may affect the safety of students, faculty, and staff are communicated through the same channels as other emergencies. Severe weather precautions are published at <https://www.uab.edu/emergency/preparedness>. Other information sources include:

**Webpage:** [www.uab.edu/emergency](http://www.uab.edu/emergency)

**B-ALERT** system: [www.uab.edu/balert](http://www.uab.edu/balert)

**Hotline:** (205)- 934-2165

**WBHM Radio** (90.3 FM)

## WITHDRAWAL FROM COURSE / PROGRAM

Withdrawal from a course or from your program is an official process and should be discussed with your academic advisor and / or program director. Most programs in the School are full-time and the curricula specifically sequenced. Withdrawal from a course may risk your wait time to register for the class again. You might have to wait for a full year before resuming enrollment in the program. Withdrawals are made through the UAB registration system via the Student Resources tab in BlazerNET. Notice of program withdrawal should be given in writing to the program director. Please refer to the handbook for additional information. Check the Academic Calendar for deadlines:  
<https://www.uab.edu/students/academics/academiccalendar>

## SECTION 2 – PROGRAM INFORMATION

### PROGRAM OVERVIEW

The goal of the Anatomical Sciences MS (MS-ANSC) program is to provide quality education to prepare a diverse student body for entry into an education focused career or further study in science, education, or medicine. This program is critically important to provide a pipeline of academically and culturally competent future science educators (specifically with a focus in anatomy and the scholarship of education), for not only the state of Alabama, but for underserved areas throughout our country.

**Degree Conferred:** Diploma- The Master of Science in Anatomical Sciences is awarded by the University of Alabama at Birmingham.

**Length of Study:** 14 months

**Term of Enrollment:** Summer, Fall, Spring, and Summer II semesters

**Program Mission:** The mission of the master's degree in Anatomical Sciences is to provide quality education to prepare a diverse student body for entry into an education focused career, including classroom instruction to post-secondary students, science communication, and scholarship of teaching and learning. Successful students will be able to create and complete meaningful research in education, and have top-notch credentials for teaching anatomy and its subdisciplines.

The University of Alabama at Birmingham (UAB) is committed to the policy that all persons shall have equal access to its programs, facilities and employment without regard to race, color, religion, national origin, sex, age, sexual orientation, disability or veteran status.

### ADMISSION REQUIREMENTS

Admission in good academic standing to the MS-ANSC Program requires the following:

Baccalaureate degree from a regionally accredited college/university.

A minimum undergraduate cumulative GPA of 3.0 (A= 4.0), computed from all undergraduate credits

A minimum cumulative science GPA of 3.0, computed from all undergraduate coursework in biology, chemistry, and physical sciences.

If foreign-educated, have a score of at least 550 for paper version (or 80 for Internet version; or 213 for computer version) on the TOEFL; submit a transcript evaluation from World Education Services (WES) at [www.wes.org](http://www.wes.org).

Satisfactory health screening by the UAB Medical Center Student Health Service.

## FACULTY AND STAFF

### Program Directors:

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**J. Bradley Barger**, PhD Assistant Professor, School of Medicine

Department of Cell, Developmental, and Integrative Biology

1900 University Boulevard, VH 202E

Birmingham, AL 35294 (913-634-6838) [jbbarger@uab.edu](mailto:jbbarger@uab.edu)



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**David Resuehr**, PhD Assistant Professor School of Medicine

Department of Cell, Developmental, and Integrative Biology

1900 University Boulevard, VH 230

Birmingham, AL 35294 (205) 934-7574 [resuehr@uab.edu](mailto:resuehr@uab.edu)



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### Education Faculty:

Will S. Brooks, PhD Associate Professor School of Medicine  
Department of Cell, Developmental, and Integrative Biology  
1900 University Boulevard, MCLM 830 Birmingham, AL 35294  
(205) 934-7596 [wbrooks@uab.edu](mailto:wbrooks@uab.edu)



Laura F. Fraser, PhD Associate Professor School of Medicine  
Department of Cell, Developmental, and Integrative Biology  
1900 University Boulevard, VH 229 Birmingham, AL 35294  
(205) 934-5341 [lcotlin@uab.edu](mailto:lcotlin@uab.edu)



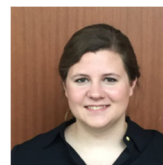
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## CURRICULUM

The MS-ANSC program shares resources with a number of other departments and programs, including Physician Assistant, Nurse Anesthetist, Physical Therapist, and the Schools of Dentistry, Optometry and Medicine. This allows us to provide the highest quality education with the most efficient use of resources. Additionally, the students in MS-ANSC will gain exposure to a variety of diverse learners, which will help inform the future teaching of the anatomy educator. The main collaboration of the ANSC curriculum comes from the CIRTL program at UAB. CIRTL is a graduate certification that provides education courses and resources to a variety of programs, and helps to turn content experts into excellent teachers by providing adult pedagogy resources, scholarship of teaching and learning, and scholarly teaching/research classes. The ANSC students will take a number of CIRTL courses while also enrolled in the anatomy core content. A calendar summary follows, with brief descriptions of the anatomy core courses after.

**CIRTL CORE-** Choose 12 hours that compliment your career goals from the CIRTL website (e.g. If you want to be a class room teacher, you should take “Creating a Teaching Portfolio”. If you wish to use this degree to improve your scientific communication in another venue, you can take “Writing Research” or “Effective Presentations” instead.) The following recommended courses work for most students:

- Teaching Adult learners (Summer I)
- Introduction to the Scholarship of Teaching and Learning
- Creating a Teaching Portfolio
- STEM Teaching
- Writing and Reviewing Research
- Mentoring 101

**ANATOMY CORE-** You will take each of the following courses for a total of 23 hours in anatomy, teaching and research.

**ANSC 601.** Human Gross Anatomy. 4 Hours.



Course provides a comprehensive survey of the gross anatomy of the human along with functional and applied anatomy as it relates to common clinical findings.

**ANSC 601L.** Human Gross Anatomy Lab. 1 Hour.

Lab component of Human Gross Anatomy.

**ANSC 602.** Gross Anatomy Supplement. 1 Hour.

This course will provide students with detailed dissections of head, neck, pelvis and perineum anatomy that are not otherwise covered in existing courses.

**ANSC 618.** Histology of Mammalian Organ Systems. 3 Hours.

This course will cover the specialized cell biology and microscopic anatomy for each of the mammalian organ systems, as well as consider current research with regards to each system. The objective is to understand how cells organize into tissues and organ systems and how these systems function in the body, as well as appreciate the microscopic appearance of cells, tissues and organs.

**ANSC 655.** Neuroscience. 3-6 Hours.

The course provides the student with a balanced basic science view of the structure and function of the nervous system. The course is designed to provide students with a comprehensive overview of the nervous system from molecular to behavioral levels. The inclusion of relevant clinical correlations is designed to facilitate the students' understanding of the function of the normal nervous system and to provide an overview of the clinical neurosciences. Offered in the Spring term.

**ANSC 656.** Human Embryology. 2 Hours.

This course uses didactic lectures, lab exercises and student presentations to help students gain an understanding of the major events in human development from gastrulation to birth. Individual units focus on the developmental processes of specific organ systems. the course uses an anatomical focus to describe the morphological characteristics of the developing embryo/fetus. The biochemical and molecular biology of development are only briefly discussed. morphology and anatomy are also related to clinical presentation of birth defects. Offered in the Summer term.

**ANSC 657.** Medical Imaging. 1 Hour.

Students will learn to obtain and interpret ultrasound images by practicing techniques on classmates and reading existing ultrasound images. Other radiograph images (X-ray, MRI) will also be used to help students understand planar anatomy and its relationship to 3D anatomy. Students will learn the basics of the technology behind the different medical techniques to provide a fuller understanding of image interpretation.

**ANSC 695.** Teaching Practicum. 3 Hours.

Students will act as supplemental instructors in a variety of anatomy lab courses, complete their own (or in teams) whole-body prosection, and prepare and present 2-3 hours of new lecture content for anatomy.

**ANSC 696.** Research Project. 3 Hours.

Students will develop an original research project in medical education, clinical anatomy, or other anatomy research. Students will be evaluated on their ability to formulate an anatomically relevant research question, review the existing literature, and communicate their findings via a poster or oral presentation to department.

## **GRADUATION REQUIREMENTS**

Graduation from the M.S. Anatomical Sciences Program requires the following:

Completion of all courses in the curriculum with a grade of “C” or better.

Achievement of an overall GPA of 3.0 or better in the required courses.

Demonstration of a satisfactory level of professional behavior during the 14 month curriculum, and satisfactory performance on teaching practicum feedback.

Completion and presentation (or publication) of an educational scholarship (research) project.

Completion of all financial and administrative obligations to the University of Alabama at Birmingham.

## **ASSESSMENTS AND EVALUATIONS**

The Program utilizes the following grading scale: A = Superior Performance B = Adequate Performance C = Minimally adequate performance F = Unsatisfactory performance

## **STUDENT RESPONSIBILITIES TO THE PROGRAM**

To be an active participant in all learning activities and to seek out additional learning opportunities when appropriate.

To assist fellow students, faculty, and preceptors by freely sharing personal knowledge and skills.

To take responsibility for realizing your full potential as a student and future medical professional.

To develop a cooperative and constructive relationship with program faculty, adjunct faculty, guest lectures and fellow students.

To maintain the highest standards of personal behavior and ethical conduct.

To follow all policies and procedures as outlined in syllabi, memos, and the program handbook.

To notify the program in a timely manner of any problem that has the potential of interfering with academic performance.

To abide by the UAB Code of Ethics

## **PROGRAM RESPONSIBILITIES TO THE STUDENT**

To provide the highest quality education to all students enrolled in the Program.

To review and upgrade the quality of education that the Program provides to students through a program of ongoing and comprehensive self-assessment and improvement.

To recruit, maintain, and support the highest quality faculty and staff for purposes of providing students with the highest quality education.

To properly orient, counsel, and educate students throughout the entire curriculum without regard to the student's age, religion, race, color, sex, national origin, sexual orientation, or disability that is unrelated to academic performance.

To comply with and Graduate School policies regarding student evaluation, remediation, and dismissal.

## **PROBATION AND DISMISSAL**

A student who receives a grade of F in more than one course in the Program will be immediately dismissed. In extenuating circumstances, a student may be granted a maximum of one additional, consecutive year to complete all program requirements and achieve a minimum GPA of 3.0, but he/she must acquire approval from the Department Chair and the Dean of the Graduate School. Assignment of grades in the curriculum is the responsibility of the individual instructor, and appeal of the grade can be made according to the grade appeal process (refer to the Grievance Procedures for Violations of Academic Standards). The Program Directors' decision will be final. If the Program Director is the course instructor, appeal can be made to the Department Chair. This decision will be final.

Students admitted in good academic standing who fail to obtain a minimum 3.0 GPA during any semester will be placed on probation. These students must re-establish good academic standing by bringing their overall GPA to at least 3.0 within two subsequent semesters or they will be permanently dismissed from the UAB Graduate School.

## **PROFESSIONAL CONDUCT**

The Department of Cell, Developmental, and Integrative Biology expects that all students:

1. Attend Class.
2. Be on-time for all commitments (class, appointments, etc.).
3. Thoughtfully complete and submit all assignments by the due date.
4. Use proper grammar in written and oral assignments.
5. Use proper grammar and email etiquette in all emails to faculty, classmates, etc. Do not use "text speak."
6. Present an appearance that is not distracting to others and reflects a professional image as defined in the CDS Dress Code.
7. Are courteous in the use of electronic devices: pagers, cell phones, laptops. Your device should be on silent/vibrate when in lecture, lab, and clinic.
8. Treat individuals with respect.
9. Comply with applicable laws, regulations, and policies.
10. Profanity is not allowed at any time.
11. Use confidential information responsibly and do not violate a patient's rights.
12. Acknowledge and appropriately manage conflicts of interest.
13. Conduct and present yourself in such a manner that reflects the high professional standard set forth by the Department of Clinical and Diagnostic Sciences and the School of Health Professions.

## **REMEDIATION AND READMISSION**

Students will be eligible for personal leave in the event of individual illness, death or severe illness in an immediate family member, jury duty, military duty, or a similar personal crisis resulting in more than three consecutive days of absence. With the exception of personal illness, students must obtain prior written approval for personal leave from the M.S Biomedical and Health Sciences Program and the

course instructor. The following rules apply to personal leave, remediation, and withdrawal from the Program:

1. Students may be granted up to one week of personal leave.
2. Absences greater than one week require Remediation or Withdrawal from the Program.
3. Remediation should be completed within the same semester. If this is not possible, an “I” will be reported to indicate that the student has performed satisfactorily in the course but, due to unforeseen circumstances, has been unable to finish all course requirements. Students who receive an “I” for a course should note that in many instances, the student will not be allowed to register for the following semester’s courses because many courses in the didactic curriculum have pre-requisites that require successful completion of the previous semester’s courses. Students should also note that because of the limited resources of the program, many courses cannot be repeated until the following year when they are normally scheduled.
4. Students who return after Remediation or Withdrawal and readmission to the Program will have to demonstrate continued proficiency in the courses they have previously completed in the Program. In most cases, this will be accomplished by sitting-in on these courses and passing a comprehensive exam with a grade of 70% or better. Exam content and timing will be determined by the course instructor.

The expectation is for the student to meet with the course or section instructor within 1 week of a failed examination or assignment. Once the course or section instructor identifies areas of weakness, additional assignments will be given to the student with the expectation that they meet with the course or section instructor a second time. During this meeting, the student is expected to demonstrate competency of the material in an oral conversation format. This demonstration will not be graded but it will be noted that the student met with the course or section instructor.

## ESSENTIAL REQUIREMENTS

Fundamental tasks, behaviors, and abilities are necessary to successfully complete the academic requirements of the program. Students requesting disability accommodations must do so by filing a disability accommodation request in writing with the academic program office.

**UAB Technical Performance Standards** Students should be aware that the Program requires that all students demonstrate the technical skills needed to complete the entire curriculum. These skills include the ability to think critically, communicate effectively, and utilize computerized information technology. A full description of these technical skills is referenced below. Minimum Technical (Performance) Standards include: **Critical Thinking:** Students must possess the intellectual capabilities required to complete the full curriculum and achieve the level of competence delineated by the faculty. Critical thinking requires the intellectual ability to measure, calculate, synthesize and analyze a large and complex volume of medical and surgical information. Students in the program must also be able to perform applicable demonstrations and experiments in the medical sciences. **Computer Technology Skills:** Students must be able to utilize computerized information technology to access and manage on-line medical information, participate in computerized testing as required by the curriculum, conduct research, prepare multimedia presentations, and participate in the management of computerized patient records and assessments. **Communication Skills:** Students must be able to speak clearly and

effectively in order to elicit and relay medical information. They must also be able to communicate effectively and legibly in writing. **Interpersonal Ability:** Students must possess a wide range of interpersonal skills, including (1) the emotional health required for management of high stress situations while maintaining their full intellectual abilities; (2) the ability to exercise good judgment; (3) the ability to complete all assigned patient care responsibilities; (4) the ability to manage time (show up on time, begin and complete tasks on time); (5) the ability to develop a mature, sensitive and effective relationship with medical colleagues, clinical and administrative staff, patients, and families; (6) the ability to identify, use, understand and manage emotions in positive ways to relieve stress, communicate effectively, empathize with others, overcome challenges and diffuse conflict; and (7) the ability to recognize your own emotional state and the emotional states of others and engage with people in a way that draws them to you.

## REGISTRATION

It is each student's responsibility to be registered for the appropriate courses. No one will be able to attend classes or clinical sites without being properly registered. Students can register via the web or in person at the Office of the Registrar located at 1605 11th Avenue South. Web Registration Students may register via web any time after their assigned time up but prior to the last working day before classes begin. BlazerNET is available 24/7, but the Add/Drop function within Registration Tools will end when the open registration period closes. Students experiencing difficulty with BlazerNET should call the Registrar's Office at 934-8222 or email registrar@uab.edu.

Follow these steps to register using BlazerNET: 1. Access BlazerNET with your web browser. 2. Log in with your BlazerID and strong password. 3. Click on the Student Resources tab. 4. View the Registration Tools channel. Select either Look Up Classes to gather CRNs or Add or Drop Classes if you already have the course reference numbers. 5. Register for the appropriate courses by either clicking the checkbox to the left of the course on the Look Up Classes screen, or by submitting the CRNs in the blocks on the Add or Drop Classes page. 6. Please make sure that your course schedule states "Web Registered" and that you can view all of your classes on the Student Detail Schedule page. A BlazerNET Registration Guide is available on the Student Resources tab if you need more assistance. If you have any problems with registering, please call 934-8222 or stop by the Registrar's Office at 1605 11th Avenue South. Please come prepared with the appropriate signatures, if necessary.

In-Person Registration Registration should be completed online through BlazerNET. If you have special circumstances and need to register in person, please call the Registrar's Office at 934-8222 or email registrar@uab.edu or stop by the Registrar's office at 1605 11th Avenue South.

Late Registration (Add/Drop Classes) Starting with the first day of regular classes, a late registration fee will be charged. If you begin registration during the late registration period, additional steps are necessary.

## SCHOLARSHIPS AND LOANS

All students enrolled at UAB are eligible to apply for financial aid. To be considered, a completed application must be on file at least 45 days before the beginning of the term in which financial assistance is requested. More information is available by contacting UAB Office of Financial Aid office, Lister Hill Library, Room G40, 1700 University Boulevard, (205) 934-8223.

Students should note that scholarships and loans do not change the total amount of money students are eligible to receive. Loan and scholarship money simply exchanges unsubsidized money (loans) for subsidized money (scholarship or free money), thus reducing how much money students have to pay back following completion of their education.

Federal Scholarships and Loans Some of the educational loans and grants available from the federal government can be found on this website:

<http://studentaid.ed.gov/PORTALSWebApp/students/english/studentloans.jsp>

Please consult the UAB Financial Aid Office website for more information regarding student loans:

<http://www.uab.edu/handbook/student-services/c-financialaid>

## **ANSC POLICIES ACADEMIC PROGRESS**

Academic Progress Review is implemented to promote, assist, and maintain student performance. The main purpose is to provide feedback to students regarding their performance and to identify areas of strength and/or weakness in performance or behavior. Generally speaking, program faculty, and/or the program director, may academically counsel students on a semester-by-semester basis to assess progress in the curriculum and to provide students counseling regarding deficiencies as needed. These meetings may be documented and the student may be required to sign the documentation of the academic progress sessions with associated notes placed in the student's file. In cases regarding deficiencies, suggestions and/or action plans may be developed in conjunction with the student so as to provide a plan for reversing the deficiencies by a specified timeframe. Such suggestions and/or action plans will be documented and signed (by both faculty and the student) and will be placed in the student's file. If a student does not comply with the suggestions and/or action plan and/or does not meet the deadlines as specified, the student may be dismissed from the program.

## **INCOMPLETE & DEFERRED CREDIT POLICY**

The awarding of an "I" (incomplete) grade is not done lightly. An "I" will be given only when an emergency or unexpected event prohibits the student from meeting course objectives in a timely manner. A student receiving a grade of "I" (incomplete) must arrange with the instructor to complete the course requirements as soon as possible, and in order to progress within the program the student must arrange to complete the requirements prior to the final day of registration for the next term. A grade of "I" not changed by the instructor by the beginning of the next regular term will automatically convert to an "F."

## **PREGNANCY POLICY**

All students are encouraged to inform the program director immediately in writing once pregnancy has been confirmed. If students choose not to inform the program of their pregnancy, the program will not consider them pregnant and cannot exercise options that could protect the fetus. For students who voluntarily disclose pregnancy the program director will discuss factors to be considered in cases of pregnancy with the student based on acceptable professional guidelines. A student is offered three alternatives after the consultation with the program director. These are: 1. Immediate withdrawal in good standing from the program. Readmission to the program after the pregnancy will be in accordance with the Readmit Policy. 2. Continuation in the program after being given specific instruction regarding safety practices, safety monitoring, and specific clinical and laboratory assignments. 3. Continuation in the program with additional safety monitoring but without modification of assignments. The student

must be able to progress in her educational experiences, both clinical and academic. If the student cannot, she will be strongly advised to withdraw as in alternative number one. If there are any questions regarding any aspect of the above statements, please call the Program Director.