

Course Syllabus

MA 418-ZNC

Spring 2026

Instructor Information



Instructor Name: Patrick Hartley
Email: hartlepb@uab.edu
Phone: 205-934-2154
Office Location: HHB 202

Office Hours

Email is the preferred method of contact if you have questions. Include MA 418-ZNC in the subject line of your email for a faster response.

Please expect a response within 24 hours on weekdays and a slower response on weekends (OR Emails received after 5 pm on Friday will be returned Monday morning).

Office hours will be in person in HHB 202. Virtual office hours will be hosted through Zoom. Office hours will be announced in class and on the Syllabus page in Canvas.

Important Course Dates

First Day of Class: Tuesday January 13th

Class Meeting: Tuesday in UBOB 208 at 2pm

Lab Meeting: Thursday in HHB 202 at 2pm

Final Exam: Tuesday April 28th at 1:30pm

Divisive Concepts

All University faculty, instructors, and teaching staff have the academic freedom to explore, discuss, and provide instruction on a wide range of topics in an academic setting. This class may present difficult, objectionable, or controversial topics for consideration but will do so through an objective, scholarly lens designed to encourage critical thinking. Though students may be asked to share their personal views in the academic setting, no student will ever be required to assent or agree with any concept considered “divisive” under Alabama law, nor penalized for refusing to support or endorse such a concept. All students are strongly encouraged to think independently and analytically about all material presented in class and may express their views in a time, place, and manner consistent with class organization and structure, and in accordance with the University’s commitment to free and open thought, inquiry, and expressions.

Shared Values Statement

Collaboration, integrity, respect, and excellence are core values of our institution and affirm what it means to be a UAB community member. A key foundation of UAB is diversity. At UAB, everybody counts every day. UAB is committed to fostering a respectful, accessible, and open campus environment. We value every member of our campus and the richly different perspectives, characteristics, and life experiences that contribute to UAB’s unique environment. UAB values and cultivates access, engagement, and opportunity in our research, learning, clinical, and work environments. Our [School] aims to create an open and welcoming environment and to support the success of all UAB community members.

Course Information

Credit Hours

3 credit hours

Instructional Method

Face-to-Face: This class will be conducted in person, on campus, on the days and times listed in the course schedule. As described below, there may be online elements to the course.

Course Description

This course supports the development of quantitative literacy. As such, the course is about learning the concepts and principles of statistics and then being able to choose among various statistical methods when presented with a brand-new problem. The actual calculations required in applying statistical methods is done using a calculator or computer program.

Course Objectives

Upon successful completion of this course, you will be able to:

1. Recognize and analyze sampling methods and the importance of collecting data.
2. Develop the ability to organize, summarize, and represent data in ways that enable us to see important characteristics.
3. Apply methods of descriptive statistics to summarize or describe relevant characteristics of data.
4. Collect sample data gathered in the community and analyze it using summary statistics.
5. Identify, interpret, and calculate probability values.
6. Select and use discrete or continuous probability distributions.
7. Apply basic methods for hypothesis testing to a collected data set and interpret the results to create possible further actions.
8. Use basic methods of testing claims about population parameters by selecting sample data to estimate values of population parameters as well as conducting tests about population parameters.
9. Analyze paired data to determine correlation and identify a linear regression equation to predict values.
10. Use statistical methods for analyzing categorical data that are separable into different cells.
11. Identify and apply methods of one-way analysis of variance to conduct hypothesis tests.

Prerequisites

Undergraduate level MA 102 Minimum Grade of C or Undergraduate level MA 105 Minimum Grade of C or Math Placement Test 46 or Undergraduate level MA 106 Minimum Grade of C or Undergraduate level MA 107 Minimum Grade of C or Undergraduate level MA 110 Minimum Grade of C or Undergraduate level MA 125 Minimum Grade of C or Undergraduate level MA 225 Minimum Grade of C or Undergraduate level MA 168 Minimum Grade of C

Required Text and Course Materials

Access Code

The MyMathLab access code for the course is required and is available through Canvas with the First Day access unless you opt out. Access is also available for purchase at the bookstore, but more expensive. There is no textbook for the course, eText is included with the Access Code.

Formula Sheet

The formula sheet will be printed on the test cover sheet during testing and is located on Canvas. It is recommended to use the formula sheet during class and lab meetings as well as for assignments.

Calculator

Only the Desmos Scientific calculator (<https://www.desmos.com/scientific>) will be allowed during tests, no personal calculators. A link is provided in the Course Links Module. Students can use StatCrunch, which is included with MyMathLab for computations as well. Tutorials are provided on Canvas.

Canvas

All additional course materials as well as deadlines will be on Canvas. Official communication will be done through Canvas announcements or in person. Canvas will be used to access online assignments in MyMathLab, as well as the lecture notes used during class meetings.

MyMathLab

All previews, homeworks, quizzes, and tests for this course are available in MyMathLab only. A user account is required for every student and needs to be activated through Canvas. You won't need an access code unless you opt out of the First Day access provided at a reduced cost. Instructions can be found under Course Information.

NO EXTENSIONS for missed assignments due to failure to activate your account or opt out of First Day access.

Browser

It is recommended to use Mozilla Firefox or Google Chrome to avoid any browser issues with Canvas or MyMathLab

Access to Library Resources

Some articles in this course are linked from the UAB Libraries databases. If you are using the internet from an IP address on campus, clicking on the link will open the article. If you are using internet in another location, you will be prompted to enter your BlazerID and password to access the article.

Course Time Zone

All assignment deadlines listed on this syllabus are in Central Time. If you are in a different time zone, including any traveling, you are responsible for calculating the time difference and

submitting assignments or attending online meetings on time. Use the [World Official Time Zone Site](#) as a reference.



Course Grading and Policies

Late Assignment Policy

Homework and quiz assignments can be completed late for up to half-credit until April 26th at 11:59pm. There are no late submissions for any other assignments.

- **If a student misses 1 test** (not including the Final Exam), the Final Exam grade will be used to replace the missed test grade if the student formally makes a request to do so. The student must complete a **Test Replacement Form** under the Course Links on Canvas no later than 5:00pm on the last day of classes. ***Note that only one missed test grade may be replaced with the Final Exam grade. All students are expected to complete the Final Exam.***
- ***A student missing a test due to university related business or government mandated activities is required to notify the instructor no later than one week prior to the missed test date to be able to take the test prior to the scheduled test date. If a student does not communicate with the instructor one week prior to the missed test date, the student will be required to use the Final Exam grade to replace the missed test grade.***

Grading Scale

The following scale will be used to determine final grades.

A = 880-1000 points B = 750-879 points C = 620-749 points D = 500-619 points
F = 0-499 points

Rounding Policy

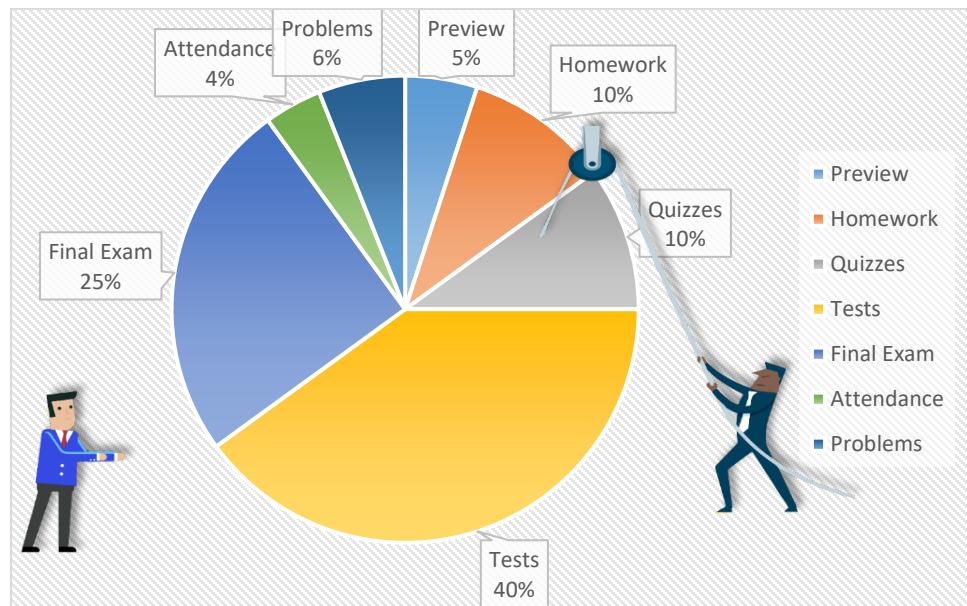
Individual assignment grades will be rounded to one decimal place. Final grades will be rounded up from .50.

Student Access to Grades

Official student grades are maintained in the Math Department grade database (a.k.a. MADDIE). To access your grade record, go to www.uab.edu/mathematics and click on *Student Resources* then *Check grades*. You will need to enter your BlazerID and password. You can also access it through Canvas under *UAB Grade for MA 180/418*.

Students are asked to review all grades for accuracy immediately after they are posted. **All questions involving homework grades, quiz grades, test grades and participation points must be resolved before the Final Exam.** Once the Final Exam is taken the course is completed.

Grading Pie Chart



Graded Assignments and Activities Overview

Your grade in the course is determined by the points earned throughout the semester and a Pass/Fail project.

Assignments and Activities	Value
Preview (10 @ 5 points each)	50
Homework (10 @ 10 points each)	100
Quizzes (10 @ 10 points each)	100
Tests (4 @ 100 points each)	400
Final Exam	250
Attendance (10 @ 4 points each)	40
Problems (10 @ 6 points each)	60
Total points	1000
Syllabus Quiz	2
Honor Code	1
Knowledge Mastery	2
Practice Tests (5 @ 4 points each)	20

Assignments and Activities Descriptions

Preview

There is a Preview assignment that is required before you can attempt the weekly Homework Assignments. It is important to work through them to gain the basic understanding needed for the remaining assignments that they go with. It serves as an introduction for new concepts and is completed in MyMathLab. No credit will be given for late completions.

Homework

The homework exercises are done using a computer program named MyMathLab. Homework assignments must be completed no later than 11:59 PM on the day specified in your course schedule to receive full credit. Any work submitted after the deadline will receive half-credit automatically. To work on exercises again after the deadline, you have to go to Review your Work in MyMathLab or it will reduce your score for late work.

Quizzes

Like the homework, quizzes are taken on-line. Each quiz can be taken two times (the highest grade will count). **Do not hit the BACK button on your browser when taking a quiz.** This will end your quiz and you will not be able to get back into it. If you think your computer or network connection is not reliable, you should take your quizzes in the UAB Math Learning Lab (if available). Quizzes have a 30-minute time limit. **Students are strongly advised not to wait until the last minute to complete homework and quizzes.** Problems occurring at the last minute are the responsibility of the student. Quizzes must be completed no later than 11:59 PM on the day specified in your course schedule to receive full credit. Any work submitted after the deadline will receive half-credit automatically.

Tests/Final Exam

There will be four 50-minute tests and a 120-minute final exam. The final exam will be comprehensive. The tests and final exam can all be completed with the Desmos calculator and formula sheet. The textbook itself cannot be used. You can use StatCrunch during testing, but no other resources. Students found using anything besides the permitted items during testing will receive a zero on the test and will be reported to the University Academic Integrity Office. **All testing will be completed in HHB 202 during lab time on the scheduled days.**

Problem

Weekly group problems will be solved during the assigned lab days in HHB 202. Each student is accountable for their individual submission and answers should not be copied from members of the group. Once you have completed your problem, you can use the remainder of the lab time to work on your homework and ask questions. No makeup is offered for missed meetings.

Attendance

The [Undergraduate Catalogue policy on attendance](#) states, "*UAB recognizes that the academic success of individual students is related to their class attendance and participation.*"

UAB's Department of Mathematics Attendance Policy

The Department of Mathematics complies with the official [UAB Attendance and Excused Absence Policy for Undergraduate Programs.](#) (Scroll down to the section titled, *Attendance and Excused Absence Policy.*) Please refer to this policy regarding which absences would be excused. Therefore, class attendance is mandatory. The following attendance policy will be applied:

Monday, Wednesday, Friday classes:

You will be able to earn 4 attendance points each week. 1 point for each lecture class on Monday and Wednesday and 2 points for each lab class on Friday for a total of 40 points throughout the semester. There will be no points during test weeks. It is up to the instructor's discretion on how much will be deducted for late arrivals and there will be no points given for missed class or lab meetings.

Tuesday, Thursday classes:

You will be able to earn 4 attendance points each week. 2 points for each lecture class on Tuesday and 2 points for each lab class on Thursday for a total of 40 points throughout the semester. There will be no points during test weeks. It is up to the instructor's discretion on how much will be deducted for late arrivals and there will be no points given for missed class or lab meetings.

Specifying expectations for in class behavior.

Success in this course requires you to be present and fully engaged. Therefore, you are expected to attend class, participate in discussions by sharing your ideas while also being respectful of other's ideas. Additionally, you are expected to refrain from distractions during class (texting, websites not pertinent to the discussion, etc.). Lesson notes to help follow the lecture can be found in each week's module on Canvas.

Attendance as a percentage of the grade.

Attendance is worth 4% of the final course grade. This includes attendance in class and lab. There is no make-up for missed attendance. However, you can use the available Bonus points in the course to replace them.

Honor Code and Syllabus Quiz

Both assignments should be completed before any other assignments in Canvas. The Syllabus Quiz will be completed to ensure that you have read and understand the contents of this document. It will contain important aspects of the course and its structure. By completing it, you certify that you have read and understand the syllabus. The Honor Code will be used for you to certify that you will abide by the UAB Honor Code and that failure to do so can result in severe penalties. Both assignments count as Bonus Points in the course.

Knowledge Quiz & Mastery

At the beginning of the semester, you will take a Knowledge Quiz containing questions about Math skills needed for this course that you should have to be successful. The quiz will determine how many questions of the mastery that you will need to complete. The quiz should be taken without any resources to show you which topics you need a little bit more practice with and which you will receive automatic credit for. The Knowledge Mastery counts as Bonus Points in the course.

Practice Tests

The way you prepare for the tests is by completing the homework and quiz assignments for understanding. Also, you will have a practice test available for each test and the Final Exam in the course. There is no make up for missed practice tests. The points earned count as Bonus Points in the course.

Bonus Points

You will have the opportunity throughout the semester to earn Bonus points in the course. These will include the syllabus quiz, honor code, practice tests, and the knowledge mastery for a total of 25 points.

Project

As a 418 student, you will have an additional project to complete. It will be graded out of 100 points. **If you receive less than 70 points on both portions together, your course grade will automatically be lowered by a whole letter grade.** The work for the project will be submitted on Canvas through two separate assignments, Collect Data and Inference. See Canvas for deadlines.

Time Commitment

You are expected to spend a substantial amount of time working through the course activities and assignments every week. Please know that time management and self-motivation are key components for success in this course and courses in general. There is a lot to be gained in this course, so approach it with an open mind!

This class meets for lectures in the classroom and for labs in HHB 202 (see course information above). In addition to class time, you should spend about 6 hours per week reading, studying, and completing assignments.

Inclement Weather

Classes will be canceled for weather only if the University cancels classes. Otherwise, you are expected to be present in class. **UAB Emergency Management** will be the official source of UAB information during any actual emergency or severe weather situation. The UAB Emergency Management Team will use B-ALERT, the university's emergency notification system, to communicate through voice calls, SMS text messages and emails to the entire campus all at the same time. To register for B-ALERT or update your existing information in the system, go to **uab.edu/balert**. All registration is connected to your BlazerID.

Weekly Course Schedule

Your course schedule can be found under Syllabus in your Canvas course Navigation on the left.

UAB Policies and Resources

Add/Drop and Course Withdrawal

- Drop/Add: Deadlines for adding, dropping, or withdrawing from a course and for paying tuition are published in the [Academic Calendar](#). Review the [Institutional Refund Policy](#) for information on refunds for dropped courses. 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 using BlazerNET.
- Withdrawal: 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). Failure to attend class does not constitute a formal drop or withdrawal. The official course withdrawal must be completed online in BlazerNET.

Academic Integrity Code

Your success while at UAB and after graduation is valued by the University. To gain and grow in the knowledge and skills needed for your future career, it is vital that you complete your own work in your courses and in your research. 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.

Please be sure you understand the different forms of "academic misconduct" covered by the code. See what UAB students say about academic integrity and review the FAQs about the code on the [Student Academic Integrity webpage](#).

Academic Policy Appeal

Students should request an Academic Policy Appeal when the student cannot continue in a course for reasons that are outside of the strict qualifications under this policy. Students need to submit supporting documentation showing why they cannot continue in a course. Learn more about the Academic Policy Appeal and how to submit an appeal form by visiting the [Academic Policy Appeal webpage](#).

Grading Policies and Practices

UAB provides many Grading Policies to students such as Study Abroad Grading Policy, Grade Change Policy, Course Repeat, and University Forgiveness Policy. View more about the policies in the Grading Policies and Practices section of the [Undergraduate Catalog](#).

Extended Absences

Attendance is fundamental to course objectives and to the integrity of this course. Courses in the Mathematics Department require a variety of activities that involve interaction with the instructor and/or interaction with other students. Excessive absences and missed assignments

(more than 2 weeks) seriously jeopardize a student's ability to successfully complete the course. In the event of excessive absences, students should be prepared to officially withdraw from the course through the Registrar's Office. In cases involving medical hardships, military duty, or other serious personal situations after the withdrawal date for a course, the student may participate in the Academic Policy Appeal (accessed and submitted through Blazernet Links/Forms).

Artificial Intelligence Use

Academic Integrity

Academic misconduct is present in an academic work wherever AI assistance has been used when unauthorized, or when authorized, has not been disclosed as required. Such behavior is considered deceit and a violation of UAB's shared commitment to truth and academic integrity. Deceit constitutes academic misconduct and is subject to review according to UAB's Academic Integrity Code.

Expect Changes

The developments around generative AI are in flux and the rules that are expressed in this syllabus may need to change on short notice. This may affect the contents of assignments, as well as their evaluation.

Generative AI Use Is Prohibited

The use of generative AI is strictly prohibited in this course.

Closed Book Exam/Quiz

The use of AI tools is not permitted.

Student Conduct Code

The purpose of the University of Alabama at Birmingham ("University") student conduct process is to support the vision, mission, and shared values of the University and the tenets of the University's creed, The Blazer Way. Through a student-focused and learning-centered lens, the process strives to uphold individual and community standards; foster an environment of personal accountability for decisions; promote personal growth and development of life skills; and care for the well-being, health, safety, and property of all members of the University community.

The [**Student Conduct Code**](#) ("Code") describes the standards of behavior for all students and student organizations and outlines students' rights and the process for adjudicating alleged violations. It is set forth in writing in order to give general notice of non-academic prohibited

conduct. The Code should be read broadly and is not designed to define non-academic conduct in exhaustive terms. All students and student organizations are expected to conduct themselves in accordance with the Code. The current version of the Code, which may be revised periodically, is available from the Office of Community Standards & Student Accountability.

Intellectual Property

My lectures and course materials, including PowerPoint presentations, quizzes, exams, outlines, and similar materials, are protected by copyright. You may take notes and make copies of course materials for your own use. You may not and may not allow others to reproduce or distribute lecture notes and course materials publicly, whether or not a fee is charged, without my expressed written consent.

DSS Accessibility Statement

Accessible Learning: UAB is committed to providing an accessible learning experience for all students. If you are a student with a disability that qualifies under the Americans with Disabilities Act (ADA) and/or Section 504 of the Rehabilitation Act, and you require accommodations, please contact Disability Support Services for information on accommodations, registration, and procedures. Requests for reasonable accommodations involve an interactive process and consist of a collaborative effort among the student, DSS, faculty and staff. If you are registered with Disability Support Services, please contact me to discuss accommodations that may be necessary in this course. If you have a disability but have not contacted Disability Support Services, please call (205) 934-4205 or visit [the DSS website](#).

Title IX Statement

In accordance with Title IX, the University of Alabama at Birmingham does not discriminate on the basis of gender in any of its programs or services. The University is committed to providing an environment free from discrimination based on gender and expects individuals who live, work, teach, and study within this community to contribute positively to the environment and to refrain from behaviors that threaten the freedom or respect that every member of our community deserves. For more information about Title IX, policy, reporting, protections, resources, and supports, please visit the [UAB Title IX webpage](#).

Violence Prevention and Response Policy

The University of Alabama at Birmingham (UAB) is committed to maintaining a safe and secure educational environment and workplace, one which seeks to ensure the well-being and safety of faculty and staff, employees, students and visitors. Violence and threatened violence are prohibited by UAB. Each member of the UAB community has the responsibility to understand, prevent, and respond appropriately to campus/workplace violence. For more information, view the [Violence Prevention and Response Policy](#).

Technology

Access technical support and view privacy policies and accessibility statements for Canvas and other technologies on the [Student Learning Technologies website](#). Additionally, view information about the [Minimum System Requirements and Technical Skills](#).

Health and Safety

UAB is very concerned for your continued health and safety. Please consult the [Student Health Services webpage](#) for up-to-date guidance because the following information is subject to change as circumstances require.

We strongly urge you to be fully vaccinated. Mask-wearing has proven to be one of the most successful mitigation strategies used to combat spread of the various variants of the COVID-19 virus. View information on the Immunization Requirements and Policies of the University on the [Student Health Services Immunizations webpage](#).

Student Academic and Support Services

- [One Stop Student Services](#) provides a single point of professional integrated service to students. The One Stop serves students who need assistance with academic records, financial aid, registration, student accounting, ONE card, and other related topics.
- [Student Assistance and Support](#) provides individualized assistance to promote student safety and well-being, collaboration and resilience, personal accountability, and self-advocacy. The Care Team consults and collaborates with campus partners to balance the needs of individual students with those of the overall campus community. [The UAB Care Team](#) helps find solutions for students experiencing academic, social, and crisis situations including mental health concerns.
- [Disability Support Services](#) assists students with reaching accommodations for their educational experiences at UAB that ensure that they have equal access to programs, services, and activities at UAB.
- The [Vulcan Materials Academic Success Center](#) provides tutoring, supplemental instruction, and other services that encourage goal achievement and degree completion.
- The [University Writing Center](#) offers free writing assistance for all UAB students. Get help at any stage of the writing process and with any type of writing. Students may meet with a tutor in person or via Zoom. Students may also upload a paper for feedback (called eTutoring in the online system). During in-person and Zoom sessions, tutors can help you understand your assignment, develop and organize your ideas, use and cite sources, revise and edit your draft, and more. When you upload a draft for eTutoring, tutors can provide feedback on both big-picture issues and detail-oriented concerns;

please note that you must upload a draft and assignment sheet to use eTutoring.

To make an appointment or get more information, please see the [UWC website](#), email writingcenter@uab.edu, or call 205-996-7178. Follow the UWC on [Facebook](#), [Instagram](#), and [LinkedIn](#) for daily news and quick writing tips.

- [UAB Student Health Services](#) delivers comprehensive, high quality, confidential, primary healthcare to students. Student Health provides testing services and vaccination clinics.
- [Student Counseling Services](#) offers students a safe place to discuss and resolve issues that interfere with personal and academic goals. UAB has created a new app (available in the App Store and Google Play) called [B Well](#), that is designed to easily access resources on mobile devices and build a self-care plan. [Kognito](#) is a free, interactive simulation-based platform designed to help you talk with someone when you are worried about your mental health.
- [UAB Blazer Kitchen at the Hill Student Center](#) provides food and basic supplies for any UAB student in need through in-person or online shopping. Students who can are also able to donate food and supplies to assist their peers. To get more information, call 205-975-9509, email studentoutreach@uab.edu, or visit the [Student Assistance & Support website](#).
- The [Office of Learning Technologies](#) provides numerous academic technologies and learning resources for students.
- [UAB Emergency Management](#) will be the official source of UAB information during any actual emergency or severe weather situation.

The following are the various websites describing additional student academic and technology resources:

- [UAB Policies for Students](#)
- [Student Academic and Support Services](#)
- [Technology Resources](#)

See also the [Student Assistance & Support](#) website of Student Affairs for a description of Covid-19-related resources, including the laptop loaner program.

Syllabus: This syllabus is subject to changes announced in class.