MA180 and MA418 STATISTICS Section ZN, Spring 2018

Syllabus for a Monday lecture meeting, a Wednesday lecture, and a Friday lab

The syllabus is required reading

Section ZN
- Mondays in CH 443 from 8:00 AM until 8:50 AM
- Wednesdays in CH 443 from 8:00 AM until 8:50 AM
- Fridays in HHB 202 from 8:00 AM until 8:50 AM

First day of class: Monday January 8, 2018
Last day of class: Friday April 20, 2018
Final Exam: Monday April 23, 2018, 8:00 AM

Instructor
Lingling Wang
CH 474, phone 934-7769, e-mail:mgwang@uab.edu

Objectives
This course supports the development of quantitative literacy. As such, it is not about learning how to do the homework and quiz problems and then replicating that effort on tests. Rather, 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 can usually be done by using a calculator or computer program. Students should not expect that test questions will duplicate homework and quiz problems; quite the opposite.

Preparing for Tests
There are three principle methods for learning the course material and preparing for the tests:

1. Reading the Textbook
   Students must allocate sufficient study time each week to a careful reading of the textbook. Students should read for meaning using markers or pens to underline key ideas. If ideas are unclear the students should ask for clarification during lectures, lab meetings, or instructor office hours.

2. Taking Notes during Lectures
   Instructors will cover key ideas during weekly lectures. Students should take notes and immediately ask the instructor for clarification whenever something is not clear. Students should strive to sit where they can maximize their communication with the instructor. Cell phones should be turned off at all times.

3. Doing Homework for Understanding
   When doing homework problems students should strive for learning and applying concepts in each problem, as opposed to just trying to get the correct answers. Think about the principles involved in working on the problem, and, once the problem is complete, read over the problem again, reviewing the steps involved and the reasons behind taking each step.
Course Objectives
Upon successful completion of the course, a student can:

- handle data sets, construct and interpret tables, graphs, and schematic representations of mathematical relations
- identify a problem and translate verbal descriptions into mathematical form
- compute statistics and evaluate the significance of observations
- draw conclusions based upon probability laws and empirical data
- test hypotheses and validate a model based upon evidence
- communicate results in a manner appropriate to the audience in writing or using visual aids (graphs, charts, schemata).
- demonstrate understanding of the following concepts:
  - Sample statistics versus population parameters
  - What constitutes a valid sample
  - Probability, and what is likely to occur
  - Measures of center
  - Measures of variability
  - The idea of a normal distribution
  - The idea of a sampling distribution
  - The concept of a confidence interval
  - The testing of a claim or hypothesis
  - Linear regression analysis

How to access your Course
All Homework, Quizzes, and Tests for this course are available only in the computer program MyMathLab Plus.
A MyMathLab Plus account will have been established for you and must be activated, as follows:
Log in to BlazerNet/Canvas and click on the MyMathLab Plus link.
Click on your course.
Enter your MyMathLab Plus ACCESS CODE (or purchase it online), OR Click on Pay Later.* (good for 14 days from activation.)

*Once Temporary Access has expired, you must purchase and enter the required access code or you will no longer have access to your course materials and assignments in MyMathLab Plus.

If you have any questions regarding your MyMathLab Plus account, email the course instructor. Please note that there will be NO EXTENSIONS for missed homework, quiz, or test deadlines due to failure to purchase access to your online materials.

Tutors to be announced later

Office Hours to be announced
Textbook


Reading the textbook is required. Bringing the textbook to class is recommended but not required. The 12th edition is required.

**Book packaged with access code.** You should find copies of the text in the bookstores that are shrink-wrapped with a course access code. You will need the course access code. The book is available in hard cover or soft cover pre-punched for a loose-leaf notebook. The soft cover version is less expensive. The least expensive option is usually the book shrink-wrapped with the access code.

**Book packaged without an access code.** If you purchase a text that is not shrink-wrapped with an access code, you will have to purchase a stand-alone access code from the bookstore or on-line from the publisher at MyMathLab Plus.

**Students from Spring semester 2017 or Summer semester 2017:** If you have previously purchased an access code for this course, it may be possible to use it again. Let your instructor know if you are using this option.

Fold-Out Card

The book comes with a tear-out, fold-out card at about page 62. This card includes tables of distribution and statistical formulas. You will need this card to work problems in the course. **The card is the only reference document that you can use during testing. If you purchase a used book the fold-out card will probably be missing.** The fold-out card should be brought to class every day, along a notebook for note-taking purposes.

Laptops

The use of laptop computers is not permitted during course lectures. Rather, students are expected to engage with the instructor and take paper and pencil notes.

Cell phones

**Cell phone use during testing will result in a test grade of zero.** All cell phones, iPhones, iPads, and laptops must be turned off and put away during lectures and testing. **Texting during lectures is strictly forbidden.** Students found to be texting or otherwise on the Internet will receive deductions in participation points, at the discretion of the instructor, and such students may be asked to leave the classroom. In the case of multiple infractions the point deductions will be severe.

Calculators

A good calculator can be useful but is not required. In lieu of a calculator students can use the StatCrunch computer program for homework and quizzes. If you want to use a hand-held calculator, it is recommended that you get a TI-83 Plus or TI-84 Plus.
Make-ups There are no make-ups for missed homework and quiz assignments. This is because they can and should be completed ahead of time. A missed test can be excused for a serious, verifiable circumstance, and only if the student provides adequate written documentation. To appeal a missed test, go to the Math Department office in Campbell Hall room 452 and complete the appeal form. Appeals must be received no later than one week after the missed test, by 5:00 PM on that day. If the appeal is approved, your instructor will schedule a make-up time and place.

Tests There will be four 50-minute tests and a 90-minute final exam. The final exam will be comprehensive. The tests and final exam can all be completed with reference to the tear-out, fold-out card taken out of the textbook. The textbook itself cannot be used. Notes cannot be written on the fold-out card or attached to, or concealed within the fold-out card. You can use your calculator during testing, but not laptops, cell phones or any other Internet access. Students found using their cell phones during testing will receive a zero on the test. (StatCrunch will not be useful during tests.)

Homework The homework exercises and quizzes are done using a computer program named MyMathLab Plus. In order to register for the on-line portion of the course you will need the access code that comes packaged with the text (or that you purchase on-line if your copy of the text does not include the shrink-wrapped access code). You can use the computers in the UAB Math Learning Lab in room 202 of Heritage Hall, computers in the Library’s ETS facility, or you can use your own computer with an Internet connection. Be aware if you are using your own computer, you may have to download the Flash plug-in in order to do the homework assignments.

Browser The Firefox or Chrome browsers may on occasion give you a more reliable connection to the homework website than will Internet Explorer.

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. Quizzes have a 30-minute time limit. They are open-book. Students are strongly advised to not wait until the last minute to complete homework and quizzes. Problems occurring at the last minute are the responsibility of the student.

Reading Quizzes There is a separate reading quiz associated with each reading assignment. Each reading quiz can be taken two times. The higher grade will count. The Reading Quizzes do not have a time limit. Reading quizzes must be submitted no later than 11:59 PM on the day specified in your course schedule.
Due dates  
Homework problems can be worked **any number of times** until they are correct. Quizzes can be worked two times (the highest score will count). **There are no extensions of homework, quiz, and reading quiz deadline dates**, so plan to complete them ahead of schedule. Homework sets are due by 11:00 PM and the corresponding quizzes must be submitted no later than 11:59 PM.

Reading Assignments  
Listed below are the sections of the Textbook that are assigned for reading, and are the basis for the reading quizzes and tests. Reading material titled “Beyond the Basics” is not included.

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<th>Chapter</th>
<th>Sections to read</th>
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<td>8</td>
<td>1,2 (part I),3,4,5</td>
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<td>11</td>
<td>1,2,3 (part I)</td>
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Participation  
Classroom and lab participation are required. At each class meeting there will be a roll to be signed by the students. 5 points per week are awarded for on-time lecture participation with the fold-out card in hand. 5 additional points are awarded each week for lab participation. Zero points are awarded for missed lectures or missed labs. If the course instructor accepts a written excuse for an absence, the points awarded can be zero to half-credit, at the discretion of the instructor. (Students absent on University business; e.g. athletics, can make up the points at a scheduled tutoring session outside of normal class time.)

Students arriving late get zero to half-credit, at the discretion of the instructor. Students attending a lecture or lab meeting without the fold-out card can earn zero to half-credit, again at the discretion of the instructor.

Signing the Roll  
Students may not sign the roll sheet for another student. Students engaging in this activity are subject to disciplinary action for academic misconduct, including a grade of F in the course.
Course Grade based on points earned (not on a percentage)
Reading Quizzes (12 assignments @ 6 points each) 72
Homework (12 assignments @ 6 points each) 72
Quizzes (12 quizzes @ 6 points each) 72
Four tests @ 100 points each 400
Final exam 244
Lecture participation (14 weeks @ 5 pts each) 70
Lab participation (14 weeks @ 5 pts each) 70
Total possible points 1000
Bonus points available (from Practice Tests) 40

Letter Grade based on points earned Note: 749 points is a C, not a B.
880 to 1000 A
750 to 879 B
620 to 749 C
500 to 619 D
Below 500 F

Extra Credit The four practice tests are for extra credit. Each practice test can be worked on two times prior to the major test with which it is paired. The highest grade obtained on a practice test will count, and the score on the highest grade will earn the student that portion of the ten available bonus points.

Grade Access 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 or MyMathLab Plus.

Grade Review Students are asked to review all grades for accuracy immediately after they are posted. Quizzes must be reviewed before the date of the mid-term test with which they are associated. Mid-term tests should be reviewed as soon as possible, but no later than the date of the next test. Tests that are not reviewed on this schedule are not eligible for review. 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 complete, and no further review of in-term grades is permitted.

MA418 MA418 students must also submit a pass/fail project before the end of the semester. Information regarding the project will be distributed later in the semester. In support of developing writing skills, the project will include a
report describing student observations, presenting logical analysis, and making conclusions.

**Final Exam**  The final exam is Monday April 23\(^{rd}\) at 8AM in the Math Learning Lab. The exam is comprehensive.

**Email**  Information about the course (changes to assignments, reminders, schedules, etc.) will be distributed to students using their BlazerID email address. Each student is required to access their UAB email account daily, as these communications represent official university business. This is a requirement for all UAB students. For UAB email account assistance, send an email to userservices@uab.edu, or call 934-3540.

**Withdrawal**  The last day to withdraw from the course with a grade of “W” is March 2\(^{nd}\), 2018. The permission of the instructor is not required.

**Disability Support Services (DSS)**  DSS offers accommodations to students who qualify. The UAB DSS office is located in the Hill Student Center, telephone: 934-4205, e-mail: dss@uab.edu. Students who have a DSS-approved accommodation for extended test times will take quizzes and tests that have longer time durations. See your instructor for further information.