MA180 and MA418 STATISTICS Section ZNB, Spring 2020
Syllabus for a Tuesday lecture meeting and Thursday lab meeting
The syllabus is required reading

Section ZNB   Tuesday in CH 443 from 11:00 AM until 12:15 PM
Thursday in HHB 202 from 11:00 AM until 12:15 PM
First day of class: Tuesday January 14, 2020
Last day of class: Thursday April 24, 2020
Final Exam: Tuesday April 28, 2020 @ 10:45 AM

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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   Please visit Resources on the Math Department website at https://www.uab.edu/cas/mathematics/resources .

Office Hours TBD in HHB 202, or by appointment.

Textbook   *Elementary Statistics*, by Mario F. Triola, 13th edition.
Reading the textbook is required. Bringing the textbook to class is recommended but not required. The access code for MyMathLabPlus 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 a previous semester: 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. It will be provided to you in MyMathLabPlus.** The fold-out card should be brought to class every day, along with 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, quizzes, and tests. 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**. However, you can complete the assignments late for half credit.

- **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 **Replacement Test Grade** form in the math department office (UH 4005) no later than 12:00pm 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 attend the Final Exam session.***
- *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 in order to be able to take the test prior to 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.*

Tests   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 reference to the formula card provided. The textbook itself cannot be used. 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.

Homework   The homework exercises and quizzes are done using a computer program named MyMathLabPlus. 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   Firefox or Chrome browsers may on occasion give you a more reliable connection to the homework website than other browsers.

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 and cannot be reviewed until after the due date.

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. However, homework and quizzes can be completed
for up to half credit after the deadline date.

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.

Chapter	Sections to read
1	1,2,3
2	1,2,3,4
3	1,2,3
4	1,2,3,4
5	1,2
6	1,2,3,4,5
7	1,2,3
8	1,2,3,4
9	1,2,3
10	1,2,3
11	1,2
12	1

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. 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. Up to 5 additional points are
awarded each week for lab participation. The score is dependent on the performance of
Knowledge Checks completed in lab. (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.

<u>Signing the Roll</u> 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.

<u>Group Project:</u> There will be a group project at the end of the semester where students will be working in groups of 5 during each class period during the last two weeks of class. The grading will include a group and an individual portion. The details of the project will be made available during the Class 13 meeting as well as the group assignments.

<u>Course Grade</u> 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	250
Lecture participation (12 weeks @ 5 pts each)	60
Lab participation (9 weeks @ 5 pts each)	45
Group Project	<u>29</u>
Total possible points	1000
Bonus points available (from Practice Tests)	40

<u>Letter Grade</u>   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

<u>Extra Credit</u>   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 10 available bonus points for each one.

<u>Grade Access</u>   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.

<u>Grade Review</u> 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. There will be three parts to be completed throughout the semester in Canvas. In support of developing writing skills, the project will include a report describing student observations, presenting logical analysis, and making conclusions.

Email   Information about the course (changes to assignments, reminders, schedules, etc.) will be distributed to students using their BlazerID email address or Canvas. 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 13th, 2020. 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.