STA 309: Elementary Business Statistics (04100, 04105)

Spring 2019 Syllabus

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R Help Sessions:	MOD Lab	Tu 5-6 pm
TA Office Hours:	CBA 4.304A	M 3-5 pm , Tu 3:30-5 pm, W 2-7 pm, Th 1-6 pm

About the Course

The goal of this course is to give you an introduction to the practice of using data to make business decisions. Upon completion of the course you should be able to think critically about data, use graphical and numerical summaries, understand the effect of randomness and sampling, apply standard statistical inference procedures, and draw conclusions from such analyses. Importantly, *this is a practical course*: you should come out of this course being able to actually do the analyses that we have studied.

This course carries the Quantitative Reasoning flag. Quantitative Reasoning courses are designed to equip you with skills that are necessary for understanding the types of quantitative arguments you will regularly encounter in your adult and professional life. You should therefore expect a substantial portion of your grade to come from your use of quantitative skills to analyze real-world problems.

Course Materials

MyStatLab: We will be using MyStatLab for online homework. To access MyStatLab, click the "MyLab and Mastering" link in the left sidebar of Canvas. Registration requires an access code that will be included with your textbook purchase or payment with a credit card or PayPal.

Textbook: *Business Statistics*, 4th Edition, by Sharpe, De Veaux, and Velleman, Pearson, ISBN 9780134685199. You can choose to use the e-book that is included with My-StatLab or purchase the textbook with the MyStatLab coupon.

Class Participation

We will be using Learning Catalytics in class to facilitate instant feedback, small group discussion, and other in-class activities. Bring a laptop, smartphone, or tablet to each class—let me know right away if this is not possible for you and we will make other arrangements. Later you can click on the "Review older class sessions" link to go over the questions asked during class.

Computing

The practice of statistics requires extensive numerical calculations. We will use R, a powerful, state-of-the-art statistical software platform, for statistical computing in this course. R is frequently used by practictioners and being able to use R to do statistical analysis is a valuable (and marketable!) skill. No prior knowledge of R or programming is needed; we will teach you all you need to know. Weekly R help sessions (Tu 5 pm) will provide additional help with learning R functions, how to save files, etc. You should bring a laptop to class each day to use for R for data analysis, participate in Learning Catalytics, and follow class notes. You may find it helpful to have a separate device, such as a tablet or phone for Learning Catalytics.

Reading Assignments

This course will be taught in a "flipped" model, which means that we will not cover all of the material during lecture. Instead, you'll read the relevant sections of the textbook *before class* and complete a short pre-class assignment. During class, we'll focus in on the material that was most challenging in the reading, and we'll do active learning activities to help you better understand the difficult concepts in the course. This way, we can spend more time in class on what you find challenging and less time on the easy stuff.

You will be expected to read a few sections from the book and then submit two questions on Canvas: things you are confused about or wondering about. I'll read your questions and use them to shape what we do in class the next day, so it is important to do the reading carefully and provide thoughtful questions.

Tests

Two tests (February 27 and April 10) for this class will be given in the ModLab during class time. The final will be given at the time scheduled by the University. You will be able to use R for computation during the exams, but not Excel, a calculator, or any other tool. You may bring one 8.5" by 11" page (both sides) of notes to the first test, two pages to the second test, and three pages to the final. You must bring a picture ID to each test. There will be no make-up tests. Your grade on the final can replace one test grade (but not both) if it helps your average.

Homework

Statistics is a cumulative subject that requires frequent practice. The homework assignments are designed to give you the needed practice. The assignments will be available in MyStatLab. Assignments must be completed by midnight on their due dates. It is recommended that you do not wait until the last minute to complete assignments. This will allow for any unexpected difficulties (with the material, website, etc.).

Working the assigned problems is not sufficient to guarantee an A in the course. Your proficiency with statistics will improve with active practice; i.e., working problems and explaining your results. Use the textbook problems at the end of each chapter for additional practice. Answers to odd numbered textbook problems are given in the back of the book. Detailed solutions to the odd problems are available in the Student Solution Manual (at the top of Chapter Contents) on MyStatLab.

Team Projects

There will be two team projects to be completed for this class. The assignments are examples of real problems. The assignments are designed to give you practical experience analyzing real-world data. You will apply statistical concepts that you learn in this class. Normally, all members of a group will receive the same grade for the projects. However, group members who do not fully participate in the project may have their grade reduced.

Grading

Your course grade will be calculated as follows and the grades will be assigned to comply with the Guidelines for Grading in McCombs Undergraduate Classes.

5%	Participation	Based on questions answered (on Learning Catalytics).
10%	Homework	Homework is completed in MyStatLab.
5%	Reading Quizzes	
10%	Projects	
20%	Test 1	
20%	Test 2	
30%	Final	

Course Web Site

In addition to MyStatLab and Learning Catalytics, this course will use Canvas, a password-protected class web site. Syllabi, notes, assignments, grades, and other resources will be available on this site.

Contacting the Instructor

I have regularly scheduled office hours and by appointment, where you can ask questions, get additional help, or discuss any course-related issues. I will do my best to reply to all email inquiries within 24 hours. Be aware that we cannot discuss grades over email (we can only discuss grades in person).

Collaborative Learning

This course is supported by the Peer-Led Undergraduate Studying (PLUS) program. PLUS study groups provide weekly opportunities to collaboratively practice skills and apply knowledge you need for success in this course. Attending study groups regularly is a great way to ensure that you are keeping up with the material so you don't fall behind. Feel free to attend any study group at any point in the semester; more information on times and locations will be available through Canvas. More on PLUS may be found at `https://www.utexas.edu/ugs/slc/support/plus`.

Sanger Learning Center

All students are welcome to take advantage of Sanger Center's classes and workshops, private learning specialist appointments, peer academic coaching, and tutoring for more than 70 courses (including STA 309) in 15 different subject areas. For more information, please visit `http://www.utexas.edu/ugs/slc`, JES A332, or call 512-471-3614.

Students with Disabilities

Students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, 512-471-6259, `http://www.utexas.edu/diversity/ddce/ssd/`.

Religious Holy Days

By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, a test, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

Student Emergency Services

The Student Emergency Services Office `http://deanofstudents.utexas.edu/emergency/` supports students through challenging or unexpected situations by providing assistance, intervention, and referrals. If you experience academic academic difficulties due to crisis or emergency situations contact `http://deanofstudents.utexas.edu/emergency/`.

Policy on Scholastic Dishonesty

The McCombs School of Business has no tolerance for acts of scholastic dishonesty. The responsibilities of both students and faculty with regard to scholastic dishonesty are described in detail in the BBA Program's Statement on Scholastic Dishonesty at `http://www.mccombs.utexas.edu/BBA/Code-of-Ethics.aspx`. By teaching this course, I have agreed to observe all faculty responsibilities described in that document. By enrolling in this class, you have agreed to observe all student responsibilities described in that document. If the application of the Statement on Scholastic Dishonesty to this class or its assignments is unclear in any way, it is your responsibility to ask me for clarification. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since dishonesty harms the individual, all students, the integrity of the University, and the value of our academic brand, policies on scholastic dishonesty will be strictly enforced. You should refer to the Student Conduct and Academic Integrity website at `http://deanofstudents.utexas.edu/conduct/` to access the official University policies and procedures on scholastic dishonesty as well as further elaboration on what constitutes scholastic dishonesty.

Examples of scholastic dishonesty in this course include copying or collaborating during assessments, discussing or divulging the contents of a test with another student, use of assignment solutions from another student or semester, and attempting to gain credit for class participation while not actually in class.

Campus Safety

Please note the following recommendations regarding emergency evacuation from the Office of Campus Safety and Security, 512-471-5767, `http://www.utexas.edu/safety`:

- Occupants of buildings on The University of Texas at Austin campus are required to evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside.
- Familiarize yourself with all exit doors of each classroom and building you may occupy. Remember that the nearest exit door may not be the one you used when entering the building.
- Students requiring assistance in evacuation should inform the instructor in writing during the first week of class.
- In the event of an evacuation, follow the instruction of faculty or class instructors.
- Do not re-enter a building unless given instructions by the following: Austin Fire Department, The University of Texas at Austin Police Department, or Fire Prevention Services office.
- Behavior Concerns Advice Line (BCAL): 512-232-5050
- Further information regarding emergency evacuation routes and emergency procedures can be found at: `http://www.utexas.edu/emergency`.

Course schedule

Note: The schedule is subject to change as necessary. Reading Quizzes (RQ) are due by 7 PM. All other assignments are due by 11:59 PM.

Sunday	Monday	Tuesday	Wednesday	Thursday
Jan 20	21 MLK Jr. Day	22	23 **Class 1**	24 HW 1 due
27 RQ §3.1-3.10	28 **Class 2**	29	30 **Class 3**	31 HW 2 due
Feb 3 RQ §2.1-2.6	4 **Class 4**	5	6 **Class 5**	7 HW 3 due
10 RQ §4.1-4.10	11 **Class 6**	12	13 **Class 7**	14 HW 4 due
17 RQ §5.1-5.7	18 **Class 8**	19	20 **Class 9**	21 HW 5 due
24 RQ §6.1-6.5	25 **Class 10** Project 1 due	26	27 Test 1	28
Mar 3	4 **Class 11**	5 RQ §7.1-7.5	6 **Class 12**	7 HW 6 due
10	11 **Class 13**	12 RQ §8.1-8.6	13 **Class 14**	14 HW 7 due
17	18 Spring Break	19	20 Spring Break	21
24 RQ §10.1-10.4	25 **Class 15**	26	27 **Class 16**	28 HW 8 due
31 RQ §11.1-11.7	Apr 1 **Class 17**	2	3 **Class 18**	4 HW 9 due
7 RQ §12.1-12.6	8 **Class 19**	9	10 Test 2	11
14	15 **Class 20** Project 2a due	16 RQ §13.1-13.2,13.4-13.6	17 **Class 21**	18 HW 10 due
21 RQ §14.1-14.4, 14.6-14.7	22 **Class 22**	23	24 **Class 23**	25 HW 11 due
28 RQ §15.1-15.2, 15.4, 15.6	29 **Class 24**	30 RQ §16.1-16.2	May 1 **Class 25**	2 HW 12 due
5 RQ §18.1-18.5	6 **Class 26** Project 2b due	7	8 **Class 27**	9 HW 13 due