

STA309 – ELEMENTARY BUSINESS STATISTICS

Unique IDs:

04095 (MW 2:00 – 3:30pm) & 04100 (MW 3:30 – 5:00pm)



1 Professor

Rafael Mendoza-Arriaga (Rafa Mendoza)

Hours: Monday, Wednesday 9:30 – 11:00 am or by appointment

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2 TA Information

Daniel Mitchell

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3 Course Objective

This course concentrates on the practice of statistics as a tool for learning about the real world. Upon completion of the course you should be able to think critically about data, use graphical and numerical summaries, apply standard statistical inference procedures, and draw conclusions from such analyses.

4 Texts

The Practice of Business Statistics, Using Data for Decisions, 2nd Edition, by David Moore, George McCabe, William Duckworth, and Layth Alwan, W.H. Freeman and Company, 2008. You may purchase a hard copy at the bookstore or order one directly from the publisher at www.bfwpub.com. Online access can be purchased at <http://portals.bfwpub.com/pbs2e.php> or www.coursesmart.com. *CPS_{RF}* response pad and registration. The response pad can be obtained at the University Coop and the registration instructions are below.

5 Grades

The grade on one test (Test 1 or Test 2) may be replaced by your Test 3 grade
Grades will be curved at the end of the semester



Figure 1: The CPS_{RF} response pad

Evaluated Item	Percentage
Class Participation	5%
Homework	10%
Applied Finance Assignments	10%
Test 1	25%
Test 2	25%
Test 3	25%

6 Class Participation

You are required to obtain a CPS_{RF} response pad and to bring it to class every day. Your class participation grade will be determined from the responses that you provide in class.

You will need to register your CPS pad using Blackboard:

- Log on to your Blackboard account, click the Course tab and choose Course Tools, click CPS Connection, and then click Register Class.
- Enter your serial number in the space provided. You can find your serial number on your LCD screen when you turn on your pad.
- Click Create Your Account. If you already have a CPSONline Username and Password, enter it in the space provided. Otherwise, create a CPSONline Username and Password and fill in your contact information.
- Keep this user name and password in a safe place. For security reasons USE A DIFFERENT USERNAME AND PASSWORD from your UTEID.
- Click Submit to create your account or login.
- Follow the wizard to pay your fee and create your account and receive your pad number and registration confirmation. Fees can be paid with a credit card or a virtual check.

7 Homework

Statistics is a cumulative subject that requires frequent practice. If one topic is confusing, the next is likely to be more so. To address this, it is necessary for you to practice statistics on a frequent basis. The homework assignments are designed to keep you current in the course. The assignments are available online on the course web page. It is recommended that students work on assignments independently.

You may open an assignment (and even print it out) several times before submitting your answers. Click on the Submit button (at the bottom) when you are done. Assignments must be submitted 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.).

Once the deadline has past, you will be able see how you did on an assignment. Click on My Grades and then the automatically generated grade for the assignment to see the

correct answers. Ignore these HW grades. Your TA will assign grades after each assignment is due.

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. The textbook has about 100 problems per chapter for additional practice. Answers to all odd numbered problems are given in the back of the textbook.

8 Applied Finance Assignments

There will be **three applied finance assignments** to be completed for this class. These assignments are examples of real problems from the field of finance. They are designed to give you practical experience analyzing real-world data that you will obtain yourself. You will apply statistical concepts that you learn in this class. Applied finance assignments are **due by midnight on their due date.**

9 Tests

- Tests will be given in the MOD Lab in the evenings.
- 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 third test.
- Necessary distributional tables will be provided with the test; no formulas will be provided.
- You may bring a calculator to the exams.
- You must bring a picture ID to each test and exam.
- The third test will be cumulative. Your 3rd test grade can replace one lower test grade.
- There will be no make-up tests.
- **You must inform the professor in advance** if you are going to miss a test due to observance of a religious holiday or an official university activity.

10 Laptops

You may find it helpful to have a laptop in class to use Excel for data analysis and/or follow along on class notes. If you are multitasking during class and using your laptop for

tasks unrelated to class, sit in the last row of the classroom so that you do not distract other students.

11 Web Page

The webpage is through **BlackBoard**.

This course will use a password-protected class web site. Syllabi, notes, videos, assignments, and other resources will be available within this site. Site activities will include submission of homework assignments and posting of grades. Students who do not want their names included in the electronic class roster must restrict their directory information in the Office of the Registrar, Main Building, Room 1. For information on restricting directory information see: <http://www.utexas.edu/student/registrar/catalogs/gi00-01/app/appc09.html>. Students who have restricted their directory information must see the professor to identify him or herself. Login to the course website using your UT EID. You should be able to use the website on computers running Windows, Internet Explorer, Excel and the Adobe Acrobat Reader. If you have difficulty, you may be able to get help from the ACITS Help Desk (475-9400). Alternatively, you may need to work in the **CBA labs**.

12 Computing

The practice of statistics requires a fair amount of numerical calculations. We will use Microsoft Excel for statistical computations and graphics. It is also useful to have a calculator that does **two-variable statistics**, that is, which calculates not only mean and standard deviation, but also the correlation and the least-squares regression line from keyed-in data. Two-variable calculators are available for \$25 or less. A graphing calculator is not required for this course. The McCombs School of Business has 2 computer labs with Dell computers: **CBA 5.304/5.325(MOD Lab)** and **CBA 5.322(Millennium Lab)**. Lab hours are extensive both in the CBA labs and the SMF. You must have an ITS computer account to use the labs. The datasets to individual homework assignments are available as you work.

13 Videos

As a part of this course, you may find it helpful to watch videos from the series *Against All Odds: Inside Statistics*, which was prepared with funding from the Annenberg Corporation for Public Broadcasting. Each program contains segments illustrating different applications of statistics. At <http://www.learner.org/resources/resource.html?uid=65>, you can see a description of each of the 26 programs and, if you have a broadband connection, view them over the web. The UT Learning Center also has a set of the videos available for viewing.

14 Getting Help

Your professor and TAs are eager to help you during office hours or by appointment. If you prefer a private tutor, the UT Learning Center (phone 471-3614) in Jester A332A can arrange one for you for a reasonable charge. The UT Learning Center also has specific statistics resources including a copy of the video tape series, *Against All Odds: Inside Statistics*, to help you with material in this class.

15 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 Policy Statement on Scholastic Dishonesty for the McCombs School of Business.

By teaching this course, I have agreed to observe all of the faculty responsibilities described in that document. By enrolling in this class, you have agreed to observe all of the student responsibilities described in that document. If the application of that Policy Statement to this class and its assignments is unclear in any way, it is your responsibility to ask me for clarification. Policy on Scholastic Dishonesty: 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, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced. You should refer to the Student Judicial Services website or the General Information Catalog to access the official University policies and procedures on scholastic dishonesty as well as further elaboration on what constitutes scholastic dishonesty.

Scholastic dishonesty in this course includes copying or collaborating during an exam, discussing or divulging the contents of an exam with another student who will take the test, and use of homework solutions from another student or semester.

16 Students With Disabilities

The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. This includes students with ADHD and learning disabilities. For more information, contact the Office of the Dean of Students at 471-6259, 471-4641 TTY.

17 Important Dates

- **February 3.** Last day to drop a class with possible refund
- **February 15.** Last day to drop a class without academic penalty
- **March 29.** Last day, with the dean's approval, to withdraw from the University or drop a course except for urgent and substantiated, nonacademic reasons.

The entire UT academic calendar is also available.

18 Schedule

Date	Day	Lecture	Topic	Video	Text
1/20	W	Lecture 1	Introduction	1	
1/21	Th	Survey	DUE DATE (23:59)		
1/25	M	Lecture 2	Displaying Distributions	2,6	1.1
1/27	W	Lecture 3	Describing Distirbutions	3	1.2
2/1	M	Lecture 4	The Normal Distribution	4,5	1.3
2/3	W	Lecture 5	Using Excel for Statistics		
2/7	Su	Homework 1	DUE DATE (23:59)		
2/8	M	Lecture 6	Scatterplots and Correlation	8,9	2.1, 2.2
2/10	W	Lecture 7	Least Squares Regression*	7	2.3, 2.4
2/15	M	Lecture 8	Relations in Categorical Data*	11	2.5
2/17	W	Lecture 9	Designing Samples	13,14	3.1
2/21	Su	Homework 2	DUE DATE (23:59)		
2/22	M	Lecture 10	Designing Experiments	12	3.2
2/24	W	Lecture 11	Sampling Variability		3.3
2/28	Su	Homework 3	DUE DATE (23:59)		
3/1	M	Review/Class	Finish covering material / review		
3/3	W	TEST No. 1			
3/8	M	Lecture 12	Randomness	15	4.1
3/10	W	Lecture 13	Sampling Distributions*	18	4.4
3/11	Th	Applied Finance No 1	DUE DATE (23:59)		
3/15	M	Spring Break			
3/17	W	Spring Break			
3/22	M	Lecture 14	Binomial Distributions	17	5.2
3/24	W	Lecture 15	Estimating with Confidence*	19	6.1
3/28	Su	Homework 4	DUE DATE (23:59)		
3/29	M	Lecture 16	Tests of Significance*	20	6.2
3/31	W	Lecture 17	Using Significance Tests*		6.3
4/4	Su	Homework 5	DUE DATE (23:59)		
4/5	M	Lecture 18	Inference Decisions and Power*		6.4
4/7	W	Review/Class	Finish covering material / review		
4/9	F	Homework 6	DUE DATE (23:59)		
4/12	M	TEST No. 2			
4/14	W	Lecture 19	Inference for One Mean*	21	7.1
4/15	Th	Applied Finance No 2	DUE DATE (23:59)		
4/19	M	Lecture 20	Comparing Two Means*	22	7.2
4/20	T	Homework 7	DUE DATE (23:59)		
4/21	W	Lecture 21	Inference for Proportions*	23	8.1, 8.2
4/26	M	Lecture 22	Inference for Two-Way Tables*	24	9.1, 9.2
4/27	T	Homework 8	DUE DATE (23:59)		
4/28	W	Review/Class	Finish covering material / review		
5/2	Su	Applied Finance No 3	DUE DATE (23:59)		
5/2	Su	Homework 9	DUE DATE (23:59)		
5/3	M	Review/Class	Finish covering material / review		
5/5	W	TEST No. 3			