

EDP 308: Statistical Reasoning and Literacy Fall 2019 TTH 12:30-2pm SZB 435
--

Instructor:

Rebecca A. Zarate (RAZ)

Ms-RAZ@utexas.edu**Office:**

SZB 536 Common Area

TTH 2-3pm, or by appt

Course Description

This course is designed to introduce you to statistical applications and their interpretation in daily life. In this course, you will learn the principles of gathering and analyzing data, as well as interpreting analysis results in order to critically evaluate findings reported in the media and in social science research. This course will provide you with the tools to perform basic statistical analyses and to be informed consumers of research.

Quantitative Reasoning Flag

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.

Prerequisites

Mathematical skills: While this course is not completely mathematical, it is founded upon the use of mathematical tools. Thus, some fundamental mathematical skills are essential for successful mastery of the material. Students are expected to have basic algebra skills including the ability to solve single variable equations. Students should have a basic understanding of exponents and square roots, as well as the order of operations, proportions, fractions, decimals, percentage, and negative numbers.

Course Materials and Resources

Required Text: *Statistics: The Art and Science of Learning from Data (3th Edition)* by A. Agresti, C. Franklin, and B. Klingenberg. Optional homework problems are available in this book. The text is also helpful because it provides more detailed information than can be presented during class time.

Calculator: Students are required to bring to class a scientific calculator that can be used to sum, multiply, take the square root and square of numbers. Calculators are recommended for use with homework and tests as well as during class time. During in-class exams, you must use a calculator that does not have the capacity to connect to the internet (use of cell phones is completely **forbidden** during exams).

Optional Resource: I will post the course slides on Canvas prior to class as well as links to various YouTube videos. I recommend you review them before class and print the notes, so you do not have to copy everything from the board. There will also be worksheets to help you gain practice with certain calculations. These will not be graded, but I highly recommend you print and work on them in class; we will do this together as a group.

Grading System

Grades will be posted to our Canvas website – please periodically check for any keypunch errors. Final grades will then be assigned based on the scale below:

Graded Assessments	Number of Assessments	Point Value	Percent of Final Grade
Attendance and Participation	27 classes	0.5 each day (3 free points)	16%
Quizzes	9 (10 total-drop one)	6 points each	54%
Exams	2	15 each exam	30%
Final Exam	1 (optional)	15 total	Replaces Prior Exam
Extra Credit	4 (one for each week)	1 point each	+4%

Attendance

Attendance will be taken and participation in class activities and polls is mandatory, though you can refuse to answer questions that you are not comfortable with. Each class period you attend is worth .5 points towards your final grade. You are allowed to miss one class without penalty, after that each day you miss class you will lose 0.5 points from your final grade. If you will be absent for a *valid* reason, you must let me know BEFORE class, not after.

You are expected to arrive on time for the beginning of class, attendance is taken at the beginning of class. Students anticipating late arrival should notify the instructor before class. A pattern of tardiness can negatively affect your grade and result in point deductions. Cell phones must be on silent. In class you are expected to be respectful which includes raising your hand to ask a question or make a comment and not creating disruptions for other students. I will ask you to leave if you are negatively interfering with the learning of the other students. Be advised, if I notice you texting or engaging in other extraneous activities (ex. social media) in class on your phone or laptop, I will call on you.

Quizzes

There will be weekly quizzes on Canvas to help keep you on track. There will be a total of ten quizzes, but I will drop your lowest quiz grade at the end of the semester for a total of nine. Each quiz will vary in the number of questions, but each will be worth a total of 6 points towards your final grade. Quizzes will be open for one week and will *always* be due on **Wednesdays by 11:59AM**. You cannot make up a quiz. No exceptions. This is because the answers to the quizzes are released at 12:00pm on Wednesdays for you to review and help you study for future quizzes and exams.

Exams

There will be two mandatory in class exams and one optional final exam. Each exam is worth 15 points. At the end of the semester, if you are satisfied with your grade you can choose to not take the final exam, though you must still attend the final class periods. For those of you that chose to take the final, if your final exam score is higher than one of your previous exams, I will drop the lower exam score. If your final exam score is lower than your prior exams, I will drop the final exam grade. In other words, the final exam can only help you not hinder you. The final exam is scheduled for Dec. 5th during regular class time. You will need the **orange scantrons** for the exams.

Extra Credit

There is one extra credit option for this course, however, it requires FOUR weeks to complete. This is a behavior modification/data tracking exercise. You will track your data for a MINIMUM of four weeks, answer weekly questions about your progress, then turn in your completed data and a data visualization no later than **Dec. 1st, 11:59 pm**. You must complete the assignment in its entirety to earn the credit, so must start at the latest on November 1st. **No points will be given unless you complete the entire four weeks, even if you did three weeks.**

Grade Assignments

Grades are assigned based on the total amount of accumulated points:

<i>Overall Course Points</i>	<i>Grade</i>
93 +	A
90 – 92	A-
86 – 89	B+
83 – 85	B
80 – 82	B-
76 – 79	C+
73 – 75	C
70 – 72	C-
66 – 69	D+
63 – 65	D
60 – 62	D-
Below 60	F

Makeups Work

Only in exceptional circumstances (which does **NOT** include family vacations, weddings, routine doctor's appointments, job interviews, etc.) and only with **prior** permission from the instructor, or with a verifiable medical excuse, will you be able to take a makeup exam without penalty. You can **NOT** make up any quizzes, regardless if you have a valid excuse because quizzes are available for one week. You must provide medical proof of illness. You are also responsible for notifying the instructor **BEFORE** the exam, not after. If you miss an exam without a valid reason, you will be required to take the final.

Religious holy days sometimes conflict with class and examination schedules. It is the policy of The University of Texas at Austin that you must notify each of your instructors prior to the classes scheduled on dates you will be absent to observe a religious holy day. If you have to miss an exam due to a religious holy day, it is your responsibility to re-schedule with the professor another time to take the exam.

Accessibility & Inclusion

The university is committed to creating an accessible and inclusive learning environment consistent with university policy and federal and state law. Please let me know if you experience any barriers to learning so I can work with you to ensure you have equal opportunity to participate fully in this course. If you are a student with a disability, or think you may have a disability, and need accommodations please contact Services for Students with Disabilities (SSD). Please refer to SSD's website for contact and more information: <http://diversity.utexas.edu/disability/>. If you are already registered with SSD, please deliver your Accommodation Letter to me as early as possible in the semester so we can discuss your approved accommodations and needs in this course.

Scholastic dishonesty policy

The University defines academic dishonesty as cheating, plagiarism, unauthorized collaboration, falsifying academic records, and any act designed to avoid participating honestly in the learning process. Scholastic dishonesty also includes, but is not limited to, providing false or misleading information to receive a postponement or an extension on a test or other class assignment, and submission of essentially the same written assignment for two courses without the prior permission of faculty members.

By accepting this syllabus and participating in this course, you have agreed to these guidelines and *must* adhere to them. This means (specifically for this class) that any work that you hand in for a grade **MUST** be your own work.

Violation of this agreement and of any of the University rules on scholastic dishonesty will result in the student being awarded an ***F for the final course grade***, being referred to the appropriate university officials, and may result in suspension or expulsion from the University. For more information on scholastic dishonesty, students may review the Student Judicial Services website: <http://deanofstudents.utexas.edu/sjs/>.

Communication

In this course, **Canvas** will be used as a means of communication. You will be responsible for checking your Canvas messages regularly for class work, deadlines, changes, and announcements.

You will also be responsible for checking the Canvas course site regularly for class work, announcements, and copies of the lecture slides. As with all computer systems, there are occasional scheduled downtimes as well as unanticipated disruptions. Notification of these disruptions will be posted on the Canvas login page. Canvas is available at <http://canvas.utexas.edu/>. Support is provided by the ITS Help Desk at 475-9400 Monday through Friday 8 am to 6 pm, so plan accordingly.

Tentative Schedule

Week #	Topic(s)	Assignment	Due Date Wednesdays (11:59 AM)
#1 8/29	Introductions and Syllabus Review	-	-
#2 9/3-9/5	Variables and Measurement, Variables, Exp Design	Find a data visualization and post to Discussion in Canvas	9/4
#3 9/10-9/12	Describing Data, Central Tendency, Probability, Visuals, Notation	Quiz: Variables and Measurement, Variables, Exp Design	9/11
#4 9/17-9/19	Distributions and Transformations, Variance, Standard Deviation, Z-scores	Quiz: Describing Data, Central Tendency, Probability, Visuals	9/18
#5 9/24-9/26	Sampling Distributions, Central Limit Theorem, Standard Error	Quiz: Distributions and Transformations, Variance, Standard Deviation, Z-scores	9/25
#6 10/1-10/3	Confidence Intervals, p values, z-table, t-table	Quiz: Sampling Distributions, Central Limit Theorem, Standard Error	10/2
#7 10/8-10/10	Review (10/8) Tuesday Exam (10/10) Thursday	Quiz: Confidence Intervals and p values	10/9
#8 10/15-10/17	Hypothesis Testing and Types of Errors	-	10/16
#9 10/22-10/24	One Sample, Independent Sample	Quiz: Hypothesis Testing and Types of Errors	10/23
#10 10/29-10/31	Dependent Samples t-test	Quiz: One Sample, Independent Sample	10/30
#11 11/5-11/7	ANOVA	Quiz: Dependent Samples t-test	11/6
#12 11/12-11/14	Correlation Regression	Quiz: ANOVA	11/13
#13 11/19-11/21	Chi Squared (11/19) Tuesday Review (11/21) Thursday	Quiz: Correlation Regression	11/20
#14 11/26-11/28	Exam 2 (11/26) Tuesday Enjoy Thanksgiving!	-	Extra Credit Due 12/1 (11:59PM)
#15 12/3-12/5	Review-Wrap Up Final Exam (in class) 12/5		-