MATH 10 -27553

Elementary Statistics
Fall 2023

Asynchronous

Instructor: Fatemeh Yarahmadi

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Textbook & Required Materials:
Elementary Statistics: Picturing the World, Betsy Farber and Ron Larson (6th Edition)
(9780321901118)
Inferential Statistics and Probability by Geraghty (online). (The online text is free)

Graphing Calculator: TI-83/TI-83+/TI-84/TI-84+

Computer/smartphone to complete online homework assignments, submit projects on Canvas,
and attend required live class meetings.
You should keep a **notebook** where you take notes and work the problems for reference.

Prerequisites:

- Intermediate Algebra (MATH 109, MATH 114 or MATH 130) or equivalent
- Not open to students with credit in MATH 10H.
- Advisory: EWRT 211 and READ 211 (or LART 211), or ESL 272 and 273.

Attendance:
Because this is an online class, there are no on-campus meetings. However, this does not mean
that you will be able to move through the class at your own speed. A major part of the class
involves participation, discussion assignments and problems with your classmates. Thus,
everyone needs to be doing the same work at approximately the same time. You are expected
to meet all deadlines for homework, quizzes, and discussions. We are learning a lot of different
concepts that build on one another and it is very difficult to catch up if you fall behind. Time
management is critical in an online course. You will be considered present if there is evidence
of
your participation in required course activities including, but not limited to, submitting an
assignment, participating in an online discussion, and working in a group.

Course Description:
Introduction to data analysis making use of graphical and numerical techniques to study patterns
and departures from patterns. The student studies randomness with an emphasis on
understanding variation, collects information in the face of uncertainty, checks distributional
assumptions, tests hypotheses, uses probability as a tool for anticipating what the distribution of

data may look like under a set of assumptions, and uses appropriate statistical models to draw conclusions from data. The course introduces the student to applications in engineering, business, economics, medicine, education, social sciences, psychology, the sciences, and those pertaining to issues of contemporary interest. The use of technology (computers or graphing calculators) will be required in certain applications. Where appropriate, the contributions to the development of statistics by men and women from diverse cultures will be introduced.

Instructor Communication:
I am looking forward to working closely with you this term, and you can expect me to play an active role in our course. I will hold live lectures, post announcements every week, join you in breakout rooms and class discussions to help you understand course concepts, and provide detailed feedback on assignments within one week of submission. I will also answer questions throughout the term in the Q&A Discussion in Piazza and in our weekly discussions. Please let me know when you need help—that's why I'm here!

Canvas:
All class content, assignments and announcements will be on Canvas, which you can access through MyPortal. The course will be divided into weekly modules in Canvas.

Asynchronous Group Activity:
There will be required group activities. Even though the problems will be discussed in group, write up your own solutions independently.
• Every member of the group will be taking a role.
• Groupwork are done in Google doc.
• Your name and your role should be written at the top of the first page.
• Work must be NEAT and ORGANIZED. Do problems IN ORDER.
• It is important for you to SHOW YOUR WORK! You are graded on the wor you show to get the final answer, not just the final answer. Be sure to show your "scratch work" that goes with the problem.

Discussions:
There will be discussion topics posted throughout the term. The deadline for responding to the topic will be indicated when the assignment is posted. You may not respond to the discussion once the deadline has passed.

Homework:
Written sets for submission: During the term, I will send out homework and group activities sets to be discussed, written up, and submitted on Canvas. Homework and group activities is essential in any math class. You cannot expect to pass the class without putting consistent effort into homework and group activities. Show all work and explain any reasoning. You may not submit your assignments once the deadline has passed.

HW Guidelines:
The process of solving homework problems reflected in step-by-step solutions.
The following are some specific criteria:

Guidelines for homework:
• Your name, class, and section number should be written at the top of the first page.
• Work must be NEAT and ORGANIZED. Write the questions (problems) IN ORDER.
• It is important for you to SHOW YOUR WORK! You are graded on the work you show to get the final answer, not just the final answer. Be sure to show your "scratch work" that goes with the problem.
• Do your work underneath the assigned problem then circle your final answer.
• At the end of each homework assignment, write a brief "Chat" paragraph
- A key component in learning is thinking about how and what you are learning. What are you doing that is working? What areas could you improve upon? What comes easily for you? Is there a pattern in your homework? At the end of each homework assignment, write a very brief paragraph about what you learned, what you feel you need to review, and any thoughts or feelings you have about the math you're doing. This is also a great opportunity for you to communicate with your instructor!
There are no "right" answers. Be honest and use this as a learning process.
• Submit pdf file of your homework on Canvas

Reading and Writing:

Statistics is a concept-heavy subject. While we will do some computations and calculations by hand, we will mostly use technology. The essence of statistics lies in framing a problem in statistical language, collecting and processing data, and interpreting the meaning of results in the context of the original problem. This makes it very different from most math classes! You cannot hope to do well in statistics without a clear understanding of statistical concepts. You will need to keep your focus on both concepts and skills. On projects, quizzes and exams, in addition to correct numerical answers, you will also be graded on your explanations. Practice this carefully and deliberately on your homework and group work and ask questions whenever you don't understand something.

Participation in online class:

A major part of the class involves participation, discussing assignments and problems with your classmates. Thus, everyone needs to be doing the same work at approximately the same time. You are expected to meet all deadlines for homework, quizzes, and discussions. We are learning a lot of different concepts that build on one another and it is very difficult to catch up if you fall behind.

Projects:
Projects will be assigned throughout the term. Project due dates are indicated on Canvas. You may not submit your assignments once the deadline has passed.

Exam Reviews:
There will be an exam review assigned before each exam. The purpose of the review is to aid the student in studying for the exams. You may not submit your assignments once the deadline has passed.

Midterm Exams: There will be three midterm exams. Each exam includes handwritten portion which you will upload to Canvas. Each midterm exam will focus the material covered since the

previous exam. More details on exam dates and procedures can be found in Canvas. You may not submit your assignments once the deadline has passed.

Final Exam: The final exam will cover all material from throughout the term.
More details on the final exam will be available on Canvas.

Grading Policy:

Homework	(12.5%)
CLASS Assignment	(12.5%)
Projects	(12.5%)
Midterm Reviews/ Midterms	(37.5%)
Final	(25%)
Total	100%

Quarter grade:			
≥100%	A+	78-79.9%	C+
93-99.9%	A	70-77.9%	C
90-92.9%	A-	68-69.9%	D+
88-89.9%	B+	63-67.9%	D
83-87.9%	B	60-62.9%	D-
80-82.9%	B-	0-59.9%	F

Important Dates and Deadlines: http://www.deanza.edu/calendar/dates-and-deadlines.html

De Anza Final exams schedule: https://www.deanza.edu/calendar/final-exams.html

For detailed information on Homework, Quizzes, Projects, Discussion please log into your Canvas course page.

Academic Integrity:
All students are expected to exercise high levels of academic integrity throughout the quarter. You are encouraged to work together but you are expected to write up your answers independently. Any instances of cheating or plagiarism will result in disciplinary action, including getting a '0' on the assignment and report to the PSME dean, which may lead to dismissal from the class or the college

Student Honesty Policy:
"Students are expected to exercise academic honesty and integrity. Violations such as cheating and plagiarism will result in disciplinary action which may include recommendation for dismissal."

Disabled Services:
Students who have been found to be eligible for accommodations by Disability Support Services (DSS), please follow up to ensure that your accommodations have been authorized for the current quarter. If you are not registered with DSS and need accommodations, please go to http://www.deanza.edu/dss.

This syllabus is subject to change at the instructor's discretion. Changes will be announced in class and on Canvas.

Recipe for Success:
- If you ever have any questions, Email me! You are welcome to send email to me whenever you need help!
- Visit the Online Tutoring Center.
- Form an online study group.
- Watch all lectures, participate in every discussion, and complete every homework assignment.
- Read the sections to be discussed in class prior to the lecture

Tentative Calendar

WEEK	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	Friday
1	September 25 Introduction to Statistics	26 Introduction to Statistics	27 Introduction to Statistics	28 Descriptive Statistics	29 Descriptive Statistics
2	October 2 Descriptive Statistics	3 Descriptive Statistics	4 Descriptive Statistics	5 Descriptive Statistics	6 Descriptive Statistics
3	9 Probability	10 Probability	11 Probability	12 Probability	13 Exam 1
4	16 Discrete Probability Distributions	17 Discrete Probability Distributions	18 Discrete Probability Distributions	19 Discrete Probability Distributions	20 Discrete Probability Distributions
5	23 Normal Probability Distribution	24 Normal Probability Distribution	25 Normal Probability Distribution	26 Normal Probability Distribution	27 Normal Probability Distribution
6	30 Confidence Intervals	31 Confidence Intervals	November 1 Confidence Intervals	2 Confidence Intervals	3 Exam 2
7	6 Confidence Intervals	7 Confidence Intervals	8 Confidence Intervals	9 Confidence Intervals	10 Confidence Intervals
8	13 Hypothesis Testing	14 Hypothesis Testing	15	16 Hypothesis Testing	17 Hypothesis Testing
9	20 Hypothesis Testing	21 Hypothesis Testing	22 Hypothesis Testing	23 Thanksgiving holiday	24 Hypothesis Testing
10	27 Hypothesis Testing	28 Hypothesis Testing	29 Hypothesis Testing	30 Hypothesis Testing	December 1 Exam 3
11	4 Correlation and Regression	5 Correlation and Regression	6 Correlation and Regression	7 Chi-Square Tests and the F -Distribution	8 Chi-Square Tests and the F -Distribution

DECEMBER 11-15 Final exams https://www.deanza.edu/calendar/final-exams.html

Student Learning Outcome(s):

• Organize, analyze, and utilize appropriate methods to draw conclusions based on sample data by constructing and/or evaluating tables, graphs, and numerical measures of characteristics of data.
• Identify, evaluate, interpret and describe data distributions through the study of sampling distributions and probability theory.
• Collect data, interpret, compose and evaluate conjectures, and communicate the results of random data using statistical analyses such as interval and point estimates, hypothesis tests, and regression analysis.

Office Hours:

T,TH   12:00 PM   02:00 PM   Zoom,In-Person,By Appointment   S55