MATH 10. 62

Elementary Statistics

Fall 2022

Tuesday and Thursday 6:30 PM**-8:45** PM **in S16**

Instructor: Fatemeh Yarahmadi

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My office hours are times for conversation about the course and your work in it. I am here to answer questions, offer feedback, discuss a course concept, or just listen as you explore a line of reasoning. I can also direct you to resources to help you meet challenges you face outside of class.

Questions outside of office hours? I will respond to your message or email within 24 hours, M-F. If you do not get a response after 24 hours, please resend.

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:

- MATH 114 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:

Regular attendance and class participation is as vital in any Math. You are expected to attend all meetings. 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 class discussion, and working in a group. If you consistently miss meetings, you may be dropped from the course. However, it is your responsibility to drop yourself if you wish to drop the course.

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 lectures, post announcements every week, check your group work, join you in 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 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 in class and on Canvas, which you can access through MyPortal. The course will be divided into weekly modules in Canvas. Weeks will run from Monday to Sunday.

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.

Notebook

I recommend that you work out each homework problem on paper in a notebook. Even though you won't be handing in problems (unless announced), I expect that you write out the solution to each problem in your notebook. I believe the best way to prepare for a test is to practice the skills that you will demonstrate during the test. Practice solving each problem in a clear, logical, and methodical way and you will earn more points on your test. This will also help me whenever you come to me with questions, because it allows me to see your work and offer helpful suggestions suited to your questions.

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. Homework and group activities Guidelines:

Group Quizzes: There are group quizzes in our class. Quizzes will focus on the material covered during that week.

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.

Projects: Projects will be assigned throughout the term. Project due dates are indicated on Canvas.

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.

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.

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	100 pts (12.5%)
Discussion	100 pts (12.5%)
Projects	100 pts (12.5%)
Midterm Reviews/ Midterms	300 pts (37.5%)
Final	200 pts (25%)
Total	800 pts

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 Schedule

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

September 26 Fall classes begin

October 8 Last day to add classes

October 9 Last day to drop classes without a W

November 11 Veterans Day holiday – no classes; offices closed

November 18 Last day to drop classes with a W

November 24-27 Thanksgiving holiday – no classes; offices closed

December 12-16 Final exams

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 defend conjectures, and communicate the results of random data using statistical analyses such as interval and point estimates, hypothesis tests, and regression analysis.

Office Hours:

Zoom		F	11:00 AM	12:00 PM
In-Person	S91H	M,W	12:00 PM	12:00 PM