Math 10 Introductory Statistics Spring 2025 – Syllabus (CRN- 46166, Section 38Z) - (04/07/2025-06/27/2025)

Instructor: Neelam R. Shukla

Class Time/Days and Span

6:30 pm- 8:45 pm Tuesday, Thursday via Zoom through Canvas shell.

Course Description

This course is an 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. This Statistics course is a required lower-division course for students majoring or minoring in many disciplines such as data science, nursing, business, and others.

Required Materials

- a. TI-84 Calculators
- b. Textbook (Free): Introductory Statistics, 1st Edition by Illowsky and Dean.
- c. Notebook, pen/pencil to write during the zoom sessions.
- d. Online Homework: You will have online homework on each chapter we cover on WebAssign, and you must pay \$31.95 for the quarter. Please do not buy any code, click the homework1 assignment that will take you to the other window, then follow the instructions. The homework will be embedded within Canvas. The links and due dates are within the modules. You can request an automatic extension for homework with a 5 % deduction of scores within 5 days from the due date.
- e. Course Requirements: Windows PC or laptop, Mac or MacBook, or Chromebook for online assignments. Assignments cannot be done on a phone, regardless of its make or model, and cannot be taken on an iPad either.

Face-to-face learning, online homework, quizzes, labs, discussions, and exams are where you will earn 100% of your points in this class. You have 4 quizzes, 4 exams, 2 Labs ,1 Final Exam and 12 homework assignments. One least exam, quiz and 2 homework score will be dropped at the end.

Course Content

- 1. Displaying and Analyzing Data with Graphs
- 2. Descriptive Statistics
- 3. Populations and Sampling
- 4. Probability
- 5. Discrete Random Variables

- 6. Continuous Random Variables
- 7. The Central Limit Theorem
- 8. Point Estimation and Confidence Intervals
- 9. One Population Hypothesis Testing
- 10. Two Populations Inference
- 11. Chi-square Tests for Categorical Data
- 12. Correlation and Linear Regression
- 13. One Factor Analysis of Variance (ANOVA)

Office Hours

Wednesday: 6:30 pm-7:30 pm via zoom, link will be available on the home page of Canvas or click at the zoom in the left bar Menu in Canvas. Be sure to submit all first and second-week assignments to get into the "rhythm" of the class. Please note that if you're not attending the class and not submitting any assignments, I will assume that you are not interested in the taking the class and may drop you (so you can get your refund)! If, for any reason during the quarter, you stop participating and intend to drop the class, **please do an official drop in a timely manner**. Please see the calendar for important deadlines. If you fail to do so, you will receive an 'F' in the class. Follow the deadlines for this class in My Portal. I do not have the ability to make exceptions to these.

Weekly Schedule

Read textbook (self-study), watch lecture notes, work on homework, respond to discussion boards, and study! We will have meeting 6:30 pm- 8:45 pm Tuesday, Thursday, via Canvas. We have class meetings. You're expected to attend these meetings: ask your questions, do labs, and take quizzes and exams.

Assignments

Chapter Discussions

There will be a topic of discussion. The due date will be at the end of 3-weeks. These topics are designed to help you think critically about statistics and express your analysis, conclusions, or opinions. They will often involve the history and practice of statistics including questions related to the homework, applications of statistics in the real world, etc.

Homework, In class Worksheets

The best way to succeed in any math class is doing all the assigned work correctly and in a timely manner, making sure you really understand what you are doing! Focus on your understanding of the concept, how it relates to the course concepts and how it's applied outside of the class, not just on following a procedure or learning a skill! Time spent on the homework and worksheets (in class) will directly benefit you on quizzes and exams. You can request automatic extension for homework with 5 % deduction of scores with in 5 days from the due date.

Labs

We will have Three technology labs in this class. They will be done in groups. There will be one submission per group, with each member of the group receiving the same grade. Labs are due within 10 days after they are discussed in class. Late labs will NOT be accepted. Be sure to do the assignment created for lab groups to connect with your group members by the end of the first week.

Participation

Even though this is on campus class, you are expected to participate. Here are ways to participate:

- Ask questions during the class.
- Participate actively when we do notes/labs during class sessions.
- Participate in assigned discussion boards (it's part of your grade). Post and answer questions in chapter discussion boards on canvas.

Quizzes

There will be **four** quizzes (see the calendar) online via Canvas. You will need to submit them on time to receive any points. IMPORTANT: There will be NO MAKEUPS for any of the quizzes. However, your lowest one guiz scores will be dropped.

Exams

You will have 4 exams. One least score will be dropped at the end.

Final Exam

There will be accumulative exam at the end. You can skip it in case you take all the exams during the quarter and a n average grade will be posted for average final exam score (average of the best 3 exams). Best score out of the average final exam score and final exam. Score will be picked at the end.

Evaluation

Labs: 10%: Discussions: 5%, Homework: 15%, Quizzes: 20 %

Cumulative-Exams: 40 %, Final Exam: 10%

Academic Integrity

All students are expected to be academically honest throughout the term. Any instances of cheating or plagiarism will result in disciplinary action, which may include recommendation for dismissal. You are encouraged to work together but submitting someone else's work as your own is never acceptable! Also, that activity will be of no help to you later. Cheating will result in getting a 0 on the assignment or assessment, an 'F' in the course, or dismissal from the class.

Also, each incident of cheating will be reported to the Dean of the Physical Science, Mathematics and Engineering Division. Please see the De Anza College's page on <u>Academic Integrity</u>. Also, please watch this <u>video</u> that's designed to help you understand what academic honesty means:

Help

- 1. Your classmates are a great resource. Ask for help and provide help to others either within your current groups or using Canvas discussion boards!
- 2. Visit me during office hour for help with online homework or any other course related questions.
- 3. Ask questions during the class meetings on Tuesday, Thursday.
- 4. Get help from De Anza's Math <u>Student Success Center</u>. Use NetTutor (available 24/7) for help through Canvas. You can also access SmartThinking through MyPortal.
- 5. If you need any technical help with MyPortal, Zoom, Canvas help.

Disability Notice

If you feel that you may need an accommodation based on the impact of a disability, please

contact me privately to discuss your specific needs. Also, please contact <u>Disability Support</u> Programs & Services for information or questions about eligibility, services, and accommodations for physical, psychological or learning disabilities.

2025 Tentative Calendar for Math 10 class

Week #	Tuesday	Thursday
1	8 th April: winter Session starts; Chapter 1	10 th April: Chapter 2
2	15 th April: Chapter 2	17 th April: Quiz 1 (Chapter1 and 2)
3	22 nd April: (No Class) King Martin Luther's Day; Chapter 3:	24 th April Lab1
4	29 th April: Chapter 3; Exam 1 (Chapter 1,2,3)	1 st May: Chapter 4
5	6 th May: Chapter 5:	8 th May: Chapter 6
		Quiz 2(Chapter 5,6)
6	13 th May: Exam2 (Chapter 4,5,6)	15 th May: Chapter 7
		Lab2
7	20 nd May: Chapter 8:	22 nd May: Chapter 8:
8	27 th May: Chapter 9: Lab3	29 th May: Chapter 9, 10: Quiz 3(Chapter 7,8)
9	3 rd June: Chapter 10, Review	5 th June Exam3 (Chapter 7,8,9)
10	10 th June: Chapter 12	12 th June: Chapter 11: Quiz 4(Chapter 10,11)
11	17 th June: Chapter 11: Exam 4 (Chapter 10,11,12)	19 th June: Juneteenth Holiday Chapter 13: Review
12	23-27 June Final Exam week	26 th June: Final Exam

Note: For the exact due dates of the assignments e.g. homework, labs, discussions, quizzes, and exams Check the Canvas modules. As this is an on the campus class regular announcements will be delivered in the class. And exams will be held in the class. Read the late submission policy or ask me for more clarification. No retake of the exam except, you are sick, jury duty, or any other valid reason (please talk to me). You can request an automatic extension for homework with a 5 % deduction of scores within 5 days from the due date.

Important Dates

Go to Calendar

First day of winter quarter

April 7

Last day to add 12-week classes

April 20

Last day to drop classes without a W

April 20

May 24-26 Memorial Day, No classes

Last day to drop classes with a 'W'

May 30

June 19 Juneteenth Holiday

June 23-27 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 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:

W 6:30 PM - 7:30 PM

Canvas, Zoom