

Math 10 Introductory Statistics and Support for Statistics

Math D210X-Q02(CRN-47768) [with Math-D010-Q02 (CRN-42230)]

Spring 2022– Syllabus (04/06/2022- 06/21/2022)

Instructor: Neelam R. Shukla

Class Time/days: 9:30 am- 11:45 am Monday via Zoom

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) T1-84 Calculators

b) Please use the link below to download the book for free: Text: Collaborative Statistics, 2nd Edition by Illowsky and Dean

<http://cnx.org/content/col10522/latest/>

c) **Online Homework:** You will have online homework on each chapter we cover on WebAssign, and you must pay \$29.99 for the quarter. The homework will be embedded within Canvas. The links and due dates are within the modules. You can request automatic extension for homework with 10% deduction of scores.

d) **Course Requirements:** Windows PC or laptop, Mac or MacBook, or Chromebook:

This class cannot be taken on a phone, regardless of its make or model, and cannot be taken on an iPad either.

Synchronous learning: Synchronous learning, online homework, quizzes, labs, discussions, and exams are where you will earn 100% of your points in this class. You have 6 quizzes, 2 accumulated exams, 8 Support assignments (Labs), 1 Final Exam and 12 homework assignments. One least quiz, 2 least Lab(support assignments), and 1 least homework score, one from Average of (AE1+AE2) and Final exam will be dropped at the end. Online Homework: There is an online homework via WebAssign, which you will register through canvas.

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:

Monday, Thursday 5:30 pm-6:30 pm via Zoom

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 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:

Mondays (and other days): Read textbook, watch lecture notes and videos, work on homework, respond to discussion boards, and study!

Monday, Tuesdays, and Thursdays: We will have synchronous Zoom meeting. The link can be found in the Zoom in left navigation. We have class meetings. You're expected to attend these meetings: ask your questions, do worksheets, and take quizzes and exams.

Chapter Discussions:

There will be a topic of discussion. The due date will be at the end of the week. These topics (except for Week 1) 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, applications of statistics in the real world, etc.

Homework, Worksheets and Labs

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 will directly benefit you on quizzes and exams.

Worksheets: You will have worksheets in almost every class. These worksheets will usually be posted as Google docs in the Canvas modules. You will work on them in groups, but you are to submit them individually by the deadline. They are designed to help you practice the concepts and skills you are learning. I will look for evidence of your understanding in your work.

Worksheets Submission Guidelines:

- Even though the problems will be discussed in groups, you must write up your own solutions independently.
- Worksheets will be due the day after you work on it in class. Worksheets that are turned in within 24 hours after the deadline will receive half credit. After that, they will receive no credit.

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 the day after they are done in class. Late labs will NOT be accepted.

Participation:

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

- Ask questions during the synchronous portions of the class.
- Participate actively when we do worksheets during synchronous sessions.
- Participate in assigned discussion boards (it's part of your grade) Post and answer questions in chapter discussion boards

Quizzes:

We will have **six** quizzes (see the calendar) during the synchronous portions of our class. 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 quiz scores will be dropped.

Exams:

You will have three exams. You can skip cumulative final exam in case you take both the exams. And average final-exam score will be calculated as $(AE1+AE2)/2$. See the calendar for the dates. There will be **NO MAKEUPS** for any of the exams, so be sure to not miss any of them.

IMPORTANT: One of the best “average final-exam score” or “the cumulative final exam” will be picked. Final exam cannot be rescheduled for any reason. In case you are not happy with average final-exam score you can take the cumulative final exam.

Evaluation:

Support-Worksheets: 10%, Discussions: 2%, Homework: 13%, Quizzes: 20 %

Cumulative-Exams: 30%, Labs: 10%, Final Exam: 15%

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 Academic Integrity: https://www.deanza.edu/policies/academic_integrity.html (Links to an external site.). Also, please watch this video that's designed to help you understand what academic honesty means: <https://www.youtube.com/watch?v=4unoOe-l0eY> (Links to an external site.)

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. On online homework, you can message me by using 'Ask My Instructor' button.
3. Ask questions during our synchronous meetings on Monday, Tuesdays and Thursdays.
4. Get help from De Anza's Math Student Success Center. See details at <http://deanza.edu/studentsuccess/> (Links to an external site.).
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, etc., visit <https://www.deanza.edu/online-fall/#Learning> (Links to an external site.).

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 Disability Support Programs & Services through <https://www.deanza.edu/dsps/> (Links to an external site.) for information or questions about eligibility, services, and accommodations for physical, psychological or learning disabilities.

Important Dates: Go to
<https://www.deanza.edu/calendar/>

	Monday	Tuesday	Thursday
Week 1		Spring Session starts	7 th April First Day of the Class Ch 1: Zoom meeting
Week 2	11 th April Ch 1,2: Zoom meeting	12 th April Ch 2: Zoom meeting Questions	14 th April: Zoom meeting Chap2Quiz1(on Ch 1, 2) Support assignment (on Ch 1&2)Due
Week 3	18 th April Ch 3 : Zoom meeting	19 th April: Chap3Zoom meeting: Questions	21 st April: Zoom meeting: Support assignment (on Ch 3)
Week 4	25 th April Ch 4: Zoom meeting:	26 th April Ch 4,5 : Zoom meeting	28 th April Ch 5: Zoom meeting: Support assignment (Ch 4)Due Quiz 2 (Chap3,4)
Week 5	2 nd May Chapter 6:Zoom Meeting	3 rd May Chap6,7: Zoom meeting:	5 th May Support assignment (Ch 5,6) Due
Week 6	9 th May Ch 7: Zoom meeting Quiz 3(5&6)	10 th May Ch 7: Zoom meeting	12 th May Support assignment (Ch 7) Exam 1(On Ch 1-7)
Week 7	16 th May	17 th May Ch 8: Zoom meeting	19 th May Ch 9: Zoom meeting Quiz 4(Chap 8) Support assignment (Ch 8)
Week 8	23 rd May Chap 9: Zoom meeting	24 th May Ch 10: Zoom meeting Chap 9	26 th May Drop with 'W ' 27th May Chap 10: Zoom meeting
Week 9	30th May: No Class Memorial Day	31 st May Zoom meeting: Chap 10	2 nd June Support-Assignment (Chap 9&10)Due
Week 10	6 th June Ch 11: : Zoom meeting Chap 11 Quiz 5(Chap 9 and 10)	7 th June Chap 11: Zoom meeting	9 th June Chap 11, 12
Week 11	13 th June Quiz 6(Chap 11) Ch 12: Zoom meeting	14 th June Chap 13: Zoom meeting Cumulative Exam2 (Ch. 8-12)	16 th June Support assignment (Ch 11&12)Due Zoom meeting: Questions Review for the final exam(Average Final grades)
Week 12	20th June No Class (Holiday)	21 st June Tuesday -Last day of the class Final Exam: 9:15 AM - 11:15 AM	

Student Learning Outcome(s):

*Demonstrate mathematical concepts, skills and numeracy needed for understanding Probability and Statistics.