Math 10 Introductory Statistics and Math-D010-Q10 (CRN-36459) and (CRN-36462) Support for Statistics –Winter 2022– Syllabus

Instructor: Neelam R. Shukla

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:

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/

Class Time and days:

Math 10 Introductory Statistics (M.T.Th. 8:30-10:45 AM) - Winter 2022

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. **T1-84 calculator is required.**

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 4 quizzes, 4 exams, 4 labs ,1 Final Exam and 12 homework assignments. One least exam, quiz, lab, and homework score 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.

Textbook: To get

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.

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 teach Monday. Worksheets that are turned in within 24 hours

after the deadline will receive half credit. After that, they will receive no credit.

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 four 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:

We will have four exams. You can skip cumulative final exam in case you take all the exams. And average final-exam score will be calculated as (E1+E2+E3+E4)/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:

Worksheets: 10%, Discussions: 2%, Homework: 15%, Quizzes: 15 %

Exams: 33%, 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-I0eY (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.

Math 10 Introductory Statistics (M.T.Th. 8:30-10:45 AM) - Winter 2022
Tentative Calendar

	Monday	Tuesday	Thursday
Week 1	3rd Jan Ch 1	Zoom meeting: Welcome/introduction	6th jan Zoom meeting: Questions
Week 2	10th Jan Ch 2	11th Jan Zoom meeting:	13th -Jan Zoom meeting: **Quiz 1(on Ch 1, 2)** **Group Lab 1 (on Ch 1, 2)**
Week 3	17th Jan **Martin Luther King Jr. Holiday** **No class**	18th Jan Zoom meeting: **Exam 1(on Ch1-3)**	20th Jan Zoom meeting: Ch 4:
Week 4	24th Jan Ch 4:	25th Jan Zoom meeting: Ch :5	27th Jan Quiz 2 (on ch 4,5) Ch 5: Zoom meeting:
Week 5	31st Jan Chap6	1st Feb Zoom meeting: Ask Questions Review for **Exam 2**	3rd Feb **Exam 2** **(On Ch 4-6)**

Week 6	7th Feb Ch 7 Zoom meeting: **Individual Lab 2(On chap 7)**	8th Feb Zoom meeting: Ch 8:	10th Feb Zoom meeting: Ch 8
Week 7	14th Feb **Quiz 3(7,8)**	15th Feb Zoom meeting: Ch 9	17th Feb Ch 9 **Group Lab 3 (On ch 9)**
Week 8	21st Feb **Presidents' Holiday - no classes, offices closed**	22nd Feb Zoom meeting: Ch 10	24th Feb Zoom meeting: **Chap 10**
Week 9	28th Feb Review for Exam 3	1st March Zoom meeting: **Exam 3 (On Ch 9,10)**	3rd March Ch 11 Zoom meeting: chap11
Week 10	7th March Ch 11:	8th MarchZoom meeting:	10th March Quiz 4(on chap 11) Ch 12 **Group Lab 4(On ch 12)**
Week 11	14th March Ch 12:	15th March Chap 13 Zoom meeting: **Exam 4 (On Ch. 11-12)**	17th March Zoom meeting: Review for the final exam
Week 12			**23rd March** **Final Exam: 7:00 - 9:00 AM** **Via Zoom**

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

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.