Math 10.31 – Introductory Statistics   Spring 2020
Meets: TTh, 4:00 PM to 6:15 PM
Online classes via Zoom

Instructor: Lilit Mazmanyan	
Contact: mazmanyanlilit@fhda.edu	**Office hours:** Friday, 3:00 – 4:00 PM, online via Zoom (check Canvas for instructions)

Instructional method is **synchronous**. Lectures will be delivered online via Zoom during scheduled class times. Virtual breakouts will be used for group collaboration. Instructions how to connect Zoom lectures can be found on Canvas, which are accessible to you via **MyPortal** as you are enrolled in the course. You can also access Canvas using direct link (https://deanza.instructure.com) with your MyPortal login credentials. Communications with students will be maintained via Zoom, announcements on Canvas, and emails.

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. 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.

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.

Textbook
Barbara Illowsky and Susan Dean, *Introductory Statistics*, OpenStax College, 2013, ISBN: 978-1938168208
- This is an open source textbook which is available for free online:
  http://openstaxcollege.org/textbooks/introductory-statistics/get
- Printed edition can be purchased or rented at the DeAnza College bookstore.

Supporting Textbook
Maurice A. Geraghty, *Inferential Statistics and Probability-A Holistic Approach*, De Anza College, 2018.
  http://nebula2.deanza.edu/~mo/holistic/HolisticStatisticsRev180817.pdf

Calculators and Computer Software
- A TI-83 PLUS, TI-84 or TI-84 PLUS graphing calculator is REQUIRED.
- Cell phones or other devices CANNOT be used in place of a permitted calculator on any quiz or examination.
- Graphing calculator and computer software Minitab are REQUIRED to complete the Laboratory assignments.

Homework (HW)	• Homework is done online using WebAssign • Students need to self-register at http://www.webassign.net to use WebAssign software • **CLASS KEY** to register on WebAssign **WILL BE SENT TO STUDENTS BY EMAIL** • You are eligible for free Cengage Unlimited access during COVID-19: https://www.cengage.com/coursepages/CU_Access_Spring • How to create and use your Cengage/ WebAssign account: http://embed.widencdn.net/pdf/plus/cengage/tkbyycgpir/cu-covid-start-strong-free-trial-flyer-1348236.pdf • After the due date/time, HW cannot be submitted for credit • After the due date/time, the answer key is available online • There are thirteen (13) chapter homework assignments which are distributed between ten (10) homework due dates • The lowest homework grade will be dropped
Labs (L)	• Laboratory assignments will be described during class via Zoom • May be used graphing calculator or may be used statistical software Minitab • Must be done in groups of at least two and no more than four • Individual work will be penalized by 20% of the grade • LATE Laboratory work will be penalized by 20% of the grade • No laboratory grade can be dropped
Quizzes (Q)	• Quiz is online based on classwork and homework • NO MAKE-UP QUIZZES are given • Missed quiz is graded as a zero (0) • The lowest quiz score will be dropped
Exams & Final Exam (EX, FE)	There will be four (4) examinations • EX 1, 2 & 3 are one hour each and Final exam is two (2) hours • EX 1, 2 & 3 and the FE dates are on the course schedule • Exams are closed book • No cellphones or other technologies are allowed during the Exams except graphing calculator • One (1) sheet of notes (double-sided 8.5 x 11-inch), HANDWRITTEN, is allowed for the Exams 1, 2 & 3 • Two (2) sheets of notes (double-sided 8.5 x 11-inch), HANDWRITTEN, are allowed for the Final Exam • There are NO MAKE-UP examinations • An absence from any examination earns a grade of zero (0) • You MUST take the final exam to pass the course Quizzes and Exams will be assigned via WebAssing or Canvas. Structure of exam will be discussed in class.

Grading	Students will be graded on homework (HW), quizzes (Q), laboratory work (LW), and exams (EX1, 2 & 3, FE).

Distribution of weights for each category

Category	% Weight on Final Grade
Homework	10 %
Quizzes	10 %
Labs	15 %
Exam 1	15 %
Exam 2	15 %
Exam 3	15 %
Final Exam	20 %

Grading Scale

A+	≥99	A	94-98	A-	90-93
B+	86-89	B	82-85	B-	78-81
C+	74-77	C	70-73		
D+	64-69	D	58-63	D-	50-57
				F	<50

Important Dates and Deadlines
https://www.deanza.edu/calendar/

Monday	April 13	First day of Spring Quarter 2020
Saturday	April 25	Last day to add classes
Sunday	April 26	Last day to drop classes with no record of "W" Last day to drop classes for full refund or credit
Friday	May 8	Last day to request "Pass/No Pass" for full-length classes
	May 23-25	Memorial Day Weekend - Campus Closed
Friday	June 5	Last day to drop classes with a "W"
Thursday	June 25 4:00 – 6:00 PM	Final examination https://www.deanza.edu/calendar/finalexams.html

Online Education Center
- **Student Resource Hub:** Visit this site for tips, guides and answers to your questions about using Canvas, Zoom and other online learning tools that your classes may be adopting.
- **Staying Organized:** This webpage has advice for planning and staying on top of your online coursework.
- **Canvas Help:** Need technical support with Canvas? This page has information on how to get help.
- **More Student Resources:** Visit this page for more links and tips.

California Virtual Campus
- **Get Ready for Online Learning:** This website has videos about getting "tech ready," managing your time, communicating with instructors and more.

Student services and support
https://www.deanza.edu/online-spring/#Services
- Tutoring and Library Help
- Computers and Tech Products
- Internet Access

- Food and Financial Assistance
- Health and Psychological Services

Attendance, Drops or Withdrawals
- Regular online attendance is essential for success in the course.
- You must not miss a class in the first week of the quarter or you will be dropped.
- A student who discontinues coming to class and does not drop the course will automatically receive a 'F' grade for the course.
- It is the student's responsibility to drop or withdraw from this course by the college deadlines.

Academic Honesty and Discipline Policy:
Students are expected to abide by the DeAnza College Code of Conduct and not participate in academic dishonesty.
https://www.deanza.edu/policies/academic_integrity.html

Student Success Center
http://deanza.edu/studentsuccess/mstrc/
Hours of online Zoom Tutoring Center are Monday to Thursday 9:00-6:00 PM and Friday 9:00 AM-12:30 PM.
The SSC provides free tutoring services such as individual, drop-in, groups, in-class and workshops.
For individual tutoring, fill out a weekly individual application:
http://deanza.fhda.edu/studentsuccess/mstrc/weekly_ind.html
For group tutoring, contact to Helen at nguyenhelen@deanza.edu.

Disability Support Services
https://www.deanza.edu/dsps/dss/
Students with disabilities who qualify for academic accommodations must provide a notification from the Disability Support Services (DSS) and discuss their specific needs with the instructor at the beginning of the quarter.
For information or questions about eligibility, support services or accommodations to disability (physical or learning disability) please contact Disability Support Services (DSS).
Phone number: (408) 864-8753
Email: dss@deanza.edu

Tentative Schedule

	Tuesday	Thursday
Week 1	April 14 **Syllabus/Chapter 1** Sampling and Data	April 16 **Chapters 1, 2** Sampling and Data; Descriptive Statistics
Week 2	April 21 **Chapter 2** Descriptive Statistics **Quiz 1**	April 23 **Chapters 2, 3** Descriptive Statistics; Probability Topics
Week 3	April 28 **Chapters 3, 4** Probability Topics; Discrete Random Variables	April 30 **Chapter 4** Discrete Random Variables **Exam 1 (one hour): Chapters 1-4**
Week 4	May 5 **Chapter 5** Continuous Random Variables **Lab 1 due**	May 7 **Chapter 6** Normal Distribution **Quiz 2**
Week 5	May 12 **Chapter 7** Central Limit Theorem	May 14 **Chapter 8** Confidence Interval **Quiz 3**
Week 6	May 19 **Chapter 8** Confidence Interval	May 21 **Chapter 9** Hypothesis Testing with One Sample **Exam 2 (one hour): Chapters 5-8**
Week 7	May 26 **Chapter 9** Hypothesis Testing with One Samples **Lab 2 due**	May 28 **Chapters 9, 10** Hypothesis Testing with Two Samples **Quiz 4**
Week 8	June 2 **Chapter 10** Hypothesis Testing with Two Samples	June 4 **Chapters 10, 11** Hypothesis Testing with Two Samples; Chi-Square Distribution **Quiz 5**
Week 9	June 9 **Chapter 11** Chi-Square Distribution	June 11 **Chapter 12** Linear Regression and Correlation **Exam 3 (one hour): Chapters 9-12**
Week 10	June 16 **Chapter 12, 13** Linear Regression and Correlation F-Distribution and One-Way ANOVA **Lab 3 due**	June 18 **Chapter 13** F-Distribution and One-Way ANOVA; Review Problems
Week 11	June 23	June 25 **Final Exam (two hours): Chapters 1-13** **4:00 – 6:00 PM**

- Any change in schedule is announced during class. Students are responsible for keeping track of schedule changes.
- Final Exam date/time is the college mandated official final exam date/time.
- The due dates for **HW** assignments can be found on **WebAssign**.
- Course materials (syllabus, lecture presentations, quiz/exam answer keys and additional resources) are uploaded onto *Canva*s. It is accessible to you via MyPortal as you are enrolled in the course. You can also access into Canvas using direct link (https://deanza.instructure.com) with your MyPortal login credentials.

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.