DeAnza College

Math 10.65 – Introductory Statistics — Fall 2019
Meets: TTh, 6:30 PM to 8:45 PM
Room: G7

Instructor: Lilit Mazmanyan	**Office:** Baldwin Winery 12
Contact: mazmanyanlilit@fhda.edu	**Office hours:** Thursday, 2:30 – 3:00 PM Friday, 5:30 – 6:30 PM, online (email, WebAssign)

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 in class every day.
- It is the student's responsibility to obtain a calculator to use if his/her calculator is lost or broken. Library Reserve has calculators for limited loans. The instructor CANNOT lend her calculator.
- 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** • Cost to access WebAssign is about $35 for the quarter • Pay for WebAssign online with debit or credit card • WebAssign is FREE for two (2) weeks of the quarter only

	• 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 in class • May be used graphing calculator or may be used statistical software Minitab in a computer lab during the class's regular meeting time • Must be done in groups of at least two and no more than four • Individual work will be penalized by 40% of the grade • LATE Laboratory work will be penalized by 40% of the grade • No laboratory grade can be dropped
Quizzes (Q)	• Quiz is closed book • Based on classwork and homework • One sheet of notes, HANDWRITTEN, double-sided 8.5 x 11-inch, is allowed • 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 • Bring graphing calculator, spare batteries, pencils, ruler, sharpener, and eraser • You need Scantron and #2 pencil for the Final Exam; Scantron (Green), Form #882-E • If English is the student's second language, a paper English translation dictionary is permitted • Electronic English translation dictionaries are NOT permitted • 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

Grading

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

Grading depends on the clarity of work, interpretations, accuracy and completeness of graphs, and explanations as well as numerical answers.

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

Extra Credit

During the course you will have opportunities for extra credits. There will be extra problems included in the coursework and on exams, or short presentation on *Application of Statistics in Real Life*.

Important Dates and Deadlines

https://www.deanza.edu/calendar/

Monday	**September 23**	First day of Fall Quarter 2019
Saturday	**October 5**	Last day to add classes
Sunday	**October 6**	Last day to drop classes with no record of "W"
Monday	**November 11**	Veteran's Day Holiday - Campus Closed
Friday	**November 15**	Last day to drop classes with a "W"
Thurs-Sunday	**Nov 28 – Dec 1**	Thanksgiving Holiday - Campus Closed
Thursday	**December 12** **6:15 – 8:15 PM**	Final examination https://www.deanza.edu/calendar/finalexams.html

Attendance, Drops or Withdrawals

- Regular 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.

Academic dishonesty includes:
- Copying from other students (plagiarism)
- Using notes during a quiz or examination that do not meet permitted specifications
- Continuing to write or erase on a quiz or examination after the permitted time has ended
- Using any electronic device other than the approved TI calculator on a quiz or examination
- Sharing a calculator with another student for a quiz or examination

You can find more information on academic integrity at https://www.deanza.edu/policies/academic_integrity.html

Disruptive Behavior:
The use of cell phones and other noise emitting devices is disruptive. Students must keep their cell phones and other noise making devices in the off-mode, and keep them off the desk and out-of-sight.

Disruptive behavior includes:
- Engaging in an activity not related to the classroom activity
- Eating or drinking during class
- Monopolizing discussion time
- Late arrivals or early departure

Tutoring
The Math, Science and Technology Resource Center (MSTRC) is located in S43 on the De Anza Campus, (408) 864-5422. Hours of operation: Monday - Thursday 9:00 am - 5:30 pm, Friday 9:00 am - 12:00 pm. The MSTRC provides free tutoring services such as drop-in tutoring, weekly individual tutoring, and group tutoring.
Student Success Center: http://deanza.edu/studentsuccess/mstrc/

Students with Disabilities
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). DSS is located in Registration and Student Services Building, RSS Room 141. Phone number is (408) 864-8753; TTY (408) 864-8753. Email is dss@fhda.edu.
Disability Support Services: https://www.deanza.edu/dss/

Tentative Schedule

	Tuesday	Thursday
Week 1	September 24 **Syllabus/Chapter 1** Sampling and Data	September 26 **Chapter 1, 2** Sampling and Data; Descriptive Statistics
Week 2	October 1 **Chapter 2** Descriptive Statistics	October 3 **Chapter 2, 3** Descriptive Statistics; Probability Topics **Quiz 1**
Week 3	October 8 **Chapter 3, 4** Probability Topics; Discrete Random Variables **Lab 1 due**	October 10 **Chapter 4** Discrete Random Variables; Review Problems **Quiz 2**
Week 4	October 15 **Chapter 5** Continuous Random Variables **Exam 1 (one hour): Chapters 1-4**	October 17 **Chapter 5, 6** Continuous Random Variables; Normal Distribution
Week 5	October 22 **Chapter 6, 7** Normal Distribution; Central Limit Theorem **Lab 2 due**	October 24 **Chapter 7, 8** Central Limit Theorem; Confidence Interval **Quiz 3**
Week 6	October 29 **Chapter 8** Confidence Interval; Review Problems	October 31 **Chapter 8, 9** Confidence Interval; Review Problems **Quiz 4**
Week 7	November 5 **Chapter 9** Hypothesis Testing with One Sample **Exam 2 (one hour): Chapters 5-8**	November 7 **Chapter 9** Hypothesis Testing with One Sample
Week 8	November 12 **Chapter 10** Hypothesis Testing with Two Samples **Lab 3 due**	November 14 **Chapter 10** Hypothesis Testing with Two Samples **Quiz 5**
Week 9	November 19 **Chapter 10, 11** Hypothesis Testing with Two Samples; Chi-Square Distribution	November 21 **Chapter 11, 12** Chi-Square Distribution; Linear Regression and Correlation **Quiz 6**
Week 10	November 26 **Chapter 12** Linear Regression and Correlation; Review Problems; **Lab 4 due**	November 28 Thanksgiving Holiday
Week 11	December 3 **Chapter 13** F-Distribution and One-Way ANOVA **Exam 3 (one hour): Chapters 9-12**	December 5 **Chapter 13** F-Distribution and One-Way ANOVA; Review Problems **Quiz 7**
Week 12	No Class	**December 12** **Final Exam (two hours): Chapters 1-13** **6:15 – 8:15 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 *Canvas*. 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.