Math 10: Introductory Statistics
Spring 2025 Syllabus

- **Instructor:** Dr. Niloofar Ghorbani

- **Email:** ghorbaniniloofar@fhda.edu

- **Office Hours:** Mondays and Wednesdays, 9:00 AM – 11:00 AM or by appointment via Zoom

- **Class Times:** Mondays and Wednesdays, 6:30 PM – 8:45 PM via Zoom in Canvas

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.

Student Learning Outcomes

- 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.

Prerequisite

Intermediate algebra or equivalent or higher, or appropriate placement beyond intermediate algebra

Course Materials

- **Required Software:** StatCrunch – Standalone Access Card (6-month access)

- **Calculator:** Simple calculator (non-phone, non-smart device) required for in-class use and exams

- **Canvas:** All materials (notes, homework, tests, announcements, grades) will be posted on Canvas

Class Structure and Notes

Lectures will be online through Zoom. Blank class notes are posted to Canvas weekly. Students should download or print these notes for use during lectures. Follow along and take notes as if attending in person.

Homework

Homework is administered through Canvas and is due by 11:59 PM on the due date. Late submissions are not accepted.

Homework Deadlines

HW #	Covers Lecture	Due Date (by 11:59 PM)
HW 1	Lecture 1	Apr 30
HW 2	Lecture 2	Apr 30
HW 3	Lecture 3	Apr 30
HW 4	Lecture 4	Apr 30
HW 5	Lecture 5	Apr 30
HW 6	Lecture 6	Apr 30
HW 7	Lecture 7	Apr 30
HW 8	Lecture 8	May 21
HW 9	Lecture 9	May 21
HW 10	Lecture 10	May 21
HW 11	Lecture 11	May 21
HW 12	Lecture 12	May 21
HW 13	Lecture 13	Jun 11
HW 14	Lecture 14	Jun 11
HW 15	Lecture 15	Jun 11
HW 16	Lecture 16	Jun 11
HW 17	Lecture 17	Jun 11

Evaluation Breakdown:

Component	Weight	Date / Coverage
Homework and Discussion	20%	Ongoing, via Canvas
Test 1	20%	Apr 30 — Lectures 1–7
Test 2	20%	May 21 — Lectures 8–12
Test 3	20%	Jun 11 — Lectures 13–17
Final Exam	20%	Jun 25 — Comprehensive

Grade Breakdown:

Percentage Range	Letter Grade
94.5% and above	A
89.5% – 94.5%	A–
86.5% – 89.5%	B+
83.5% – 86.5%	B
79.5% – 83.5%	B–
74.5% – 79.5%	C+
69.5% – 74.5%	C
66.5% – 69.5%	D+
63.5% – 66.5%	D
59.5% – 63.5%	D–
Below 59.5%	F

Exam Policy

- Tests will be available on Canvas between 8 AM and 10 PM on test days. Once started, you will have 100 minutes to complete each test.

- Missed tests cannot be made up. No exceptions.

- Final Exam is comprehensive and scheduled for **Wednesday, June 25**.

- Internet issues or computer crashes are not valid excuses for missing deadlines.

Attendance and Participation

Attendance is required. Participation and discussion will count toward your final grade. Students with more than 3 absences may be reported.
Drop Policy: Students are not automatically dropped for non-attendance. It is your responsibility to drop or withdraw. If you remain enrolled and do not participate, you will receive an F.

Disability Services

Students needing accommodations must register with DSS and ensure their accommodations are authorized. Visit `http://www.deanza.edu/dss` for more information.

Important Dates and Deadlines:

- Important Dates and Deadlines: https://www.deanza.edu/calendar/dates-and-deadlines.html

- De Anza Final exams schedule: https://www.deanza.edu/calendar/final-exams.html

Tentative Course Schedule

#	Date	Lecture / Assessment
1	Apr 7	Introduction to Statistics and Key Concepts
2	Apr 9	Techniques for Sampling and Data Collection
3	Apr 14	Summarizing and Displaying Categorical Variables
4	Apr 16	Summarizing and Displaying Quantitative Variables
5	Apr 21	Understanding Measures of Center and Spread
6	Apr 23	Boxplots and the Five-Number Summary
7	Apr 28	Exploring Linear Relationships in Bivariate Data
–	**Apr 30**	**Test 1 (Lectures 1–7)**
8	May 5	Core Concepts of Probability
9	May 7	Working with Normal Distributions
10	May 12	Sampling Distributions and the Central Limit Theorem
11	May 14	Basics of Statistical Process Control
12	May 19	Confidence Intervals for Population Means
–	**May 21**	**Test 2 (Lectures 8–12)**
–	May 26	**No Class – Memorial Day**
13	May 28	Introduction to Hypothesis Testing
14	Jun 2	Hypothesis Tests and Confidence Intervals
15	Jun 4	Inference for One Sample Proportions
16	Jun 9	Inference for Two Population Means
17	Jun 11	Fundamentals of Simple Linear Regression
–	**Jun 11**	**Test 3 (Lectures 13–17)**
–	Jun 16	Final Review
–	Jun 18	Final Review
–	**Jun 25**	**Final Exam – 6:15 PM (Comprehensive)**

Student Learning Outcome(s):

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• 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:

    M,W   9:00 AM - 11:00 AM   Zoom