Math 10 Elementary Statistics and Probability

# Course Policies and Syllabus 

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Web page: All announcements, homework assignments, notes and supplementary materials will be posted at: http://www.deanza.edu/faculty/pourmohamadtony/math10section65.html

Lectures: Tuesday and Thursday 6:30-8:45 pm, Media Learning Center (MLC) 270.

Prerequisites: Passing grade (C or better) in Intermediate Algebra or placement exam; Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language equivalent courses.

Student Learning Outcomes: What you should be able to demonstrate by the end of the course:

- 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.

Required Text:Introductory Statistics, B. Illowsky and S. Dean, OpenStax (2013). There will be print version of the book available at the bookstore or you can download a free copy of the book at http://openstaxcollege.org/textbooks/introductory-statistics.

Calculators: A scientific calculator is sufficient for this course. A TI $83 / 83+$ or $84 / 84+$ graphing calculator is recommended but not required. At times I may give examples during lecture on how to use a graphing calculator to solve problems so it may be helpful to have one, but once again is not required. Calculators may never be shared between students for all exams.

Reading: There is a lot to get through, so the course can feel like it goes quite quickly. You are expected to keep up with reading the relevant sections of the text.

Homework: Homework will be assigned weekly and typically due the following week. A subset of the homework problems will be graded, but the overall assignment will be graded for completeness. If you feel it would help, you are encouraged to work together on homework. But remember that you have to take the exams individually, so the point of the homework is to learn the material.

Exams: There will be two midterm exams and a comprehensive final exam. Be sure to bring a calculator. You must show all work for full credit. You may bring one single $8 \frac{1}{2}$ in by 11in piece of paper with notes on both sides to the exams, otherwise exams are closed book.

Technology Related Activities: There will be 3-5 technology related activities assigned during the quarter. The point of these assignments will be to learn to use technology to solve real world data problems.

Course Grade: The grade for the class will be based on homework assignments, TRA's, 2 midterm exams, and a final exam. The percentage break-down is the following:

| TRA | $5 \%$ |
| :--- | :---: |
| Homework | $15 \%$ |
| Midterm 1 | $25 \%$ |
| Midterm 2 | $25 \%$ |
| Final Exam | $30 \%$ |

Make-up Exams and Late Homework Policy: Late homework and TRA's will not be accpeted; no exceptions to this policy. For all practical purposes, there will be no make-up exams. Requests for make-up exams will be considered for only truly exceptional circumstances.

Academic Dishonesty: DON'T CHEAT. Cheating in any form will not be tolerated. You are allowed to discuss and collaborate on the homework with your peers but everyone is responsible for turning in their own work. Any individual caught cheating will receive an F for the course and be reported to the appropriate college officials.

## Tentative Schedule:

| Date | Book Chapters | Topics |
| ---: | :---: | :--- |
| April 7 | 1 | Sampling and Data |
| 9 | 2 | Descriptive Statistics |
| 14 | 2 | Descriptive Statistics |
| 16 | 3 | Probability Topics |
| 21 | 3 | Probability Topics |
| 23 | 4 | Discrete Random Variables |
| 28 | $4 \& 5$ | Discrete Random Variables and Continuous Random <br> Variables |
| 30 | $5 \&$ Review | Continuous Random Variables |
| May 5 | 5 | Midterm \#1 |
| 7 | 6 | The Normal Distribution |
| 12 | $6 \& 7$ | The Normal Distribution and the Central Limit Theo- <br> rem |
| 14 | 7 | The Central Limit Theorem |
| 19 | 8 | Confidence Intervals |
| 21 | 8 | Confidence Intervals |
| 26 | 9 | Hypothesis Testing with One Sample |
| 26 | 9 | Hypothesis Testing with One Sample |
| 28 | $10 \&$ Review | Hypothesis Testing with Two Samples |
| June 2 | 10 | Midterm \#2 |
| 4 | $10 \& 11$ | Hypothesis Testing with Two Samples and the Chi- <br> Square Distribution |
| 9 | 11 | The Chi-Square Distribution |
| 11 | 12 | linear Regression and Correlation |
| 16 | 12 | Linear Regression and Correlation |
| 18 | 13 | F-Distribution and One-Way ANOVA |
| 23 |  | Final Exam 6:15pm-8:15pm |

