

Graham Elliott
Fall Quarter 2022

UCSD
Department of Economics, Room 313.

ECONOMETRICS 120A

Course Description:

The course introduces students to the science of statistics, building student skills in the analysis of data and introducing the formal methods used by statisticians to learn about the real world from data. As a building block students will be introduced to basic probability theory. We will gain an understanding of the collection of data and the problems and opportunities this affords. Students will be expected by the end of the course to understand the foundations of modern statistical analysis in preparation for 120B and C which will concentrate on developing methods of statistical analysis extending the concepts covered in this class.

TextBook : No text to buy. We will use two sources, a comprehensive set of notes at <https://www.stat.berkeley.edu/~stark/SticiGui/Text/preface.htm>, and second some notes of my own that will be available (see Canvas).

Course Outline : A detailed guide on to what to read for the UCB notes is on Canvas, see file called `READING_UCB`. This file maps topics covered in class to sections of the web notes.

1. Introduction
2. Descriptive Statistics
3. Probability Distributions.
4. Two Random Variables.
5. Sampling.
6. Data Generation .
7. Point Estimation.
8. Hypothesis Testing
9. Confidence Intervals

Statistical software: All of the statistics in this course can be done using the Microsoft Excel spreadsheet program, which is available on most university computers. You may use STATA or other econometric or statistical software.

Grading : There will be 5 problem sets that you need to hand in on Canvas (20% of grade), two midterm examinations (Oct 19 and Nov 14 in class) and a final exam during exam week. The midterms are each worth 20% and the final is worth 40% of your grade. It is important to do problems in this course, this is the best preparation for both learning and also for the exams.

Exam policies: Calculator policy to be determined. Phones, PDA's and other devices with messaging capabilities are not allowed. All grading problems with exams must be rectified within a week my returning the work. There will be no regrading of exams written in pencil. Makeup exams will only be given if absence is due to medical reasons (Doctors certificate required). In general, makeup exams will be at least as difficult as the regular exam, most likely harder.

Office Hours :Office hours for myself and the TA's are posted on Canvas.