

Economics 120B - Econometrics
Spring 2008
Tue, Thu 12:30 - 1:50 pm, Solis Hall 107

Instructor:

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Teaching Assistants

Yonah Barkhordari ybarkhor@ucsd.edu
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Office Hours Mon 11:30 am – 1:00 pm (Sequoyah Hall 226)

Michael Madrid mmadrid@ucsd.edu
Office Hours: Thu 2:30 pm – 4:00 pm (Sequoyah Hall 208)

John McAdams jmcadams@ucsd.edu
Office Hours: Fri 2:00 – 3:30 pm (Sequoyah Hall 226)

Discussion Sections

Mon 7:00 - 7:50pm (York Hall room 2722)
Mon 8:00 - 8:50pm (York Hall room 2722)

Economics 120B
Econometrics

Course Description

The course aims to prepare students for practical empirical research in an academic or business setting. It introduces the three basic concepts in econometrics: quantifying uncertainty with confidence intervals; using regression to infer causal relationships; and using regression for prediction. The course provides the standard tools necessary to perform and read empirical research.

Course Materials

Required Textbook: “Introduction to Econometrics” by James H. Stock and Mark W. Watson, Addison-Wesley.
Chapters to be covered: 1-7, 9, 12 (up to page 432), and 13.

Required Software: The software for this course is STATA (www.stata.com). Students can use STATA in the computer laboratory in Economics Building #100. Stata Tutorials will be provided by the TAs throughout the quarter. Microsoft Excel may also be used to do basic regression analysis. Do not use other software packages.

My Expectations

1. It is important to come to every lecture. If you should miss a class, it is your responsibility to get the notes and any information provided in class. There are weekly discussion sections for this course. They are not

mandatory. However, you should attend them since the TAs will go over practice problems, the kind of problems you may encounter on exams. Discussion sections will start on the week of April 7th.

2. You are expected to keep up with the required reading on your own. Try not to get behind on your study of the material.
3. Complete all your homework assignments on your own. Remember, homework is assigned to assist you in studying, and it is a way for you to check if you understand the material.

Grading

20% Homework Assignments
35% Midterm Exam
45% Final Exam

There will be three to four homework assignments for this course. Homeworks will be graded on effort, not on the correctness of answers. If you honestly attempt all the questions in the homework, you will get 100%. The midterm examination is scheduled to **Thursday, May 8th**, at lecture time. The final exam will take place on **Monday, June 9th** from 11:30 am to 2:30 pm and will be cumulative. The dates for the exams are not negotiable. There are no make up exams. If you miss a midterm for a justifiable and verifiable medical/legal reason, your midterm grade will be your grade on the final. Otherwise you will receive a zero, no exceptions!! The overall course grade will be curved. In general, the class average corresponds to the lowest B-.

Course Web Page

A course web page is available at <http://webct.ucsd.edu>.

It will include information relevant to the course, such as announcements, homework assignments, practice problem sets, solutions, syllabus, schedule and more. You should check this page regularly.

Add/Drop Policy

The instructor will not sign add cards. For any question regarding waitlist procedures, please go to the Economics Student Services in Sequoyah Hall room 245 (8:00 am – 12 pm and 1:00 pm to 4:30 pm).

Outline of the Course

Part I: Introduction and Review (Chapters 1-3)

- Correlation vs. causality; Policy analysis vs. prediction; Experimental vs. nonexperimental data
- Exact/finite sample distribution vs. large sample distribution
- Introduction to Stata

Part II. Linear Regression with One Regressor (Chapters 4 and 5)

- Least Square principle
- Sampling distribution of OLS estimator (data generating process)
- Confidence interval and hypothesis testing: small sample approach and large sample approach
- Revisit Econ 120A. Use regression with only intercept to infer about the mean
- Revisit Econ 120A. Use dummy variable regression to compare means from different subpopulations.

Part III. Linear Regression with Multiple Regressors (Chapters 5 and 6)

- Sampling distribution of the OLS estimator
- Confidence interval and hypothesis testing for a single coefficient
- Confidence set and joint hypothesis testing for more than one coefficient

Part IV. Topics in Multiple Regression

- Sources of OLS biases: measurement error, omitted variable, simultaneity and sample selection (Chapter 9, Chapter 13.1-13.4)
- Instrumental variable regression with one endogenous regressor and one instrument (Chapter 12.1, Chapter 13.5-13.8)