Economics 120B - Econometrics
Fall 2007
Tue, Thu 9:30 - 10:50 am, Solis Hall 104

Instructor:
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Office Phone #: 534-2518
Office Hours: Tue, Thu 11:00 am - 12:00 pm, 3:45 pm – 4:45 pm
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Teaching Assistants

Ben Gilbert   btgilber@ucsd.edu
Discussion Section: Fri 1:00 – 1:50 pm (Pepper Canyon Hall 122)
Office Hours: Wed 9:30 – 11:00 am (Sequoyah Hall 225)

Michael Madowitz   mmadowit@ucsd.edu
Discussion Section: Mon 3:00-3:50 pm (Center Hall 109)
Office Hours: Mon 1:00 – 2:30 pm (Sequoyah Hall 233)

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: 1-5, 7, 10 (up to page 340), and 11.

Required Software: The software for this course is STATA (www.stata.com). Students can use STATA in the computer laboratory in Economics Building #100. 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 after Thursday, October 11th.

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. The midterm examination is scheduled to **Tuesday, Nov 6th,** at lecture time. The final exam will take place on **Thursday, Dec 13th** from 8:00-11:00 am 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 (Chapter 4)
- 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 (Chapter 5)
- 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 7, Chapter 11.1-11.4)
- Instrumental variable regression with one endogenous regressor and one instrument (Chapter 10.1, Chapter 11.5-11.8)