

Econ 120C: Econometrics

Winter 2003, University of California, San Diego

Teaching Team

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Goals

Econ 120C is a sequel to Econ 120A and Econ 120B. The objective of the course is to provide you with knowledge of econometrics in theory and application. We will cover advanced topics including regression models with binary dependent variable or independent variables, linear regression models with heteroscedastic or endogenous errors, basic time series models and panel data models. We will make extensive use of econometric software. By the end of the course, you should be skilled users of basic econometric methods and critical interpreters of empirical studies. In other words, you should have acquired a variety of applied skills that are not only useful for doing economic research (e.g. a senior thesis), but also bring rewards in the labor market.

This course requires a quarter-long commitment. Econometrics is best learned by doing, and I will require you to do a fair amount of hands-on work. Successful completion of prior courses in statistics, preferably Econ 120A and Econ 120B, is **required**. Working knowledge in one-variable calculus is assumed. Prior experience with computers or statistical software such as Eviews will be very helpful, though I will go over the fundamentals.

Web Page

The web site for this class is <http://www.econ.ucsd.edu/~yisun/econ120c/econ120c.html>
Both the user id and password are econ120c

Textbooks

Required:

The required text for this class is *Introduction to Econometrics*, James Stock and Mark Watson (Addison Wesley 2002). I have asked that copies of the book be placed on reserve at SSH

Recommended:

Introductory Econometrics with Applications, Fifth Edition (2002), by Ramu Ramanathan. This book has been used on Econ 120B and this course in the past. If you have access to the fourth edition, you probably do not want to buy the latest edition. I have asked that copies of the book be placed on reserve at SSH

Alternative Econometrics Text (for your reference):

Introductory Econometrics, Jeffrey M. Wooldridge (Southwestern: 2002). This is another widely used textbook. This book is more difficult than the one by Stock and Watson, and is recommended for students who want to face more challenges.

Problem Sets

There will be four assignments, each of which will carry a weight of 5% towards the final grade. The assignments will involve both theoretical and empirical work. Group study and free discussion are strongly encouraged. But you should submit your own answers. Problem set solutions are to be turned in on time to TAs. LATE SOLUTION MAY NOT BE ACCEPTED.

Examinations

There will be two mid-term exams, each of which will carry a weight of 20% towards the final grade. The final exam will have a 40% weight. All grading problems must be rectified within a week from the time an exam or assignment is returned. Regrading of exams may not be allowed if they were written in pencil. If you write in pencil, however, you can pick up the exam from your T.A. in his office, check the grading immediately, and take care of complaints "before leaving the office."

There will be no make-up exams. If for some reason you miss one mid-term exam, then the other mid-term will carry a weight of 40% but 10% of the score will be deducted as penalty. If at all possible, the reason must be cleared with me in advance. There is no penalty for medical absence, but a doctor's certificate is required.

Office Hours and Other Contact

My office hours are 10:am-12:00 on Wednesdays. These are the times that I specifically set aside to meet with students. If you drop in at my office at times other than my office hours, I may be able to meet, but I may also ask to defer our meeting to another time. Preparing lectures and doing research sometimes requires sustained periods of time for thinking. I strongly encourage the use of email as a means of setting up time for us to chat at my office, or for you to ask questions directly. I check my email frequently.

The TAs' office hours will be announced at the beginning of the class.

Tentative Course Outline

<u>Basic Topic</u>	<u>Class Date</u>	<u>Text Chapters</u>
Introduction	Jan 6	Ch 1, 2,3,4
Multiple Regression: Estimation	Jan 8,10	Ch 5
Multiple Regression: Inference	Jan 10,13	Ch 5
Multiple Regression: Example	Jan 13,15	Ch 5
Binary Independent Variable	Jan 17, 20	Ch 4.7
Binary Independent Variable	Jan 22	Ch 12.7
Heteroskedasticity	Jan 24, 27	Ch 15.6
IV & 2SLS	Jan 29	Ch 10
IV & 2SLS	Jan 31	Ch 10
First Midterm	Feb 3	
Binary Dep. Vars: Introduction	Feb 5	Ch 9
Binary Dep. Vars: MLE	Feb 7	Ch 9
Binary Dep. Vars: Application	Feb 10	Ch 9
Time Series Model	Feb 12, 17, 14	Ch 12, 13
Time Series Regression	Feb 19, 21	Ch 12, 13
Time Series Topics	Feb 24, 26	Ch 12, 13
Second Midterm	Feb 28	
Panel Data	Feb 28, Mar 3	Ch 8
Panel Data	Mar 3, 5	Ch 8
Panel Data	March 10, 12	Ch 8
Summary & Conclusions	March 14	Ch 8
Final Exam		