Econ 120C: Econometrics

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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 applications. We will cover advanced topics including regression models with endogenous independent variables or binary dependent variable, basic time series models and panel data models. 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 essay), but also bring rewards in the labor market.

This course requires a quarter-long commitment. You should spend at least 5 hours per week on this course. 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/econometrics, preferably Econ 120A and Econ 120B, is **required**. The mathematical **prerequisites** for Economics 120C are: Mathematics 10ABC or 20ABC, or their equivalence. Prior experience with computers or statistical software such as Eviews will be very helpful, though I will go over the fundamentals.

Throughout the course, you will be asked to use the econometric software *EViews* for numerous computer assignments. You can use it in the econ PC lab. If you want to buy a copy, you can find the student version, which is about $40, at the following address
http://www.eviews.com/eviews3/eviews31s/evstud31.html.
If you coordinate and buy ten or more copies, you can get 20% discount from the company.

Participation in this course implies the student acknowledges and agrees with all policies and notifications stated in the syllabus and announced on the course web site.

Web Page

http://www.econ.ucsd.edu/~yisun/econ120c_s2003/econ120c.html
It is your responsibility to access the course web site regularly in order to keep abreast of changes. If you have any question regarding the grading policy, exam formats or any other issues, read the course web page first. Chances are that you can find the answer there. If you can't, email me or the TA's.

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. If any part of your answers is photocopied or identical to others, you will get zero for the whole problem set. You do not need to turn in the data sheet and all Eviews outputs. Problem set answers are to be turned in on time to TAs. **Do not email** assignments. We will automatically delete the email, and not notify you. Do not hand them to me. I do not grade them. LATE SOLUTION WILL NOT BE ACCEPTED! If you have a GOOD excuse, email to your TAs.

DO NOT EMAIL ME ASKING HOW TO SOLVE THE PROBLEMS. Email is the least efficient way to ask econometric questions. In addition, I cannot reply to tens of email per day in a timely manner. However, you are encouraged to ask me any question during my office hours. The TAs or I will bring your problem sets to class ONLY once. If you could not pick up your problem set in class, you can pick it up in TAs' offices. Make sure that you pick up your homework within a week from the time it's returned. The TAs or me do not have the responsibility to keep your homework for more than one week.

Examinations
There will be two mid-term exams, each carrying a weight of 15%. The cumulative final exam will have a 50% weight. All exams will be closed book, but you can bring ONE page (one side) of note, which can contain ONLY formulas. It must be HAND-WRITTEN; photo reducing and pasting is not permitted. Turned in your note with your exam answers. Sometimes students ask whether they can bring two pages of notes for the final exam. The answer is no. Bring a calculator (just a simple one will do, no need for scientific or business calculator). You do not need a blue book.

There will be no make-up exams. If for some reason you miss the first mid-term exam, then the second midterm will carry a weight of 30% but 10% of the score will be deducted as penalty. If at all possible, the reason must be cleared with me in advance. The penalty applies to almost all cases. The ONLY exception is medical absence, in which case a doctor's certificate is required. Please put the doctor's certificate in my mailbox or give it to me directly in class.

Grading

All grading problems must be rectified within a week from the time an exam or assignment is returned. **Absolutely No Exceptions**. Re-grading 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/her office, check the grading immediately, and take care of complaints "before leaving the office." To be fair, re-grading is possible only if there is an obvious mistake in the grading (for example, if the points were added up incorrectly or if a portion of your midterm was not graded). Otherwise, you have almost no chance of receiving extra credit for your responses. If you request a re-grading, we reserve the right to re-grade the whole assignment or exam and adjust your score either up or down. Make your request to the person who graded the assignment or exam.

The course grade will be assigned as follows. First, a weighted average of numerical scores will be obtained. Suppose your scores on the PS are 90, 90, 90 and 90. Your midterms and final exam scores are 85, 80 and 85, respectively. Then the weighted average is 90*5%+90*5%+90*5%+90*5%+85*15%+80*15%+85*50%=85.25=85 (the integer closest to 85.25). The weights on the problem sets, midterm and final exams cannot be changed. If the mean of the weighted class scores is below 75 points, points will be added to all scores to bring the mean score to 75 points. The adjustment can occur only to the final weighted scores. There is no adjustment for midterms, final or problem sets. Second, letter grades will be assigned using the following scale:

>=96 A+	[84,88) B+	[70, 75) C+	[45 55) D
[92,96) A	[80,84) B	[65,70) C	< 45 F
[88,92) A-	[75,80) B-	[55, 65) C-	

Note that the scale is exact. So if your score is 83.45, you will get a B. In this case, students may ask whether they can get a B+ as the score is so close to 84, the cut off point. The answer is no, because to do so will push the cutoff point to 83, which can be pushed further down. Sometimes students who are disappointed with their final grades ask whether they can do additional work to increase their grades. The answer is no, because to do so would be completely unfair to other students in the class.

Important: (1) You will get an 'F' if you turn in none of the problem sets. No exception to this rule. (2) I will only post the data on the web but not the problem sets. So please do not ask me to post the problem sets.

Sample Questions

I will give sample questions in class. Some of the sample questions will go directly to the exams. I WILL NOT post them on the web. DO NOT ask me to post them. However, I will post practice exams on the web.

Office Hours and Other Contact

My office hours are 2:00-4:00pm on Thursdays. These are the times that I specifically set

aside to meet with students. If you want to stop by my office at other times, please email me in advance so that we can set up. I check my email frequently. Please try to avoid dropping in at random times.

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

Tentative Schedule

Basic Topic	Class Date	Text Chapters
Introduction: Eviews	April 1	Ch 1, 2,3,4,5,6
IV and 2SLS	April 3	Ch 10
IV and 2SLS	April 8	Ch 10
IV and 2SLS	April 10	Ch 10
Binary Dep. Vars: Introduction	April 15	Ch 9
Binary Dep. Vars: MLE	April 17	Ch 9
Binary Dep. Vars: Application	April 22	Ch 9
First Midterm	April 24	
Review of Midterm I	April 29	
Time Series Model: Introduction	May 1,6	Ch 12
Time Series Model: Stationarity	May 8	Ch 12
Time Series Model: Forecasting	May 13	Ch 12
Time Series Model: Unit Root/Break	May 15	Ch 12
Regression with Auto-correlated Errors	May 20	Ch 12
Second Midterm	May 22	
Panel Data	May 27	Ch 8
Panel Data	May 29	Ch 8
Panel Data	June 3	Ch 8
Summary & Conclusions	June 5	Ch 8
Final Exam	June 10	11:30am-2:30pm