

Econ 120B: Econometrics

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Goals

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 to read empirical research.

Throughout, we will focus on both understanding and doing. The understanding will come from lectures, class discussions, and problem solving. The doing will come from extensive statistical software use. 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/econometrics, preferably Econ 120A is required. The mathematical prerequisites for Economics 120B are: Mathematics 10ABC or 20ABC, or their equivalence.

Web Page

The course materials will be posted on ted.ucsd.edu.

- You should be able to log into the course web site using your regular UCSD ID and password. Once you have registered for the class, you should gain access to the course website within 48 hours. Instructions can be found at the [Instructional WWW Development Center](#); please contact them at iwdc@ucsd.edu if you have difficulties logging in or getting access to the course website.
- Please access the course web site regularly in order to keep abreast of changes.
- Throughout the quarter, I will make announcements through the mail function in Ted.
- You can make anonymous comments via the course webpage. I will also conduct some survey on teaching effectiveness via TED

If you have any question regarding the grading policy, exam format or any other issues, read the course web page first. Chances are that you can find the answer there. If you cannot, email me or the TAs.

Textbooks

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Required:

The required text for this class is *Introduction to Econometrics*, James Stock and Mark Watson (Second Edition, Addison Wesley 2006).

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 are not afraid of challenges.

Software

We will use STATA to implement the econometric methods covered. Students have access to STATA in the following computer labs: Econ 100 and ERC 117. The computers and facilities in ERC 117 are better than those in Econ 100. STATA is essential for problem sets. Exam questions may involve STATA outputs. Individual copies of *Small STATA* can be purchased at <http://www.stata.com/order/schoollist.html> for about \$69.

All problem sets will be due on Wednesdays. I or a TA will be in the Econ PC lab to answer any questions you may have on Tuesdays. The door code (for weekends and evenings) for ERC 117 and Econ 100 labs are the same.

Problem Sets

There will be four assignments, each of which will carry a weight of 5% towards the final grade.

Assignments will be graded on three scales. A score of 50% will be given to homework which is clearly incomplete, but has made a start towards answering some of the questions. A score of 75% will be given to homework which is largely complete, but does not answer every question in full. A score of 100% will be given to homework which is clearly well-done, and answers all of the assigned problems.

The assignments will involve both theoretical and empirical work. Group study and free discussion are encouraged. But **you should submit your own answers**. If you have any question on the problem sets, please ask me or TAs during our office hours. Our office hours are for you. I prefer to talk to you in person. I feel that Email is not a very efficient way to ask econometric questions. However, if you have a time conflict, feel free to drop us a line.

Problem set answers are to be turned in on time. You can hand in the homework AFTER class. Please do not come and hand it in to me while I am lecturing. Do not email assignments. Late solution will not be accepted! The lowest home work score will be dropped. The average of the rest three scores will be counted toward your final grade. The tradeoff for this benefit is that I will be strict about not accepting late homework.

Solution keys to the homework will be posted on the class web page. As these solutions will be comprehensive and the homework is only graded for completeness, homework will not be returned to students. If you want a copy of your homework, make a copy before you turn it in.

Examinations

There will be a mid-term exam, carrying a weight of 30%. The mid-term is planned on August 21. The cumulative final exam will have a 50% weight. The time and location are available from the schedule of classes. All exams will be closed book, but you can bring ONE page (one-sided, no larger than 8.5in by 11in) of note. It must be hand-written; photo reducing and pasting is not permitted. The one-page policy also applies to the final exam. Bring a calculator (just a simple one will do, no need for scientific or business calculator). No need to bring a blue book.

There will be no make-up exams. An exception is medical absence, in which case a doctor's certificate is required. Please hand in the doctor's certificate in class or stop by my office.

Grading

All grading problems must be rectified within a week from the time an exam is returned.

- 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 my office, check the grading immediately, and take care of complaints before leaving the office. Please address all re-grading requests to me.
- According to a university policy, no re-grading is allowed for final exams.

The course grade will be assigned as follows. First, the weighted average of numerical scores will be obtained. Suppose your scores on the PS are 100, 100 100 and 75. Your midterms and final exam scores are 80 and 85, respectively. Then the weighted average is $100*5\%+100*5\%+100*5\%+100*5\%+80*30\%+85*50\% = 86.5$. The weights on the problem sets, midterm and final exams cannot be changed. Second, if the class mean of the weighted average is below 75 points, points will be added to all scores to bring the mean score to 75 points. Finally, letter grades will be assigned using the following scale:

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|--------------------------------|-------------------|--------------------|------------------|
| ≥ 90 A+ | [75,80) B+ | [60, 65) C+ | [45 50) D |
| [85,90) A | [70,75) B | [55, 60) C | < 45 F |
| [80,85) A- | [65,70) B- | [50, 55) C- | |

Note that the scale is exact. So if your score is 86.5, you will get a A. Grade very close to the border line might be pushed up if the student is an active participant in class.

I will not assign letter grades on the midterm. However, you can refer to the above table to see where you

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stand.

The grading policy is a little bit complicated but I think it is very fair. The policy encourages students' collaboration in group studies.

Your attendance at each class (listening) and your genuine effort on the homework and exams (doing) represent the most important factors affecting your success in this class.

Office Hours

My office hours are from 2:30pm-3:30pm on Tuesdays. If you want to stop by my office (Econ 219) at other times, please email me and make an appointment in advance. I check my email frequently.

Disabilities will be accommodated. Please refer to OSD policy on what we do to help.

<http://economics.ucsd.edu/ugrad/ugradAccom/>

If you have any questions, please feel welcome to come chat in office hours. Again, office hours are for you. You can come and ask econometric questions. You are encouraged to just stop by and introduce yourself.

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