

Economics 120B
Econometrics
Preliminary Class Syllabus (3/29/13)

Instructor: Patrik Guggenberger (econ120b@gmail.com)
Office: Department of Economics, Room 315
Office hours: Tuesday 2:15pm-3:30pm or by appointment

Teaching assistants: Allen, Roy (rhallen@ucsd.edu)
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TA office hours: Mun, Hyeong Ho, Monday 2:30-3:45pm in SH206
Chen, Qihui, Wednesday, 10:00 - 11:15am in SH 234
Breig, Zachary, Wednesday, 11:30-12:45 in Econ 126
Allen, Roy, Thursday 2-3:15pm in Econ 126.
Farmer, Leland, Friday, 10-11:15 AM in Econ 128

Class time and location: Tue, Th 12:30-1:50pm, PRICE THTR

Discussion sections: Tu 8-8:50 and 9-9:50 pm, PETER 110, run by Roy
Allen (weeks 1-5) and Leland Farmer (weeks 6-10)

Course description

In this course you will learn to estimate and evaluate statistical models for the analysis of economic data. We will consider the basic linear regression model – which is still the most widely used model in the “real world” – and some of its extensions (as time allows), such as nonlinear regression models and possibly instrumental variable regression. You will learn how to construct the appropriate model depending on the nature of the data and on the relevant question, how to estimate the model and do inference and finally, how to critically interpret the results of the estimation. The focus is primarily on practical applications using actual data; the theory will be introduced only as needed. The first three lectures will give a brief review of statistical concepts from Econ120A that are very important for the class. Prerequisite is ECON 120A: Econometrics A or a comparable course.

Textbook

J. Stock and M. Watson, Introduction to Econometrics (second edition), Addison Wesley 2007. (referred to as SW below)

Assignments

There will be 6 problem sets which involve to a great deal empirical exercises. The software used for the course is STATA. In the first two weeks of class, the basics of STATA will be covered in the discussion sections.

Students have access to STATA in the following computer labs: Econ 100, ERC 117 and CLICS-263/GH263. For lab Info see:

http://acs.ucsd.edu/instructional/labs_servers.php

Individual copies of *Small STATA can be purchased at <http://www.stata.com/order/schoollist.html> for about \$50.

STATA is essential for the problem sets and exam questions may involve STATA outputs.

The homeworks are graded on a 0,1,2 scale (unless they are multiple choice in which case a smaller breakdown will be used). Problem sets and data will be posted on the course webpage. Solutions will be posted shortly after the class on the day the assignments are due. Assignments handed in after the due date will receive no credit.

Please hand in problem sets on the first floor of the Econ Building behind the Rm. 100 Computer Lab, across from where you pick up final exams by the due date specified on each problem set. There is a mailbox called TBA = Econ 120B.

Grading

Problem sets: 10%; First Midterm exam 10%; Second Midterm exam 25%; Final exam 55%.

In computing the final grade for the problem sets, the lowest grade of the problem sets will be dropped. We do so to accommodate students who could not hand in a problem set or did not have time to work on a problem set for various reasons (family problems, illness, mix-up about deadline, etc).

We value the second midterm 35% and the first midterm 0% of the final class grade, if that improves the student's grade compared to calculating the first and second midterm as 10 and 25%.

We value the final 90% of the class grade and the first and second midterm 0%, if that improves the student's grade compared to calculating the first and second midterm as 10% and 25% and the final as 55%.

We do so to help students to make up for a bad performance on a midterm or to help students that have been unable to show up for a midterm exam.

The overall grade for the course is determined using a curve.

Graded exams and problem sets are returned by the TA during discussion session. The exams cannot be taken home, but can be carefully examined during the discussion session.

Any grade dispute should be put in writing and given to the TA who graded the assignment. The written dispute can only be given to the TA within one week from the time the exam or homework was returned. For grade disputes for an exam, the TA will regrade the entire exam. For homeworks, make sure that your grade has been posted correctly. You have one week after the homework has been posted to alert the TA that your homework grade has been incorrectly posted. I will let you know each time when the homework grade was posted on TED.

Incompletes may be granted for medical reasons ONLY. However, please note that **if you show up for the final exam, an incomplete can no longer be granted.**

Exams

First Midterm (Review of Econ120A material, hypothesis testing):
Thursday, April 11th 2013 in class

Second Midterm (Simple/Multiple Regression Model): Tuesday, May 14th 2013 in class

Final: 6/10/2013, 11:30am-2:30pm, Location: **TBA**

The dates of the exams are fixed. I will not make individual exceptions (for internships, other exams, cultural events...) to these dates, unless there is a certified medical reason. Therefore, make sure now that you don't end up taking three or four (final) exams on one particular day.

For both midterms and final exam, a one sided letter size cheat sheet is allowed. You can also bring a simple calculator, but no textbooks, computers, cell phones are allowed. The final exam will be cumulative.

The first homework and midterm (and possibly part of the second midterm and final) will be multiple choice. To make grading quick and simple, please purchase half-sheet Scantrons (height of a normal sheet of paper but half the width). You can buy them at the bookstore. They cost ~30cents and are available e.g. at the register near Perks. They have fifty questions per side. A standard-issue "number 2" pencil is required for filling out the scantrons. Please purchase Green half-sheet, Form No. 882-E scantrons.

E-mail policy

E-mail messages to the class email account econ120b@gmail.com should be kept to a minimum and should only concern important matters and clarifications that cannot be addressed by attending class and discussion sessions regularly and by checking the syllabus and the class webpage. It is a good idea to contact the TA with questions. You are always welcome and encouraged to come to my and the TAs' office hours for help.

Finally

After the University add deadline, students with extraordinary circumstances or with documentation of a university error may petition the Department of Economics to add courses. Extraordinary circumstances do not include: not being added to the course from the waitlist, forgetting to add a course, etc. Students with an extraordinary circumstance may submit a completed petition, with a written explanation (and documentation, if applicable) to Sequoyah Hall room 245.

If you have a documented disability, please come to talk to me as soon as possible so that I can make suitable accommodations for you. If you believe that you have a disability and desire accommodation, please register with the Office for Students with Disabilities.

Students found guilty of academic dishonesty will be given a failing grade for the course. In addition, the Council of Deans of Student Affairs will impose a disciplinary penalty.

Course outline

This is a rough guideline of the material that we will cover during the quarter. The actual schedule of the course may slightly differ in the end. I will update the schedule as we move on.

Lec Date	Lecture topic	Readings in SW
1 on 4/2	introduction, review statistics	1.1-1.2, 2.1-2.3, 3.1
2 on 4/4	review statistics	2.4-2.6, 3.2-3.4
3 on 4/9	review statistics/midterm practice	
4 on 4/11	Midterm 1: stat review	
5 on 4/16	simple linear regression model	4.1, 4.4
6 on 4/18	simple linear regression model	4.2
7 on 4/23	simple linear regression model	4.3, 4.5, 5.4
8 on 4/25	simple linear regression model	5.1-5.2
9 on 4/30	simple/multiple linear regression	5.3, 6.1-6.2
10 on 5/2	multiple regression model	6.1-6.3, 6.5-6.6
11 on 5/7	multiple regression model	7.1-7.2, 7.4
12 on 5/9	multiple regression model	6.1, 6.4

13 on 5/14	Midterm 2: simple/mult reg model	
14 on 5/16	multiple regression model	7.5-7.6, 8.1
15 on 5/21	nonlinear regression	8.2-8.3
16 on 5/23	nonlinear regression	8.2-8.3
17 on 5/28	nonlinear regression	8.4
18 on 5/30	nonlinear regression	8.4
19 on 6/4	internal/external validity	9
20 on 6/6	review for final exam	4-9

Homeworks

- 1) Posted TBA, due on TBA, topic: review statistics
- 2) Posted TBA, due on TBA, topic: simple linear regression
- 3) Posted TBA, due on TBA, topic: simple linear regression
- 4) Posted TBA, due on TBA, topic: multiple linear regression
- 5) Posted TBA, due on TBA, topic: nonlinear regression
- 6) Posted TBA, due on TBA, topic: nonlinear regression