Economics 120B Econometrics B Class Syllabus

Instructor: Patrik Guggenberger (econ120b@gmail.com)

Office: Department of Economics, Room 315
Office hours: Tue, 10am-12am or by appointment
Teaching assistant: Hiroaki Kaido (hkaido@ucsd.edu)

Class time and location: Tue, Th 8:00 – 9:20 am, LEDDN AUD, Muir 250 Discussion section: M, 7:00 – 7:50pm and 8:00 – 8:50 pm, Solis 104

TA office hours: Wed, 2-3:30pm in SH232

# Course description

In this course you will learn to estimate and evaluate statistical models for the analysis of economic and financial data. We will consider the regression model – which is still the most widely used model in the real world – and some of its extensions (as time allows), such as regression with discrete random variables, instrumental variables regression and regression with time series data. 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 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 lecture or two will be dedicated to a brief review of statistical concepts that are useful 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.

Optional reading: J.M. Wooldridge, Introductory Econometrics, South-Western College Publishing (the book offers a complementary treatment of the same topic).

## **Assignments**

There will be about 7 problem sets which involve to a great deal empirical exercises. The software used for the course is STATA. In the first week 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: <a href="http://acs.ucsd.edu/instructional/labs\_servers.php">http://acs.ucsd.edu/instructional/labs\_servers.php</a> Individual copies of \*Small STATA can be purchased at <a href="http://www.stata.com/order/schoollist.html">http://www.stata.com/order/schoollist.html</a> for about \$50.

STATA is essential for problem sets. Exam questions may involve STATA outputs.

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. Please hand in your assignments at the beginning of the class the day they are due. Assignments handed in after this but before solutions are posted will be marked down 50%. Assignments handed in after the solutions are posted will receive no credit.

Students can work in groups with maximal group size equal to three but each student must write up his or her answers separately and list the names of the other members of the group. Please append your STATA files to the assignments.

## Grading

Problem sets: 30%; Midterm exam 20%; Final exam 50%. In computing the final grade for the problem sets, the lowest grade of the problem sets will be dropped. The final grade is determined using a curve.

Graded exams and problem sets are returned by the TA during discussion session. The exam 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 in your session. The written dispute can only be given to the TA within two weeks from the time the exam or homework was returned.

#### Exams

Midterm: April 29<sup>th</sup>, 2010

Final: TBA

The dates of the exams are fixed. I will not make individual exceptions to these dates, unless there is a certified medical reason.

In both midterm and final, you can bring a single (two-sided) 8.5x11 sheet of notes and a calculator. However, no textbooks, computers, cell phones are allowed. The final exam is cumulative.

## E-mail policy

E-mail messages 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. I will generally not discuss the course material over email. You are always welcome to come to my office hours for help. It is a good idea to contact the TA with questions.

### Course outline

This is a rough guideline of the material that we will cover in the first couple of weeks. The actual schedule of the course may differ in the end. I will give you more details about the schedule as we proceed.

Lectures topic	readings in Stock and Watson, ch#				
1 on 3/30	review of statistics	2,3			
2 on 4/1	bivariate regressio	n 4,5			
3 on 4/6	bivariate regressio	n 4,5			
4 on 4/8	multiple regression	6,7			
5 on 4/13	multiple regression	6,7			
6 on 4/15	nonlinear regression	n 8			
7 on 4/20	nonlinear regression	n 8			
8 on 4/22	nonlinear regression	n 8			
9 on 4/27	panel data	10			
4/29	midterm				