Econometrics II Syllabus

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Objectives

This course continues the development of undergraduate econometrics. The course introduces tools and methodologies that allow causal inference and prediction for a larger variety of data sets than in Econometrics I. In particular, the course covers:

1. Data subject to simultaneous causality bias.
2. Data collected in experiments and quasi-experiments.
3. Data with binary dependent variables.
4. Time series data (modeling and forecasting).
5. Time series data (estimation of causal effects).
6. Time series data (cointegration and volatility clustering).

The overall objective is for the student to learn how to critically examine economic and financial data as well as empirical studies.

Prerequisites

Econometrics I or the following:

1. Basic knowledge of the concepts of statistical inference, hypothesis testing and confidence intervals.
2. Knowledge of OLS as well as the causes and consequences of problems of internal and external validity of the models.
3. Basic knowledge of the use of econometric software such as STATA.
4. Knowledge of some basic concepts of microeconomics and macroeconomics.

Organization

Teaching consists of 20 lectures and 6 seminars of 1.5 hours each. Lectures will develop the concepts and methodologies of the subject. Seminars will cover solutions to the homework problems and any other material not covered in lectures. Homework problems may also cover material not covered in lectures. Students are encouraged to work in groups of 3 – 4 in order to practice teamwork and share different ways of tackling the problems. Members of each group must belong to the same seminar group. Each group submits a single solution set for each problem set. Participation and asking questions in lectures and seminars is highly encouraged.

Homework will be collected, graded, and returned to the student at the seminar session. Homework will be due at 11:00AM on the due dates given in the course plan. The homework should be placed in the marked boxes at the following locations:

101, 102, 103: room 20.163.

201, 202, 203: room 20.157.

No late homework will be accepted. Homework will not count towards the final grade but the homework grade should be used as an indicator of the student's level of understanding.

Evaluation

To pass the course, the student should obtain at least 50 points out of 100, according to the following distribution:

Midterm: 40 points

Final: 60 points

The midterm is scheduled for 04/11/2013 and will cover all material up to that point. The final will cover all topics in the course but the focus will be mainly on the material covered after the midterm. 10 of the 60 points of the final will be from the material covered in the midterm. The February exam carries 100% of the grade and covers all of the topics in this course.

Book

The course follows *Introduction to Econometrics* (3rd Edition) by Stock and Watson very closely. This book is useful not just as a textbook but also as a reference. Copies of the textbook are available in the university library. It is the student's responsibility to ensure they have access to a copy throughout the term. The course will cover chapters 11 – 16 of the book.

Course Plan

Date	Topic & Chapters
30/09	Revision (2 – 9).
01/10	Revision (2 – 9).
	No Seminars.
07/10	Instrument Variable Regression (12).
08/10	Instrument Variable Regression (12).
	No Seminars.
14/10	Instrument Variable Regression (12).
15/10	Experiments and Quasi–Experiments (13).
15/10	Homework #1 due.
21/10	Experiments and Quasi–Experiments (13).
22/10	Experiments and Quasi–Experiments (13).
22/10	Homework #2 due.
28/10	Binary Data (11).
29/10	Binary Data (11).
	No Seminars
04/11	Midterm.
05/11	Time Series (14).
05/11	Homework #3 due.
11/11	Time Series (14).
12/11	Time Series (14).
12/11	Homework #4 due.
18/11	Dynamic Causal Effects (15).
19/11	Dynamic Causal Effects (15).
19/11	Homework #5 due.
25/11	Dynamic Causal Effects (15).
26/11	Additional Topics in Time Series (16).
26/11	Homework # 6 due.
02/12	Additional Topics in Time Series (16).
03/12	Additional Topics in Time Series (16).
	No Seminars.