

UNIVERSITY OF ILLINOIS

Department of Economics

**Econ 471****Introduction to Applied Econometrics****Course Outline**

This course is intended to be an introduction to specification, estimation, and prediction with econometric models. After a *brief* review of some aspects of the bivariate regression model we will move on to discuss a variety of specification issues: model selection, transformations, heteroskedasticity, temporal and spatial dependence, sample selection and endogeneity. The last half of the course will be devoted to nonlinear methods of estimation including: binary response models, duration models and quantile regression, and if time permits some introductory treatment of nonparametric methods.

My plan is to devote roughly one class in four to discussion of problem sets. Brief student presentations will be expected in the latter sessions. Cooperation among students on problems is strongly encouraged, but I expect that joint work will be clearly acknowledged in written assignments. *The size of groups doing joint work on the problem sets is limited to no greater than three.* Grading on the written problem sets and on the class presentations will be based on clear exposition of empirical results and the quality of the interpretation, not just “getting the right numbers in the computer output”. You should think of the problem set assignments as opportunities to begin to develop a style of writing empirical papers.

In the first few problem sets you should think of the questions as asking you to write a paragraph, or a footnote, to explain a particular aspect of the analysis. In later problem sets you will have more scope for a broader perspective: in fact, the last two problem sets will be more like writing mini-research papers. Likewise the class presentations you should consider as mini-seminars, just 2-5 minutes using one or two transparencies, but attempting to make a concise interpretation of the relevant material, making effective use of supporting numerical and graphical evidence.

Many routine aspects of the course will be handled by distributing information on the web site: <http://www.econ.uiuc.edu/econ471/ec471.html>. This will include versions of the problem sets, software, data, etc.

I plan to encourage students to use R as a computing environment for the course. R is an open source software project with versions available for all major hardware platforms from <http://www.r-project.org>. More on this in class as we go along.

The textbook for the course is:

Wooldridge, J. (2003) *Introductory Econometrics*, South-Western Press.

Week	Date	Topic	Readings*
1.	Jan 17	Bivariate Regression	W.1
2.	Jan 24	Transformations and Interpretation	W.2
3.	Jan 31	Bivariate Regression Inference	W.2.5
4.	Feb 7	Multiple Regression	W.3
5.	Feb 14	Inference and Model Selection	W.4
6.	Feb 21	Introduction to Time Series	W.10
7.	Feb 28	Dynamic Models	W.10-11
8.	Mar 7	Causal Models and Endogeneity	W.15
9.	Mar 14	Panel Data	W.13-14
10.	Mar 21	Spring Break	
11.	Mar 28	Binary Response Models	W.17
12.	Apr 4	Censoring and Sample Selection	W.17
13.	Apr 11	Quantile Regression	
14.	Apr 18	Duration Models	
15.	Apr 25	Non-parametric Regression	

\* Weeks are identified by the date on Tuesday each week. Readings indicate chapter numbers in W (Wooldridge). Readings will be assigned for the last few weeks, as needed.