Econometrics II - G31.2101
Spring 2003
Professor Giorgio Topa

Schedule:

Lecture:	Wednesday 2:00 – 4:00	Room 315
Lab:	Friday 3:30 – 5:30	Room 715

Office Hours:

Tuesday 2:00 – 4:00 or by appointment (giorgio.topa@nyu.edu)

Objectives:

The primary goal of the course is to introduce basic econometric tools that are commonly used in empirical work in Economics, and to emphasize the role that economic theory plays in the specification and identification of econometric models. The first part of the course will examine estimation and testing of linear models, in the context of single equations as well as systems of equations. Specific issues arising in the estimation of cross-sectional, time-series, and panel data models will be discussed. In the second part of the course, non-linear models, discrete-choice models, GMM estimation and non-parametric estimation will be introduced.

Students will be required to complete homework assignments and to learn how to perform actual estimation exercises involving the use of the programming software MATLAB, with data sets provided by the instructor. Thus students will be able to implement in practice the econometric tools discussed during lectures.

Prerequisites:

Econometrics I (G31.2100) or consent of instructor.

Course Requirements and Grading:

There will be two examinations: a midterm and a final. Students will also be required to complete almost-weekly homework assignments which will be distributed and collected on Wednesdays. The homework exercises will be graded and returned in the following lab session. No late assignments will be accepted. The following weighting scheme will be used to compute the final score:

Homework Grade Average:	.15
Midterm Exam:	.35
Final Exam:	.50

Textbooks:

Goldberger, Arthur. A Course in Econometrics. Cambridge, MA: Harvard University Press, 1991.
Ruud, Paul. Classical Econometric Theory. Oxford: Oxford University Press, 2000. *[suggested]*

Additional material will be distributed.

Lecture Topics:

1. Basic concepts: Identification; Estimation; Analogy Principle.
2. Classical Regression Model: OLS.
3. Long and Short Regression; Omitted Variable Bias.
4. Regression with Stochastic Covariates; Asymptotic Properties of OLS.
5. Generalized Classical Regression Model: GLS and Feasible GLS.
6. Heteroskedasticity and Autocorrelation. Robust Covariance Estimators: Eicker-White, Newey-West.
7. Regression Systems: SUR.
8. Instrumental Variables: General Properties; Optimal Choice of Instruments.
9. Panel Data Models: Heteroskedasticity, Cross-Correlation, Serial Correlation.
10. Panel Data Models: Fixed Effects vs. Random Effects.
11. Introduction to Discrete-Choice Models. Maximum Likelihood Estimation.
12. GMM estimation. Derivation and Asymptotic Properties.
13. Simulated Method of Moments.
14. Spatial GMM estimation.
15. Non-parametric estimation.