Objectives and Prerequisites
This course is designed to introduce students to econometric techniques and their applications in economic analysis and decision making. The main objective of the course is to train the student in (i) handling economic data; (ii) quantitative analyses of economic models with probabilistic tools; (iii) econometric techniques, their application as well as their statistical and practical interpretation; (iv) implementing these techniques on a computer. The course focuses on practical and conceptual issues involved in the substantive applications of econometric techniques. Estimation and inference procedures are formally analyzed for simple econometric models and illustrated by empirical case studies using real-life data. The course covers linear regression models, simultaneous-equations models, discrete choice models and univariate time series models. Estimation and Inference is conducted using least squares and likelihood based techniques. Students are required to perform several econometric analyses of their own. Prerequisites: Economics 1, 2, and 5, Math 150 and 151 (or 140 and 141). Alternatively: Basic micro and macro, statistical methods, basic calculus and matrix algebra. Prior knowledge of a statistical software package is not required.

Lecture and Office Hours

Lecture Hours:
Tuesday: 3:00 - 4:30, STITLER B21
Thursday: 3:00 - 4:30, STITLER B21

Office Hours (McNeil 366):
Tuesday: 1:30 - 2:30, McNeil 366
Thursday: 1:30 - 2:30, McNeil 366
or by appointment (Tel: 8-7716, E-mail: ozmucur@ssc.upenn.edu)
Textbooks and Other References

Required:


Data Sources on the web:


Other Books:


Course Outline

1. The Nature of Econometrics and Economic Data
   Wooldridge, Chp. 1

2. The Simple Regression Model
   Wooldridge, Chp. 2, Appendix A, B, C

3. Multiple Regression Analysis: Estimation
   Wooldridge, Chp. 3

4. Multiple Regression Analysis: Inference
   Wooldridge, Chp. 4

5. Multiple Regression Analysis: OLS Asymptotics
   Wooldridge, Chp. 5

6. Multiple Regression Analysis: Further issues
   Wooldridge, Chp. 6

7. Multiple Regression Analysis: Binary variables
   Wooldridge, Chp. 7

8. Heteroscedasticity
   Wooldridge, Chp. 8

9. Multiple Regression Analysis: Specification and Data Problems
   Wooldridge, Chp. 9

10. Basic Regression Analysis with Time Series Data
    Wooldridge, Chp. 10

11. Further Issues in using OLS with Time Series Data
    Wooldridge, Chp. 11

12. Serial Correlation and Heteroskedasticity in Time Series Regressions
    Wooldridge, Chp. 12

13. Instrumental Variables Estimation and Two Stage Least Squares
    Wooldridge, Chp. 15

14. Pooling Cross Section Across Time. Simple Panel data Methods
    Wooldridge, Chp. 13

15. Limited Dependent Variable Models and Sample selection Corrections
    Wooldridge, Chp. 17
Exams

There will be two midterms and a final exam. All examinations are closed book and closed notes. Formulas will be given during exams. A calculator is required for all exams.
Exam 1 (February 22, Thursday) (30%)
Exam 2 (April 5, Thursday) (30%)
Final Exam (to be scheduled by the Registrar, May 3 – 11, 2001) (40%)

Grading
The final grade for the course will be based on midterm exams, and a final exam.

Exam 1 (February 22, Thursday) (30%)
Exam 2 (April 5, Thursday) (30%)
Final Exam (to be scheduled by the Registrar, May 3 – 11, 2001) (40%)

Economics Undergraduate Grading Guidelines: Economics Department grading guidelines require that no more than 30% of the final grades in any section be A- or above, and not more than two-thirds of the final grades be B’ or above.