Economics 470
Applied Econometric Analysis

Syllabus

David Guilkey
david_guilkey@unc.edu
Gardner 208c

Two Midterm Exams (25% each)
Five to Seven Problem Sets (10% total)
Final Exam (40%)

Required Textbook:
Introductory Econometrics: A Modern Approach (Wooldridge, 6th edition)

Prerequisites:
The pre-requisites are Econ 400 (Statistics) and Econ 410 (Intermediate Microeconomics) with a grade of C or better in each.

Code of Conduct:

The University Honor Code is in effect. In particular, this implies that all work submitted is your own.

Course description:
Econometrics is the application of statistical methods and economic theory to the problem of identifying, estimating, and testing economic models. This course covers concepts and methods used in empirical economic research. Students will learn how to conduct and how to critique empirical studies in economics. Accordingly, the emphasis of the course is on various empirical applications. Topics include classical single-equation regression model, multiple regression models, discrete and categorical dependent variables, instrumental variables and longitudinal data. In the lectures, there will be many empirical examples using a wide variety of data sets.

Problem sets:
All problem sets (five to seven over the course of the semester) will involve empirical analysis using data sets in STATA 14 format that we will provide. STATA is available in computer labs on campus, a student edition can be purchased, and it is available as part of the Citrix virtual computer lab that you can access with your onyen and password. Problem sets are independent work – not a group project. However, it is okay to ask a fellow student about STATA commands, for instance. You should hand in your assignments at the beginning of class the day they are due (typically a week after distribution). Late problem sets (but before answers are posted) will be marked down by 50%.

Course Outline and Tentative Semester Schedule:

Week 1:

Review of basic statistics (Appendix A-C)

Week 2:

Types of data (Ch. 1)
Bivariate linear regression (Ch. 2)

Weeks 3 and 4:

Multiple regression (Ch.'s 3 and 4)

Week 5:

Functional form and dummy independent variables (Ch. 6.1-6.3 and Ch. 7.1-7.4)

Week 6:

Review and midterm 1.

Weeks 7 and 8:

Model specification tests and corrections (Ch. 8.1-8.4 [not 8-2a but add in-class notes on Goldfeld-Quandt test and associated GLS estimator] and Ch. 12.1a, 12.1b, 12.2a, 12.2b)

Week 9:

Instrumental variables for linear models (Ch. 15.1-15.5 and Ch. 16.1-16.4)

Weeks 10 and 11:

Longitudinal data methods (Ch.'s 13 and 14)

Week 12:

Review and midterm 2

Weeks 13 and 14:

Discrete dependent variable models (Ch. 7.5-7.7 and Ch. 17.1-17.3 plus lecture notes for multinomial logit and conditional logit)

Week 15:

Advanced topics (if there is time)

Electronic devices:

All electronic devices must be turned off during class. This includes cell phones and laptop computers. You should plan on taking notes "by hand." The STATA do files and log files of results from the in-class examples will be posted to the Sakai site.

Grading Policy:

All problem sets and test are graded on a 100 point scale. The final grade is determined by weighting problems sets by 10%, midterm exams by 25% each, and the final exam by 40%. Letter grades are determined from the following scale:

100 – 93	A
92-90	A-
89-87	B+
86-83	B
82-80	B-
79-77	C+
76-70	C
69-60	D
59 -0	F