Economics 7110: Econometrics II  
Winter 2003  
MW 10:40-12:30 State 125

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Office Hours: Wed 2-4 or by appointment

Course Description:
This is a Ph.D. level second-semester econometrics course intended to equip students with the necessary tools for empirical analyses in economics. Students should view this class as a starting point for their analyses. The prerequisite for this course is 7100. The students are assumed to have had one semester of econometrics.

Class Etiquette:
The class will meet from 10:40-12:30 on Monday and Wednesday in State Hall Room 125 (also on Thursday April 24).

Required Text:

Other Useful Texts:

Course Requirements:
- 4 Problem Sets   Tentative due dates: Jan 29, Feb 24, Mar 26, Apr 21  
- 1 Mid-term Exam   Tentative date: Wed, March 3, during class.  
- 1 Research Paper (3-5 pages)   Due date: Wed. April 16  
- 1 Final Exam   Final Exam date: Mon, April 28
The course grade will be based on the four problem sets (25% total), one mid-term exam (25%), one research paper (15%), and one final exam (35%).

Problem Sets:
Problem Sets are handed out at least one week in advance and are due in class. Late assignments can be handed in for half credit until the following class. Solutions will be available in the class following the due date. Students are permitted to work together, but are required to list the other students’ names.

Mid-term and Final Exams:
Students are required to work alone during all exams. Cheating will result in a FAILING grade for the exam and possibly for the course. Please refer to the page on the university’s policy on academic dishonesty in the WSU handbook for details. Make-up exams are provided for special circumstances, which must be approved before the exam date. Only medical emergencies (with a doctor’s note) will be accepted after the exam date.

Short Research Paper:
3-5 pages on the research topic that interests you. Propose an economic question and discuss how you would proceed with the research. Discuss one or two papers that are related to your study.
Course Outline:

1. Review of Basic Econometrics
   a. Classical Assumptions
   b. Asymptotic Theory
2. Models of Panel Data
   c. Fixed Effects
   d. Random Effects
   e. Testing and Heteroscedasticity
3. Simultaneous Equations
   a. Seemingly Unrelated Regressions
   b. Covariance Restrictions
4. Models with Discrete Dependent Variables
   a. Discrete Choice Model
   b. Binary Choice Models
   c. Probit and Logit Models
5. Limited Dependent Variable and Duration Models
   a. Truncation
   b. Censored Models
6. Time-Series Data
   a. Difference Equations and Lag Operators
   b. Stationarity and Ergodicity
7. Stationary Time-Series models
   a. ARMA Models
   b. Autocorrelation and Partial Autocorrelation
   c. Box-Jenkens Model Selection
   d. Estimation
   e. Multivariate Models (VAR)
8. Spectral Analysis
9. Asymptotic Theory For Time-Series
10. Unit Roots and Cointegration
    a. Unit Root – univariate
    b. Unit Root – Multivariate
    c. Cointegration
11. Trends and Volatility
    a. ARCH and GARCH models