

ECONOMICS 671
ECONOMETRICS I
FALL 2004 – MWF 9:00-10:50 – 111 EAST HALL
PART I
ARNE HALLAM - INSTRUCTOR

1. OBJECTIVES

This course is the first part of the standard graduate curriculum in econometrics. The course provides a systematic approach to econometric theory and techniques associated with single and multiple equation models. The primary emphasis will be on single equation models with a brief introduction to problems associated with models containing multiple equations. The emphasis will be to provide an intuitive, yet rigorous, theoretical understanding of the statistical methods used to analyze such models. The course will cover the formulation and estimation of econometric models. There will be "hands on" experience using statistical software and actual data. The course will cover selected empirical applications of the techniques covered. The first one-third of the course will review matrix algebra and statistical concepts necessary to comprehend and master this material in econometrics.

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MW 15:00 -16:00 266B Heady
TR 14:00-15:30 266B Heady
R 9:30-11:00 266B Heady

Office Hours:
TR 16:00-17:00 275 Heady Hall
F 12:00-13:00 178 Heady Hall

2. TEXTS

Wooldridge, Jeffrey M. *Econometric Analysis of Cross Section Data*, Cambridge, MA: MIT Press, 2002.

Mittelhammer, Ron C. *Mathematical Statistics for Economics and Business*, New York: Springer-Verlag, 1996.

3. WORLD WIDE WEB RESOURCES

The homepage for the course is at <http://www.econ.iastate.edu/classes/econ671/hallam>. The page contains a copy of this syllabus, problem sets, and other material.

Date: August 20, 2004.

4. EVALUATION

The student should be able to apply econometric tools to a wide range of economic problems. There will be regular exercises that allow the student to develop skills in formulating and estimating models. Some exercises will be analytical in nature, while others will involve estimation. There will be two examinations during the first one-third of the course.

Class examinations - There will be two in-class examinations during the first one-third of the course. These examinations will be on Friday 10 September and Friday 1 October. The final exam for the course will be on Monday 13 December at 7:30. 200 points

Problem sets - There will be four problem sets during the first part of the course. They will be worth 25 points each. Problem sets will be collected at the beginning of class on the due date. Late problem sets will not be accepted unless you have informed me prior to the due date that you will be unable to meet the deadline due to circumstances beyond your control. You may hand the problem sets in early. 100 points

In-class exercises - There will be seven in-class exercises each worth 10 points. The five best scores will count towards your grade. Some will be done in a group setting. There will be no make-up for any of these exercises. If you miss an exercise, you will receive a zero for that exercise. 50 points

Total possible 350 points

Economics 671 - Fall 2004 Course Schedule

Month	Date	Day	Lec	Lecture Topic	Reading
Aug	23	M	1	Matrix Equations Geometry of Matrices	Notes W 2.3
Aug	25	W	2	Characteristic Roots and Vectors	Notes
Aug	27	F		Lab	
Aug	30	M	3	Miscellaneous Matrix Algebra Probability Concepts	M 1
Sep	1	W	4	Probability Distributions Multivariate Probability	M 1, M 4, W 2.1
Sep	3	F		Lab	
Sep	8	W	5	Random Variables Sample Moments	M 2-3,6, W 2.2
Sep	10	F		Exam I	
Sep	13	M	6	Transformations Basic Statistical Theory and Estimation	M 3,6
Sep	15	W	7	Basic Statistical Theory and Estimation Confidence Intervals and Hypothesis Testing	M 7-9
Sep	17	F		Lab	
Sep	20	M	8	Quadratic Forms and Normal Variables Large Sample Theory	Notes M 5, W 3
Sep	22	W	9	Large Sample Theory	M 7-8
Sep	24	F		Lab	
Sep	27	M	10	Asymptotic Distributions	M 7-8
Sep	29	W		Part II Begins	
Oct	1	F		Exam II	
Dec	13	M		Final Exam – 7:30-9:30	