Economics 8205-8206:
Applied Econometrics I

Instructor: Professor Gautam Gowrisankaran
University of Minnesota, Fall Semester 2000

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General:

Grading: Final 40%, Midterm 20%, Homework 40%.
There will be 6 homework assignments for the semester. You may work on homework assignments in groups, but the write-up should be done individually.

Class participation and questions are welcomed and encouraged.

Textbooks:

Required: Russell Davidson and James G. MacKinnon, *Estimation and Inference in Econometrics*, (Oxford Univ. Press, 1993)
Optional: William H. Greene, *Econometric Analysis*, Fourth Edition (Prentice Hall, 2000)

Computers:

Several of the assignments will involve computer usage. You will be expected to learn the Matlab programming language. The TA will cover Matlab in the recitation section, and will help you in getting a UNIX account set up, to use Matlab.

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Preliminary Schedule:

Sep. 5	**Geometry of Least Squares** Geometry	Ch. 1 (D&M)	
Sep. 7	Restricted regressions		
Sep. 12	Partitioned regression		HW 1
Sep. 14			
Sep. 19	Computation / influential observations		
Sep. 21	**Inference in Least Squares** Nonlinear and linear regression model	Ch. 2	HW 1 due
Sep. 26	Covariance matrix estimation	Ch. 3	HW 2
Sep. 28	Confidence intervals		
Oct. 3	Hypothesis testing: Wald, LR and LM tests		
Oct. 5	Continued		HW 2 due
Oct. 10	Hypothesis testing: equivalence of tests in linear model Gauss-Markov Theorem	Ch. 5	HW 3
Oct. 12	**Maximum likelihood** Underlying model	Ch. 8	
Oct. 17	Consistency and asymptotic efficiency		
Oct. 19	Testing	Ch. 13	HW 3 due
Oct. 24	**Midterm Examination**		
Oct. 26	**Limited dependent variable models** Probit and logit models	Ch. 15 Greene Ch. 19	
Oct. 31	Testing		HW 4
Nov. 2	Multinomial logit and conditional logit		
Nov. 7	Independence of irrelevant alternatives		
Nov. 9	Censored and truncated models		HW 4 due
Nov. 14	Selection models		HW 5
Nov. 16	**Simultaneous Equations** Introduction	Ch. 7 and 18 Greene Ch. 16	
Nov. 21	Linear instrumental variables and 2SLS		
Nov. 28	Identification and overidentifying restrictions		HW 5 due
Nov. 30	Non-linear instrumental variables		HW 6
Dec. 5	Hausman test		
Dec. 7	Multiple equation methods		
Dec. 12	**Review**		HW 6 due
Dec. 18	**Final Examination: 4-6 pm**		