Dan McFadden   ECONOMICS 240A: ECONOMETRICS I   Spring 2001

This is the first course in a two-semester sequence on econometric methods, including statistical tools useful in economics applications, regression methods, and specification analysis. The course emphasizes techniques for statistical inference, with accompanying theory.   Experience in application of the tools is provided in a computer laboratory. Prerequisites are an upper-division undergraduate course in mathematical statistics and a course in linear algebra, or equivalent preparation. Texts for the course are

A. Goldberger (1994) *A Course in Econometrics*, Harvard
P. Ruud (2000) *An Introduction to Classical Econometric Theory*
D. McFadden (2000) *Statistical Tools for Economists*, Chap. 1-7, manuscript
(available as a Reader or downloadable from
http://elsa.berkeley.edu/~mcfadden/e240a_sp01/e240a.html)

For general background in analysis and linear algebra, students should have available the Econ. 204 textbook, C. Simon and L. Blume, *Mathematics for Economists*, or an equivalent. For general background in probability and mathematical statistics at an undergraduate level, any standard textbook such as R. Larsen & M. Marx, *An Introduction to Mathematical Statistics and Its Applications*, Prentice-Hall, will do. The course will be graded on the basis of weekly problem sets (40%), a midterm (30%), and a final (30%).

Course Outline (First Half)

1. Economic Theory and Econometric Analysis (Jan. 16,18)
   McFadden, Chap. 1 (review Chap. 2)

2. Review of Key Probability and Statistics Concepts (Jan. 23,25,30,Feb. 1)
   McFadden, Chap. 3

3. Stochastic Limits (Feb. 6,8**)**
   McFadden, Chap. 4

4. Statistical Decision Theory & Principles of Estimation (Feb. 13,15,20)
   McFadden, Chap. 5-6

5. Hypothesis Testing (Feb. 22,27, Mar. 1)
   McFadden, Chap. 7

MIDTERM: In class, closed book and notes, March 6.   **FINAL:** In class, May 8

Dan McFadden's office hours, 655 Evans Hall: Tuesday 4-5:30 and by appointment
(mcfadden@econ.berkeley.edu).