Economics 7818   August, 2013
Dr. Waldman   waldman@colorado.edu
Room 108   M/W 3:00 - 4:30 pm, and by appointment

Course Information

General: Economics 7818 is a course in mathematical statistics for economics Ph.D. students. It is followed by Economics 7828, a course in regression analysis. Together, Econ 7818 and 7828 are the core courses required for taking the preliminary exam in quantitative methods.

Prerequisites: An undergraduate course in statistics; calculus, to the level of multiple integration with transcendental functions (*e.g.* log, e^x, etc.); the ability to manipulate and simplify algebraic expressions, and; the ability to think abstractly.

Requirements: There will be two lectures weekly, meeting Monday and Wednesday from 12:00 to 1:15 p.m. in Economics Rm. 119. There will be a midterm exam, Wednesday, October 16, a final exam, Saturday, December 15, 4:30-7:00 p.m., and required written work (usually, practice problems from the text) throughout the semester.

Grading: Grades will be determined approximately as follows:
    Midterm: 30%
    Final exam: 40%
    Problem Sets: 20%
    Residual:*   10%
*This includes class participation, contact in office hours, subjective scoring of written work, etc.

Texts: Introduction to Statistics and Econometrics, Takeshi Amemiya, Harvard, 1994.

Tentative Course Outline: We will cover, roughly in order, some or all parts of the first nine chapters of the text. After a brief introduction of what empirical economists do, we will discuss probability; univariate and multivariate discrete and continuous distributions (especially the normal); expectation and sampling distributions; large sample (asymptotic) concepts; methods of estimation; and hypothesis testing.

Practice Problems: The end-of-section exercises are valuable learning experiences, but it is not expected or required that you do all of them. Answers to selected problems are in the text. I will assign for problem sets some of the unanswered problems, as well as some problems of my own.

Problem sets will be posted on the course website. Written answers to problems are to be submitted before the answers are posted. These will be selectively graded, and returned. I will take some midterm and final exam questions from problem set exercises.