Syllabus. This course provides a theoretical and practical introduction to the basic models and techniques used in econometric analysis. The primary topics to be covered are:

1. The Classical Linear Regression Model
2. Large-Sample Hypothesis Testing
3. Generalized Linear Models (Heteroskedasticity, Autocorrelation)
4. Time Series topics (Lagged dependent variables, ARMA models, ARCH models)
5. Instrumental Variables
6. Simultaneous Equations
7. Panel Data

Pre-Requisites. E603 is a pre-requisite for this course. As a practical matter, this means knowledge of probability and statistics at a beginning graduate level. In addition, this course presumes a comfortable command of multivariate calculus and matrix algebra, and some knowledge of elementary real analysis (e.g., convergence notions).

Assignments. This course is based on lectures and assignments (problem sets). The problem sets will involve analytical work as well as data analysis and computer work, and are intended to assist in developing the theoretical and empirical skills used in econometric analysis.

The assignments are designed to be challenging. You are encouraged to form study groups to learn the material covered in lecture, and may discuss the assignments with one another. However, the solutions you turn in must represent your own work.

For empirical assignments, you should use an advanced statistical/mathematical software program (e.g., Matlab or Gauss). I will provide more information on this as the course progresses.

Grading. Course grades will be based on assignments (50%) and exams (50%).

Readings/Texts. I recommend you purchase a copy of Greene’s *Econometric Analysis*, as it will serve as a good reference for most of the lecture material. I will occasionally suggest readings from other texts, especially when other texts offer clearer and/or more thorough expositions of a particular topic.