Class: Tuesday Thursday 12:00-1:15 in Braker 118
Office Hours: Tuesday 1:15-2:00 in Braker 114a

Primary Text (Required):
or
Note: you will require access to the data sets made available in the on-line web site. These will be used for problem sets.

Supplemental Reference (Optional):

Stata Documentation (Optional):
or

The prerequisites for this course are statistics, matrix algebra, calculus, and most immediately EC 201.

The course is divided into three sections. First, we discuss the classical regression model, the workhorse model used throughout economics; we present the basic model and problems that can arise in using this model in practice. Second, we discuss likelihood modeling and simulation-based likelihood methods. Third, we discuss causal inference and program evaluation.

The course will be graded by problem sets (70%) and a midterm (30%)
The Classical Regression Model
Wooldridge, Chapters 4-9

An Introduction to Panel Data
Wooldridge, Chapters 13 and 14.

An Introduction to Maximum Likelihood: Limited Dependent Variable Models
Wooldridge, Chapter 17.

Causal Inference and Program Evaluation


Bertrand, Marianne, Esther Duflo, and Sendhil Mullainathan, “How Much Should We Trust Differences-in-Differences Estimates?” NBER Working Paper No. 8841. Note: do not refer to the published version of this paper in the QJE.


**Likelihood Approaches: An Introduction to Bayesian Econometrics**

Statistical decision theory and the role of Bayes rules.
Readings: Lecture notes 1 and 2.


Markov chain Monte Carlo: Gibbs sampling and data augmentation.
Readings: Lecture note 4.

The Tobit model. The probit model.


Panel data, random effects, and hierarchical models.
Readings: Lecture note 5. Gelman et al., chapter 13.