

Syllabus
First Year PhD, Econometrics 1
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1. Introduction. What is econometrics? Why is it useful?
2. The linear model and Ordinary Least Squares.
 - a. Model specification.
 - b. Hypothesis Testing. Goodness of fit, R^2 .
 - c. Hypothesis tests (t and F).
 - d. Approximate Inference. Slutsky's Theorem; Limit Theorems. Approximate distribution of the OLS and GLS estimators.
3. Instrumental Variables.
4. Maximum Likelihood Methods; Discrete Choice Models
 - a. Probit & Logit
 - b. Multinomial Logit
 - c. Models without IIA
5. Censored Regression Models
 - a. Tobit Model
 - b. Sample Selection
 - c. Probit Selection Equation
6. Introduction to Panel Data
 - a. Static panel data models
 - b. Dynamic panel data models

Recommended books:

- Wooldridge, *Econometric Analysis of Cross Section and Panel Data*, MIT Press.

Exercise classes supervised by Michela Carlana will introduce students to practical examples using Stata.

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