American University
5 day course
Methods for Microeconometrics: Basic Methods, Panel Data, Discrete Choice Models
William Greene (NYU)
Each Day:
9:00 – 10:30  Session 1
10:30 – 11:00  Break
11:00 – 12:30  Session 2
12:30 - 1:30  Lunch
1:30 - 3:00  Session 3
3:00 - 3:30  Break
3:30 - 5:00  Lab session

Day 1:  May 14 – Basic statistics, linear regression, panel data for linear models
   Session 1: Review
      Statistics, quantiles, kernel density estimator
      Linear Regression Model: Basic Methods estimation and inference
      Bayesian vs. classical methods
      Quantile regression
      Bootstrapping
   Session 2: Panel data,
      Fixed and random effects linear models
      Introduction to hierarchical models and random parameters
   Session 3: Panel data methods:
      Endogeneity, IV
      Hausman and Taylor
      Arellano/Bond/Bover dynamic models
      Difference in Difference
   Lab 1: Applications of linear regression and basic panel data methods

Day 2:  May 15 - Nonlinear models, binary and ordered choice, count data
   Session 1: Nonlinear Models
      Estimation and inference in nonlinear models
      Introduction to binary choice models
   Session 2: Binary and ordered choice models
      Specification and estimation
      Inference
      Analysis of nonlinear models
      Ordered choice
   Session 3: Models for count data.
      Poisson and negative binomial
      Two part models: zero inflation, hurdle models,
   Lab 2: Applications of binary and ordered choice and count data models
Day 3: May 16 Panel data and nonlinear models
   Session 1: Fixed effects with nonlinear models
       Probit model with fixed effects
       Conditional estimation
       Unconditional estimation
       Incidental parameters problem
       Estimation of models with fixed effects
   Session 2: Random effects in nonlinear models
       parameters and simulation
       quadrature
       cluster estimator
   Session 3: Random parameters and hierarchical models
   Lab 3: Applications of nonlinear models for panel data

Day 4: May 17 – Extensions of and applications of discrete choice and panel data models
   Sessions 1-3: Discrete choice
       Sample selection in nonlinear models
       Sample selection in panel data models
       Missing data methods
       Latent class models
   Lab 4: Discrete choice and panel data methods

Day 5: May 18 – Multinomial choice. Stated and revealed preference, mixed logit, etc.
   Session 1: Multinomial choice models
       Random utility
       Random regret
       Multinomial logit model
       Multinomial probit
   Session 2: Multinomial choice models
       Nested logit
       Heteroscedasticity and heterogeneity
       Extensions of multinomial choice
   Session 3: Mixed logit
       Random parameters
       Latent class
       Generalized mixed logit
       Stated choice applications
   Lab 5: Multinomial choice models