

**Advanced Level Econometrics
Summer Training Program**

Course Prerequisites:

Students should be familiar with basic probability and statistics and, ideally, econometrics.

Course Requirements:

Students will be graded on 6 problem sets and a final examination. The problem sets must be turned in before class on the date due, without exception. The problem sets count 10 percent each and the final examination contributes the remaining 40 percent.

Course Textbooks:

Required:

F. Hayashi, *Econometrics*, Princeton University, 2000.

References:

T. Amemiya, *Introduction to Statistics and Econometrics*

A. Goldberger, *A Course in Econometrics*

W. Greene, *Econometric Analysis*

J. Wooldridge, *Introductory Econometrics*

Course Schedule

Monday: June 22
Orientation

Wednesday:
Assumptions of the Classical Linear Regression Model (PK)
Hayashi, pp. 3-14

Friday:
Computing the Least Squares Estimates (PK)
Hayashi, pp. 15-21

Monday: June 29
Properties of the OLS Estimates (PK)
Hayashi, pp. 27-32

Wednesday:
Hypothesis Testing in the Classical Linear Regression Model (PK)
Hayashi, pp. 33-46

Friday:
Independence Holiday

Monday: July 6

Finite Sample Linear Regression: Relation to Method of Moments (DS)
Hayashi: 1.5

Wednesday:

Finite Sample Linear Regression: Instrumental Variable Estimators (DS)
Hayashi: 3.1

Friday:

Finite Sample Linear Regression: Regression Discontinuity (DS)

Monday: July 13

Panel Data: Error Components Model (DS)
Hayashi: 5.1

Wednesday:

Panel Data: Difference-in-Difference Estimators (DS)
Hayashi: 5.1

Friday:

Panel Data: Fixed Effect Estimators (DS)
Hayashi: 5.2

Monday: July 20

Panel Data: Random Effect vs. Fixed Effect Estimators (DS)
Hayashi: 5.2

Wednesday:

Maximum Likelihood Estimators: Introduction and Application to OLS (PK)
Hayashi, pp. 47-53

Friday:

Binary Dependent Variables: Probit, Logit and Linear Probability Models (PK)
Hayashi, pp. 507-511, and Greene: 19.1-19.4

Monday: July 27

Polychotomous Dependent Variables: Multinomial Logit (PK)
Greene: 19.7

Wednesday:

Application of MNL: Unemployment Insurance and Weeks Worked (PK)
Kuhn and Riddell, "The Long-Term Effects of Unemployment Insurance: Evidence from New Brunswick and Maine, 1940-1991"

Friday: Final Examination

WEB links

PK: <http://www.econ.ucsb.edu/~pjkuhn/AEASTP/AEASTPhome.html>

DS: <http://www.econ.ucsb.edu/~doug/AEASTP/AEASTPhome.html>