

**Advanced Level Econometrics
Summer Training Program 2010**

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*

J. Angrist and S. Pischke, *Mostly Harmless Econometrics*

Course Schedule

Monday: June 21 Orientation

Wednesday:

Assumptions of the Classical Linear Regression Model (DS)

Hayashi, pp. 3-14

Friday:

Computing the Least Squares Estimates (DS)

Hayashi, pp. 15-21

Monday: June 28

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:

Maximum Likelihood Estimators: Introduction and Application to OLS (PK)

Hayashi, pp. 47-53

Monday: July 5 Independence Day Holiday

Wednesday:

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

Friday:

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

Monday: July 12

Tobit, Ordered Probit, and other Limited Dependent Variable Models (PK)
Hayashi: 8.2 and 8.3, Greene, 19.8

Wednesday:

Applications of Limited-Dependent-Variable Models (PK)
Kuhn and Riddell, Industrial and Labor Relations Review, January 2010.

Friday:

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

Monday: July 19

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

Wednesday:

Finite Sample Linear Regression: Regression Discontinuity (DS)

Friday:

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

Monday: July 26

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

Wednesday:

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

Friday: Final Examinations

WEB links

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

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