American Economic Association
Summer Training Program

Advanced Econometrics
Summer 2008, Session I

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North Hall 2021

Course Description: In this session, we will introduce several concepts that are fundamental to the theory of econometrics. These include the assumptions of the classical linear regression model, the method of Ordinary Least Squares (OLS), the small sample properties of the OLS estimators, and hypothesis testing under the assumption of normality.

Required textbook:

Hayashi, Fumio. *Econometrics*. Princeton: Princeton University Press. 2000.

Recommended textbooks (for a different presentation):

Greene, William H. *Econometric Analysis*. Upper Saddle River, NJ: Prentice Hall (various editions)

Griffiths, William E., R. Carter Hill, and George C. Judge. *Learning and Practicing Econometrics.* New York: Wiley (various editions)

Davidson, Russell and James G. MacKinnon. *Econometric Theory and Methods*. New York : Oxford University Press (various editions)

Tentative Course Outline:

Day	Date	Topics	Reading	Assignments
1	Wed June 25	Introductions; Classical Linear Regression Model: Definition; Linearity Assumption; Matrix Notation	Hayashi, pp.3-7	
2	Fri June 27	CLRM cont: Strict Exogeneity and Conditional Expectations; No Multicollinearity; Spherical Error Variance	Hayashi, pp.7-13; Handout on conditional expectation	Homework 1 due
3	Mon June 30	Algebra of Least Squares	Hayashi, pp.15-25	
4	Wed July 2	Finite-Sample Properties of OLS	Hayashi, pp.27-31	
5	Fri July 4	HOLIDAY – no class (but see assignments)		Homework 2 due (including empirical assignment for Research class)
6	Mon July 7	Hypothesis Testing under Normality	Hayashi, pp.33-39	
7	Wed July 9	Hypothesis Testing under Normality cont	Hayashi, pp.39-45	
8	Fri July 11	---	---	Homework 3 due; EXAM