

Econ 220B Course Syllabus, Winter 2013

University of California, San Diego

Course web page:

<http://dss.ucsd.edu/~jhamilto/Econ220B.html>

Instructor:

- James Hamilton (jhamilton@ucsd.edu)
- Lectures: M-W 8:00-9:20 a.m. in Econ 300
- Office hours: M-W 9:30-10:30 in Econ 307

Teaching assistant:

- Zheng Fang (zfang@ucsd.edu)
- Review session: Fridays 10-11:20 in Econ 300-- but note **Friday Jan 18, 8:00-9:20 will be used for make-up lecture**
- Office hours: Thursdays 2-3 in Sequoyah 234

Books available at UCSD bookstore:

Fumio Hayashi, *Econometrics*, [Princeton University Press](#), 2001. This is the main text for the course. [Click here](#) for the home page for Hayashi's text.

James D. Hamilton, *Time Series Analysis*, [Princeton University Press](#), 1994. This book is used as an optional supplementary text for the course and is also used in other courses at UCSD.

Journal articles:

Arnold Zellner, "Bayesian and non-Bayesian analysis of the regression model with multivariate Student-t error terms", [Journal of the American Statistical Association](#), 71, June 1976, pp. 400-405.

M.L. King, "Robust tests for spherical symmetry and their application to least squares regression", [Annals of Statistics](#) 1980, pp. 1265-1271.

N. Gregory Mankiw, David Romer, and David Weil, "A Contribution to the Empirics of Economic Growth", [Quarterly Journal of Economics](#), 107, May 1992, pp. 407-437.

Howard J. Wall, "Using the Gravity Model to Estimate the Costs of Protection," [Federal Reserve Bank of St. Louis Review](#), Jan/Feb 1999, pp. 33-40.

Stephen V. Cameron and James J. Heckman, "The Nonequivalence of High School Equivalents," [Journal of Labor Economics](#), Vol. 11, part 1, Jan 1993, pp. 1-47.

Joshua D. Angrist, "Lifetime Earnings and the Vietnam Era Draft Lottery: Evidence from Social Security Administrative Records," [American Economic Review](#), 80, June 1990, pp. 313-336; [Errata](#), December 1990, pp. 1284-1286.

James D. Hamilton, "The Supply and Demand for Federal Reserve Deposits," [Carnegie-Rochester Conference Series on Public Policy](#), 49, December 1998, pp. 1-44.

Joshua D. Angrist and Victor Lavy, "Using Maimonides' Rule to Estimate the Effect of Class Size on Scholastic Achievement," [Quarterly Journal of Economics](#), 114, May 1999, pp. 533-575.

Joshua D. Angrist and Jorn-Steffen Pischke, "The Credibility Revolution in Empirical Economics: How Better Research Design is Taking the Con out of Econometrics," [Journal of Economic Perspectives](#), 24, Spring 2010, pp. 3-30.

Douglas Staiger and James H. Stock, "Instrumental Variables Regression with Weak Instruments," [Econometrica](#) 65, May 1997, pp. 557-586.

The articles above can be downloaded online. The syllabus you are now reading can also be viewed as an HTML document at http://dss.ucsd.edu/~jhamilto/Econ220B_syllabus.html. If you are viewing this as an HTML document, clicking on any active link above will take you immediately to the source where the article can be viewed online or downloaded.

Grades for Econ 220B will be determined as follows:

- 20%: Problem Sets. You may work together on these, but must hand in your own write-up of the answers. These are used as a study guide and supplement to the reading and lectures.
- 30%: Midterm Exam. This will be on Wednesday, Feb 6. No books or notes allowed.
- 50%: Final Exam. This will be on Monday, March 18, from 8:00 to 11:00. No books or notes allowed.

Course Outline

Mon Jan 7	Review of linear algebra (Hamilton, Section A.4, pp. 721-739)
Wed Jan 9	The algebra of least squares (Hayashi, Section 1.2)
Mon Jan 14	The classical regression model (Hayashi, Sections 1.1 and 1.3; Hamilton, Section 8.1)
Wed Jan 16	Hypothesis testing (Hayashi, Sections 1.4, 1.5, and 1.7; references: Zellner, 1976 and King, 1980)
Fri Jan 18	Generalized least squares (Hayashi, Section 1.6) (note special Friday session meets at 8:00 a.m.)
Mon Jan 21	University holiday (no scheduled class)
Wed Jan 23	Asymptotic distribution theory (Hayashi, Sections 2.1-2.2; Hamilton, Section 7.1)
Mon Jan 28	Large sample properties of OLS (Hayashi, Sections 2.3 and 2.9; Hamilton, Section 8.2)
Wed Jan 30	Hypothesis testing-- asymptotic results (Hayashi, Sections 2.4-2.6; Hamilton, Section 8.2)
Mon Feb 4	Maximum likelihood estimation (Hayashi, Section 1.5; Hamilton, Section 5.7)
Wed Feb 6	Midterm exam
Mon Feb 11	Heteroskedasticity and serial correlation (Hayashi, Sections 2.7, 2.8, 2.10, 2.11; Hamilton, Section 8.3)
Wed Feb 13	Simultaneous equations bias (Hayashi, Sections 3.1-3.2; Hamilton, Section 9.1)
Mon Feb 18	University holiday (no scheduled class)
Wed Feb 20	Applied econometrics (Mankiw, Romer, and Weil; Wall)
Mon Feb 25	Applied econometrics (Cameron and Heckman; Angrist; Hamilton 1998; Angrist and Pischke)
Wed Feb 27	General formulation (Hayashi, Section 3.3; Hamilton, Section 9.2)
Mon Mar 4	Weak instruments (Staiger and Stock)
Wed Mar 6	Generalized method of moments (Hayashi, Sections 3.4-3.6; Hamilton, Section 14.1)
Mon Mar 11	Uses of GMM (Hayashi, Sections 3.8-3.9; Hamilton, Section 14.2)
Wed Mar 13	GMM and Maximum likelihood estimation (Hamilton, Section 14.4)
Mon Mar 18	Final exam (8-11 a.m.)