Econ 220B Course Syllabus, Winter 2016
University of California, San Diego

Course web page:

http://econweb.ucsd.edu/~jhamilto/Econ220B.html

Instructor:

- James Hamilton (jhamilton@ucsd.edu)
- Lectures: Tu-Th 8:00-9:20 a.m. in Econ 200
- Office hours: W 10-11 in Econ 307

Teaching assistant:

- Shihan Xie (s7xie@ucsd.edu)
- Review session: Thursdays 2:00-3:00 p.m. in Sequoyah 244
- Office hours: M 10-11 in Sequoyah 233

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.

Whitney K. Newey and Kenneth D. West, "Automatic Lag Selection in Covariance Matrix Estimation," Review of Economic Studies, 61, Oct. 1994, pp. 631-653.

Yixiao Sun, "Let's fix it: Fixed-b asymptotics versus small-b asymptotics in heteroskedasticity and autocorrelation robust inference," Journal of Econometrics 178, January 2014, pp. 659–677.

James H Stock, Jonathan H Wright and Motohiro Yogo, "A Survey of Weak Instruments and Weak Identification in Generalized Method of Moments," Journal of Business and Economic Statistics 20, Oct. 2002, pp. 518-529.

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 Thursday, Feb 4. No books or notes allowed.
- 50%: Final Exam. This will be on Thursday, March 17, from 8:00 to 11:00. No books or notes allowed.

Course Outline

Tu Jan 5	Review of linear algebra (Hamilton, Section A.4, pp. 721-739)
Th Jan 7	The algebra of least squares (Hayashi, Section 1.2)
Tu Jan 12	The classical regression model (Hayashi, Sections 1.1 and 1.3; Hamilton, Section 8.1)
Th Jan 14	Hypothesis testing (Hayashi, Sections 1.4, 1.5, and 1.7; references: Zellner, 1976 and King, 1980)
Tu Jan 19	Generalized least squares (Hayashi, Section 1.6)
Th Jan 21	Asymptotic distribution theory (Hayashi, Sections 2.1-2.2; Hamilton, Section 7.1)
Tu Jan 26	Large sample properties of OLS (Hayashi, Sections 2.3 and 2.9; Hamilton, Section 8.2)
Th Jan 28	Hypothesis testing-- asymptotic results (Hayashi, Sections 2.4-2.6; Hamilton, Section 8.2)
Tu Feb 2	Maximum likelihood estimation (Hayashi, Section 1.5; Hamilton, Section 5.7)
Th Feb 4	**Midterm exam**
Tu Feb 9	Heteroskedasticity and serial correlation (Hayashi, Sections 2.7, 2.8, 2.10, 2.11; Hamilton, Section 8.3)
Th Feb 11	Simultaneous equations bias (Hayashi, Sections 3.1-3.2; Hamilton, Section 9.1)

Tu Feb 16	Applied econometrics (Mankiw, Romer, and Weil; Wall)
Th Feb 18	Applied econometrics (Cameron and Heckman; Angrist; Hamilton 1998; Angrist and Pischke)
Tu Feb 23	General formulation (Hayashi, Section 3.3; Hamilton, Section 9.2)
Th Feb 25	**No scheduled class**
Tu Mar 1	Weak instruments (Stock, Wright and Yogo)
Th Mar 3	Generalized method of moments (Hayashi, Sections 3.4-3.6; Hamilton, Section 14.1)
Tu Mar 8	Uses of GMM (Hayashi, Sections 3.8-3.9; Hamilton, Section 14.2; Newey and West; Sun)
Th Mar 10	GMM and Maximum likelihood estimation (Hamilton, Section 14.4)
Th Mar 17	**Final exam (8-11 a.m.)**