

# Econ 220B Course Syllabus, Winter 2010

## University of California, San Diego

### Course web page:

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

### Instructor:

- James Hamilton (jhamilton@ucsd.edu)
- Lectures: M-W 8:30-9:50 in Econ 300
- Office hours: M 12:15-1:15 and Th 2-3 in Econ 307

### Teaching assistant:

- Min Seong Kim (msk003@ucsd.edu)
- Review session: F 8:30-9:30 in Econ 300
- Office hours: W 10-11 in Econ 117

### 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:

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.

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

Hard copies of above articles are available in the graduate student mailroom (Room 213 of Sequoyah Hall). Please keep these articles in the mail room at all times. You can also try to obtain the articles from the original sources referenced here.

Alternatively, several of the articles can be downloaded. The syllabus you are now reading can also be viewed as an HTML document at <http://dss.ucsd.edu/~jhamilto/Econ220B.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 Monday, Feb 8. No books or notes allowed.
- 50%: Final Exam. This will be on Monday, March 15, from 8:00 to 11:00. No books or notes allowed.

### **Course Outline**

Mon Jan 4	Review of linear algebra (Hamilton, Section A.4, pp. 721-739)
Wed Jan 6	The algebra of least squares (Hayashi, Section 1.2)
Mon Jan 11	The classical regression model (Hayashi, Sections 1.1 and 1.3; Hamilton, Section 8.1)
Wed Jan 13	Hypothesis testing (Hayashi, Sections 1.4, 1.5, and 1.7)
Mon Jan 18	University holiday-- no scheduled class
Wed Jan 20	Generalized least squares (Hayashi, Section 1.6)
Mon Jan 25	Asymptotic distribution theory (Hayashi, Sections 2.1-2.2; Hamilton, Section 7.1)
Wed Jan 27	Large sample properties of OLS (Hayashi, Sections 2.3 and 2.9; Hamilton, Section 8.2)
Mon Feb 1	Hypothesis testing-- asymptotic results (Hayashi, Sections 2.4-2.6; Hamilton, Section 8.2)
Wed Feb 3	Heteroskedasticity and serial correlation (Hayashi, Sections 2.7, 2.8, 2.10, 2.11; Hamilton, Section 8.3)
Mon Feb 8	<b>Midterm exam</b>
Wed Feb 10	Simultaneous equations bias (Hayashi, Sections 3.1-3.2; Hamilton, Section 9.1)
Mon Feb 15	University holiday-- no scheduled class
Wed Feb 17	Applied econometrics (Mankiw, Romer, and Weil; Wall)
Mon Feb 22	Applied econometrics (Cameron and Heckman; Angrist; Hamilton 1998)
Wed Feb 24	General formulation (Hayashi, Section 3.3; Hamilton, Section 9.2)
Mon Mar 1	Weak instruments (Staiger and Stock)
Wed Mar 3	Generalized method of moments (Hayashi, Sections 3.4-3.6; Hamilton, Section 14.1)
Mon Mar 8	Uses of GMM (Hayashi, Sections 3.8-3.9; Hamilton, Section 14.2)
Wed Mar 10	Maximum likelihood estimation-- a deeper perspective (Hamilton, Section 14.4)
Mon Mar 15	<b>Final exam (8-11 a.m.)</b>