James Hamilton
University of California, San Diego
Economics 220E
Winter 2006

Required Text

The following book is required and available at the UCSD bookstore:

James D. Hamilton, Time Series Analysis, Princeton University Press, 1994.

Also, results from the following papers will be used:

Donald W.K. Andrews (1993), "Tests for Parameter Instability and Structural Change with Unknown Change Point," Econometrica 61, pp. 821-856.

Jordi Gali (1996), "Technology, Employment, and the Business Cycle: Do Technology Shocks Explain Aggregate Fluctuations?," NBER Working Paper 5721. Shorter version appeared in 1999 in American Economic Review 89, pp. 249-271.

Grading policy

Grades for Econ 220E will be determined as follows:

30%: Midterm Exam. This will be on Tuesday, Feb. 7. No books or notes allowed.

20%: Paper. This should be turned in to Professor Hamilton's mailbox by Friday, March 17. A separate document describes the requirements for this.

50%: Final exam. This will be on Thursday, March 23, 8:00 - 11:00 a.m. No books or notes allowed.

Resources

This is a live document that will be continually revised during the quarter: it is recommended you check it periodically at http://dss.ucsd.edu/~jhamilto/Econ220E.html. Some lectures will use Powerpoint slides, pdf versions of which can be downloaded and students may wish to bring these to class. Since changes may be made at the last minute, the recommendation is to check the "Powerpoint" links below the night before class and download and print out at that time. There are also numerous examples available that you can download by following the links below, which are all written to use the RATS software package, ten copies of which should be in the computer lab by the time we get to this material.

Office Hours

Regular office hours for Econ 220E will be Wed 1:30-2:30 in Econ 307. Exceptions: no office hours Wed Feb 8 (instead available Tuesday Feb 7 12:30-1:30) and no office hours Wed March 15 (instead available Mon March 13 10:00-12:00).

Course Outline

Date	Reading	Powerpoint	Examples	Topic
Tues Jan 10	Chap 1		Ex_01_1	Difference equations
Thurs Jan 12	Chap 2			Lag operators
Tues Jan 17	Chap 3		Ex_03_3, Ex_03_4	ARMA processes
Thurs Jan 19	Chap 4		Ex_04_8	Forecasting
Tues Jan 24	Chap 5			Maximum likelihood estimation
Thurs Jan 26	Sect 6.1-6.3			Spectral analysis-- theory
Tues Jan 31	Sect 6.4	Ppt_06_4	Ex_06_4	Spectral analysis-- applications
Thurs Feb 2	Chap 7-8	Ppt_07		Asymptotic and small-sample distributions
Tues Feb 7				**In-class midterm exam**
Thurs Feb 9	Chap 15-16			Unit roots and time trends
Tues Feb 14	Chap 16			Deterministic time trends (cont'd)
Thurs Feb 16	Chap 17			Unit root asymptotics
Tues Feb 21	Chap 17			Unit root testing
Thurs Feb 23	Chap 10; Andrews			VARs: estimation, forecasting, hypothesis test
Tues Feb 28	Sect 11.1-5			VARs: impulse-response and variance decomp
Thurs Mar 2	Sect 11.6; Gali			VARs: structural inference
Tues Mar 7	Sect 11.7			VARs: confidence intervals
Thurs Mar 9	Chap 18			Unit roots in vector time series
Tues Mar 14	Chap 19			Cointegration

Thurs Mar 16	**No scheduled class**
Thurs Mar 23	**Final exam** (8:00 - 11:00 a.m.)