

Economics 303: Advanced Macroeconomics I
Brandeis University
Fall 2006
George Hall

Course Outline and Reading List

This course is the first of a two-semester sequence in Ph.D. level macroeconomics. The goal of this course is to introduce students to modern macroeconomic theory. It will focus on modern theories of short-run fluctuations and monetary economics. The course will also cover methods to solve and evaluate relevant models.

The basic reference for the course is

Lars Ljungqvist and Thomas Sargent (2004) *Recursive Macroeconomic Theory*, 2nd edition. The MIT Press.

This text is available from amazon.com. The Ljungqvist-Sargent book is oriented toward models and methods for solving and analyzing them, and this course will share this emphasis. Students may also wish to have on their bookshelf a good undergraduate intermediate macroeconomics text and

David Romer (2001) *Advanced Macroeconomics*, 2nd edition, McGraw-Hill.

The readings focus on material that you are expected to become familiar with. This list is not anything like a full bibliography of interesting work on the topics covered or on macroeconomics in general. Ljungqvist and Sargent's book, as well as the Romer text, contain many suggestions for further reading, as do the assigned papers. Much of the omitted material in these books is useful too, but there is a limit to what one can expect to do in one semester.

The course requires an extensive mathematics background. At least three semesters of calculus and one semester of linear algebra are required. The computer program, Matlab, will also be used throughout the semester. The course is designed for IBS doctoral students, but some MA and undergraduates may wish to take the course. It is expected, though not required, that students will be taking the companion course in microeconomics (Econ 301a) concurrently.

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The teaching fellow for this course is Daniela Kolusheva (danielak@brandeis.edu).

The home page for this course is <http://people.brandeis.edu/~ghall/econ303/> . Announcements, problem sets, computer programs, and additional handouts will be posted on this page. You are encouraged to check the web page regularly.

If you are student with a documented disability on record at Brandeis University and wish to have a reasonable accommodation made for you in this class, please see me immediately.

There will be regular problem sets and two examinations. While you are encouraged to discuss and work on the problems with others, you are expected to answer problems on your own. Resist the temptation to simply copy someone else's answer. This is worse than useless as it is not only a violation of Brandeis University rules but also will lull you into a false sense that you understand the material. More generally, you are expected to be familiar with and to follow the University's policies on academic integrity (see <http://www.brandeis.edu/studentlife/sdc/ai>). Instances of alleged dishonesty will be forwarded to the Office of Campus Life for possible referral to the Student Judicial System. Potential sanctions include failure in the course and suspension from the University.

The course grade will be based on the problem sets (10 percent), a midterm examination (40 percent), and a final examination (50 percent).

Reading List

1. Macroeconomic Facts, an Overview, and Important Tool I: Time Series Analysis
 - Ljungqvist-Sargent, chapter 2.1-2.4
2. Building the Workhorse Model I: Solow Growth Model
 - Solow, Robert (1956) "A Contribution to the Theory of Economics Growth" *Quarterly Journal of Economics* 70, 65-94.
 - Romer, chapter 1.
3. Building the Workhorse Model II: Intertemporal Choice
 - Ljungqvist-Sargent, chapter 1.
 - Romer, chapter 2A, 7.
 - additional readings to be determined
4. Important Tool II: Dynamic Programming
 - Ljungqvist-Sargent, chapters 3 and 4.

5. Real Business Cycle Theory

(a) Facts and the Basics

- Kydland, Finn and Edward Prescott (1990) “Business Cycles: Real Facts and a Monetary Myth” Federal Reserve Bank of Minneapolis *Quarterly Review*, Spring, 3-18.
- Christiano, Lawrence and Terry Fitzgerald (1998) “The Business Cycle: It’s Still a Puzzle” Federal Reserve Bank of Chicago *Economic Perspectives*, fourth quarter, 56-83.
- Hansen, Gary (1985) “Indivisible Labor and the Business Cycle” *Journal of Monetary Economics* 16, 309-327.
- Ljungqvist and Sargent, chapter 5.
- Romer, chapter 4.

(b) Factor Utilization and Welfare Costs

- Burnside, Craig, Martin Eichenbaum, and Sergio Rebelo (1993) “Labor Hording and the Business Cycle” *Journal of Political Economy* 101, 245-273.
- Hall, George (1996) “Overtime, Effort and the Propagation of Business Cycle Shocks” *Journal of Monetary Economics* 38, 139-160
- Lucas, Robert (2003) “Macroeconomic Priorities” *American Economic Review* 93, 1-14.

6. Asset Pricing

- Ljungqvist-Sargent, chapters 7, 10.
- Romer, section 7.5.
- Mehra, Rajnish and Edward Prescott (1985) “The Equity Premium: A Puzzle” *Journal of Monetary Economics*, 15, 145-161.
- Weil, Philippe (1989) “The Equity Premium Puzzle and the Risk Free Puzzle” *Journal of Monetary Economics*, 24:2 401-421.
- Barro, Robert (2005) “Rare Disasters and Asset Markets in the Twentieth Century” Harvard University working paper.

7. Monetary Facts and an Overview

- McCandless, George and Warren Weber (1995) “Some Monetary Facts” Federal Reserve Bank of Minneapolis *Quarterly Review* 19:3, 2-11.
- Christiano, Lawrence, Martin Eichenbaum and Charles Evans (1999) “Monetary Policy Shocks: What Have We Learned and to What End?” in J. Taylor and M. Woodford (eds.), *Handbook of Macroeconomics*, Vol 1A, Elsevier North-Holland, 65-148.
- Friedman, Milton (1968) “The Role of Monetary Policy” *American Economic Review* 58:1, 1-17.

- Lucas, Robert (1996) “Nobel Lecture: Monetary Neutrality” *Journal of Political Economy* 104:4, 661-682.

8. Adding Money to the Workhorse Model: Cash-in-Advance

- Cooley, Thomas and Gary Hansen (1989) “The Inflation Tax in a Real Business Cycle Model” *American Economic Review* 79, 733-748.

9. Models with Incomplete Markets

(a) Heterogeneity in Endowments: Various Equilibrium Concepts

- Primary Reading
 - Ljungqvist-Sargent, chapters 7, 18.
- Secondary Reading
 - Bewley, Truman (1980) “The Optimum Quantity of Money” in J.H. Kareken and N. Wallace (eds.) *Models of Monetary Economies*. Federal Reserve Bank of Minneapolis, 169-210.
 - Townsend, Robert (1980) “Models with Spatially Separated Agents” in J.H. Kareken and N. Wallace (eds.) *Models of Monetary Economies*. Federal Reserve Bank of Minneapolis, 265-304.

(b) Uninsurable Individual Risks

- Primary Reading
 - Ljungqvist-Sargent, chapter 14
- Secondary Reading
 - Aiyagari, S. Rao (1994) “Uninsured Idiosyncratic Risk and Aggregate Saving” *Quarterly Journal of Economics* 109, 659-684.
 - Huggett, Mark (1993) “The Risk-free Rate in Heterogeneous-Agents, Incomplete Markets Economies” *Journal of Economic Dynamics and Control* 17, 953-969.
 - Imrohoroglu, Ayse (1992) “The Welfare Cost of Inflation Under Imperfect Insurance” *Journal of Economic Dynamics and Control* 16, 79-92.

10. Unemployment: Search and Matching

- Primary Reading
 - Ljungqvist-Sargent, chapters 5, 19.
- Secondary Reading
 - Romer section 9.8.
 - Lucas, Robert E. (1987) *Models of Business Cycles*, Basil Blackwell, chapter V.
 - Stigler, George J. (1961) “Economics of Information,” *Journal of Political Economy*, 69, 213-225.

- McCall, J.J. (1970) “Economics of Information and Job Search,” *Quarterly Journal of Economics*, 84, 113-126.
- Davis, Steven and John Haltiwanger (1992) “Gross Job Creation, Gross Job Destruction, and Employment Reallocation,” *Quarterly Journal of Economics*, 819-864.
- Bleakley, Hoyt and Jeffrey Fuhrer (1997) “Shifts in the Beveridge Curve, Job Matching, and Labor Market Dynamics” Federal Reserve Bank of Boston *New England Economic Review*, Sept/Oct, 3-19.
- Mortensen, Dale and Christopher Pissarides (1994) “Job Creation and Job Destruction in the Theory of Unemployment” *Review of Economic Studies*, 61, 397-415.
- Shimer, Robert (2005) “The Cyclical Behavior of Equilibrium Unemployment and Vacancies” *American Economic Review*, 95, 25-49.

11. Fiscal and Monetary Policy

(a) Ricardian Equivalence

- Ljungqvist-Sargent, chapter 10
- Romer, chapter 11.1 to 11.4
- Barro, Robert (1974) “Are Government Bonds Net Wealth?” *Journal of Political Economy*, 82, 1095-1117.
- Barro, Robert (1979) “On the Determination of Public Debt,” *Journal of Political Economy*, 87, 940-971.

(b) Coordinating Fiscal and Monetary Policy

- Ljungqvist-Sargent, chapter 24
- Christiano, Lawrence and Terry Fitzgerald (2000) “Understanding the Fiscal Theory of the Price Level” Federal Reserve Bank of Cleveland *Economic Review*, 36:2.
- Sargent, Thomas and Neil Wallace (1981) “Some Unpleasant Monetarist Arithmetic” Federal Reserve Bank of Minneapolis *Quarterly Review*, Fall, 1-17.
- Sargent, Thomas (1986) “The Ends of Four Big Hyperinflations” in *Rational Expectations and Inflation*. New York: Harper and Row.
- Friedman, Milton (1959) *A Program for Monetary Stability* New York.

12. Discretionary Policy and Time Inconsistency

(a) The Basic Insight

- Romer, chapter 10
- Kydland, Finn and Edward Prescott (1977) “Rules Rather than Discretion: The Inconsistency of Optimal Plans” *Journal of Political Economy*, 85, 473-491.
- Barro, Robert and David Gordon (1983) “Rules, Discretion and Reputation in a Model of Monetary Policy” *Journal of Monetary Economics*, 12, 101-121.
- Rogoff, Kenneth (1985) “The Optimal Commitment to an Intermediate Target” *Quarterly Journal of Economics*, 100:4 1169-1189.

(b) A More Rigorous Approach

- Ljungqvist and Sargent, chapter 22 and sections 24.6-24.8
- Sargent, Thomas (1999) *The Conquest of American Inflation* Princeton University Press, chapters 1-4.
- Ireland, Peter (1997) “Sustainable Monetary Policies” *Journal of Economic Dynamics and Control*, 22, 87-108.