

Economics 303: Advanced Macroeconomics I  
Brandeis University  
Fall 2018  
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 contemporary theories of economic growth, short-run fluctuations, fiscal policy, and the current account. The course will also cover methods to solve and evaluate relevant models.

The learning goals for this course are:

1. learn how to use time series analysis to summarize basic facts about the macroeconomy.
2. learn contemporary theories of growth, consumption/saving, optimal government taxation, and international borrowing.
3. learn how to solve dynamic optimization models via dynamic programming.

Lectures will be given on Tuesdays and Thursdays from 11:00 to 12:20. All lectures will be given in Sachar International Center, Chancellor's Suite.

The primary references for the course are

Uribe, Martin and Stephanie Schmitt-Grohe (2017) *Open Economy Macroeconomics* Princeton University Press

Wickens, Michael (2011) *Macroeconomic Theory: A Dynamic General Equilibrium Approach* second edition, Princeton University Press.

These texts are available from the Brandeis University Bookstore and most on-line booksellers. Both books are 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.

The readings focus on material that you are expected to become familiar with. Additional readings will be brought up through out the course. This list is not anything like a full bibliography of interesting work on the topics covered or on macroeconomics in general. The two text books contain many suggestions for further reading, as do the assigned papers. Much of the omitted material in these books are 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 masters and undergraduate students 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 Qi He ([zjucamu@brandeis.edu](mailto:zjucamu@brandeis.edu)). Qi will run weekly recitation sessions and hold office hours. Students are expected to attend these recitation sessions.

The home page for this course is available through LATTE. 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 a 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.

While you are encouraged to discuss the homework problems with others, you are expected to answer problems on your own. Resist the temptation to 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/studentaffairs/srcs/ai/index.html>. Instances of alleged dishonesty will be forwarded to the Department of Student Rights and Community Standards 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

**This is a forecast rather than a plan; we'll update as we go along.**

1. Macroeconomic Facts, an Overview, and Important Tool I: Time Series Analysis
  - stochastic linear difference equations
  - state-space representation of linear difference equations
  - Markov chains
  
2. Economic Growth
  - (a) Growth with a Fixed Saving Rate
    - Wickens, chapter 3.
    - Obstfeld and Rogoff, chapter 7.
    - Solow, Robert (1956) "A Contribution to the Theory of Economics Growth" *Quarterly Journal of Economics* 70, 65-94.

(b) Sources of Growth

- Lucas, Robert (1988) “On the Mechanics of Economic Development” *Journal of Monetary Economics* 22, 3-42.
- Mankiw, N. Gregory, David Romer, and David Weil (1992) “A Contribution to the Empirics of Economic Growth” *Quarterly Journal of Economics* 107, 407-437.
- Acemoglu, Daron (2003) “Labor- and Capital-Augmenting Technical Change” *Journal of the European Economic Association* 1, 1-37.
- Acemoglu, Daron, Simon Johnson, and James Robinson (2005) “Institutions as a Fundamental Cause of Long-run Growth” *Handbook of Economic Growth* edited by Philippe Aghion and Steven N. Durlauf. Elsevier, chapter 6, 385-472.

3. Consumption and Saving

(a) The Infinite Horizon LQ Permanent Income Model

- Wickens, chapter 4.1 - 4.3
- Uribe and Schmitt-Grohe, chapter 2
- Hall, Robert E. (1978) “Stochastic Implications of the Life Cycle-Permanent Income Hypothesis: Theory and Evidence” *Journal of Political Economy* 86, 971-988.

(b) Important Tool II: Dynamic Programming

- Wickens, Mathematical Appendix 15.5
- King, Ian (2002) “A Simple Introduction to Dynamic Programming in Macroeconomic Models” Working Paper, The University of Auckland  
<http://researchspace.auckland.ac.nz/bitstream/handle/2292/190/230.pdf>.

(c) The Life Cycle Model

- Wickens, chapter 4.4 - 4.5
- Gourinchas, Pierre-Olivier and Jonathan Parker (2002) “Consumption over the Life Cycle” *Econometrica* 70:1, 47-89.
- Love, David (2006) “Buffer-Stock Saving in Retirement Accounts” *Journal of Monetary Economics* 53, 1473-1492.
- Kaplan, Greg and Giovanni L. Violante (2014) “A Model of the Consumption Response to Fiscal Stimulus Payments” *Econometrica* 82:4, 1199-1239.

(d) Behavioral Theories

- Ted O’Donoghue and Matt Rabin (1999) “Doing It Now or Later” *American Economic Review* 89:1, 103-24.
- Angeletos, George-Marios, David Laibson, Andrea Repetto, Jeremy Tobacman, and Stephen Weinberg (2001) “The Hyperbolic Consumption Model: Calibration, Simulation, and Empirical Evaluation” *Journal of Economic Perspectives* 15, 47-68.
- Sahm, Claudia R., Matthew D. Shapiro, and Joel Slemrod (2012) “Check in the Mail or More in the Paycheck: Does the Effectiveness of Fiscal Stimulus Depend on How It Is Delivered?” *American Economic Journal: Economic Policy* 4:3, pp. 216-250.

(e) Empirical Evidence

- Aguiar, Mark and Erik Hurst (2005) “Consumption versus Expenditure” *Journal of Political Economy* 113, 919-948.
- Mian, Atif and Amir Sufi (2014) “House Price Gains and U.S. Household Spending from 2002 to 2006,” NBER Working Paper 20152.
- Parker, Jonathan A., Nicholas S. Souleles, David S. Johnson and Robert McClelland (2013) “Consumer Spending and the Economic Stimulus Payments of 2008” *American Economic Review* 103:6, pp. 2530-2553.
- Kaplan, Greg, Giovanni Violante, and Justin Weidner (2014) “The Wealthy Hand-to-Mouth” *Brookings Panel on Economic Activity*, March 20-21, 2014.

4. Investment

- Wickens, chapter 2.7.
- Uribe and Schmitt-Grohe, chapter 3
- Simon Gilchrist and Charles Himmelberg (1995) “Evidence on the role of cash flow for investment” *Journal of Monetary Economics* 36 pp. 541-572.
- Cooper, Russell, John Haltiwanger, and Laura Power (1999) “Machine Replacement and the Business Cycle: Lumps and Bumps” *American Economic Review* 89:4, pp. 921-946.

5. The Labor Market Without and With Unemployment

- Wickens, chapter 4.6-4.7, chapter 10
- Stigler, George (1961) “The Economics of Information” *Journal of Political Economy* 69:3, 213-225.
- McCall, John J. (1970) “Economics of Information and Job Search” *Quarterly Journal of Economics* 84:1, 113-126.
- Mortensen, Dale T. and Christopher Pissarides (1994) “Job Creation and Job Destruction in the Theory of Unemployment” *Review of Economic Studies* 61, 397-415.

6. General Equilibrium, The Centralized Economy, and an Introduction to Business Cycle Dynamics

- Wickens, chapter 2, 4.8 and 16.1 to 16.4
- Uribe and Schmitt-Grohe, chapter 3 and 4
- Hansen, Gary (1985) “Indivisible Labor and the Business Cycle” *Journal of Monetary Economics* 16,

## 7. Government Expenditures, Revenues, Deficits, and Debt

### (a) The Government Budget Constraint

- Wickens, chapter 5
- Hall, George J. and Thomas J. Sargent (2014) “Interest Rate Risk and Other Determinants of Post-WWII US Government Debt/GDP Dynamics,” *American Economic Journal: Macroeconomics*, 3:3, pp 192-214.

### (b) Ricardian Equivalence

- Barro, Robert (1974) “Are Government Bonds Net Wealth?” *Journal of Political Economy* 82, 1095-1117.

### (c) Tax Smoothing I: Gallatin-Barro

- Barro, Robert (1979) “On the Determination of Public Debt,” *Journal of Political Economy* 87, 940-971.

### (d) Tax Smoothing II: Contingent Claims

- Lucas, Robert and Nancy Stokey (1983) “Optimal Fiscal and Monetary Policy in an Economy Without Capital” *Journal of Monetary Economics* 12:1, 55-94.
- Chari, V.V., Larry Christiano and Patrick Kehoe (1994) “Optimal Fiscal Policy in a Business Cycle Model” *Journal of Political Economy* 102:4, 617-652.
- Chari V.V. and Patrick Kehoe (1999) “Optimal Fiscal and Monetary Policy” in *Handbook of Macroeconomics* (ed. John Taylor and Mike Woodford) Vol 1C, 1671-1745. Amsterdam: Elsevier.
- Aiyagari, Rao, Albert Marcet, Thomas Sargent and Juha Seppela (2002) “Optimal Taxation without State-Contingent Debt,” *Journal of Political Economy* 110:6, 1220-1254.

### (e) Political Economy, Discrimination, and History

- Alesina, Alberto and Guido Tabellini (1990) “A Positive Theory of Fiscal Deficits and Government Debt” *Review of Economic Studies* 57:3 pp. 403-14.
- Alesina, Alberto and Roberto Perotti (1994) “The Political Economy of Budget Deficits” NBER Working Papers 4637, National Bureau of Economic Research, Inc.
- Persson, Torsten and Lars Svensson, (1989) “Why a Stubborn Conservative Would Run a Deficit: Policy with Time-Inconsistent Preferences,” *The Quarterly Journal of Economics* 104:2, pp. 325-45.
- Bryant, John and Neil Wallace (1984) “A Price Discrimination Analysis of Monetary Policy” *Review of Economic Studies* 51:2, pp. 279-88.
- Hall, George J. and Thomas J. Sargent (2014) “Fiscal Discriminations in Three Wars,” *Journal of Monetary Economics* 61:C, pp. 148-166.

### (f) Fiscal Policy: Overlapping Generations, Social Security, and Further Issues

- Wickens, chapter 6
- Samuelson, Paul (1958) “An Exact Consumption-Loan Model of Interest with or without the Social Contrivance of Money.” *Journal of Political Economy* 66:6, 467-482.

- Diamond, Peter (1965) “National Debt in a Neoclassical Growth Model” *American Economic Review* 55:5, 1126-1150.

## 8. The Open Economy

### (a) Consumption and Saving

- Wickens, chapter 7
- Uribe and Schmitt-Grohe, chapter 5
- Mann, Catherine L. (2002) “Perspectives on the U.S. Current Account Deficit and Sustainability” *Journal of Economic Perspectives* Vol 16, No 3, pp 131-152.
- Aguiar, Mark and Gita Gopinath (2007) “Emerging Market Business Cycles: The Cycle is the Trend,” *Journal of Political Economy* 115:1, 69-102.
- Obstfeld, Maurice and Kenneth Rogoff (2000) “The Six Major Puzzles in International Finance: Is There a Common Cause?” *NBER Macroeconomics Annual*, 15, 339-390.

### (b) Side Topic: Exorbitant Privilege

- Gourinchas, Pierre-Olivier and Helene Rey (2007) “From World Banker to World Venture Capitalist: US External Adjustment and the Exorbitant Privilege” in *G7 Current Account Imbalances: Sustainability and Adjustment*, R. Clarida, ed. Chicago, University of Chicago Press.
- Curcuru, Stephanie E, Thomas Dvorak and Francis E Warnock (2008), “Cross-Border Returns Differentials”, *Quarterly Journal of Economics* 123:1495-1530.
- Hausmann, Ricardo and Federico Sturzenegger (2007), “The Missing Dark Matter in the Wealth of Nations, and its Implications for Global Imbalances”, *Economic Policy*, 22:469-518.
- Habib, Maurizio M (2010), “Excess Returns on Net Foreign Assets: The Exorbitant Privilege from a Global Perspective”, ECB Working Paper 1158, European Central Bank.