

ADVANCED MACROECONOMICS II

Course Description

The objective of this course is to introduce the students to major issues, some very useful analytical tools and recent advances in modern macroeconomics. Topics include growth theory, business cycle theory, inflation, unemployment and macroeconomic policy.

Course Evaluation

Assignments: 30%

Final Exam: 70%

Course Outline

- I. Introduction (and Review of Intermediate Macroeconomics)
- II. Mathematical Tools (Dynamic Optimization)
- III. Economic Growth
- IV. Economic Fluctuations
- V. Inflation and Monetary Policy
- VI. Unemployment and Coordination Failure

Reading Materials

The readings are drawn from scholarly journals in economics and the following textbooks:

1. Aghion, P. and P. Howitt, *Endogenous Growth Theory*, MIT Press, 1998.
2. Barro, R. and X. Sala-i-Martin, *Economic Growth*, MIT Press, 2003.
3. Blanchard, O. and S. Fischer, *Lectures on Macroeconomics*, MIT Press, 1989.
4. Chang, A. C., *Elements of Dynamic Optimization*, McGraw-Hill, 1992.
5. Sargent, T., *Dynamic Macroeconomic Theory*, Harvard University Press, 1987.
6. Mankiw, N. G. and D. Romer (eds.), *New Keynesian Economics*, MIT Press, 1991.
7. Romer, D., *Advanced Macroeconomics*, 3rd edition, McGraw-Hill, 2005.
8. Stokey, N. and R.E. Lucas (with E. Prescott), *Recursive Methods in Economic Dynamics*, Harvard University Press, 1989

Reading List

I. Introduction (and Review of Intermediate Macroeconomics)

- Abel, A. B. and B. S. Bernanke, *Macroeconomics*, 5th edition, Addison-Wesley, 2005.
- Romer, Chapter 5
- Mankiw and Romer, Volume 1, Introduction
- Mankiw, N. Gregory, “A Quick Refresher Course in Macroeconomics,” *Journal of Economic Literature* (1990): 1645-60.
- Mankiw, N. Gregory, “The Macroeconomist as Scientist and Engineer”, *Journal of Economic Perspective* (2006): 29-46.
- Chari, V.V. and P.J. Kehoe, “Modern Macroeconomics in Practice: How Theory Is Shaping Policy”, *Journal of Economic Perspective* (2006): 3-28.
- Blanchard, Olivier, “What Do We Know about Macroeconomics That Fisher and Wicksell Did Not?” *Quarterly Journal of Economics* (2000): 1375-1409.

II. Mathematical Tools (Dynamic Optimization)

- Lecture Notes
- Chiang, Alpha C. *Elements of Dynamic Optimization*, McGraw-Hill, Inc., 1992.
- Kamien, Morton I. and Nancy L. Schwartz. *Dynamic Optimization: The Calculus of Variations and Optimal Control in Economics and Management*, 2nd edition, Elsevier, New York, 1991.
- Sargent, Thomas J. *Dynamic Macroeconomic Theory*, Harvard University Press, 1987.
- Stokey, N. and R.E. Lucas (with E. Prescott), *Recursive Methods in Economic Dynamics*, Harvard University Press, 1989

III. Economic Growth

- A. Introduction
 - Barro and Sala-i-Martin, Introduction.
 - Aghion and Howitt, Introduction and Chapter 1.
- B. Neoclassical Growth: Solow Model
 - Barro and Sala-i-Martin, Chapter 1.
 - Romer, Chapter 1.
 - Solow, Robert. “A Contribution to the Theory of Economic Growth,” *Quarterly Journal of Economics* 70 (1956): 65-94.
 - Phelps, E. “The Golden Rule of Accumulation: A Fable for Growthman,” *American Economic Review* 51 (1961):638-43.

- C. Neoclassical Growth: Ramsey-Cass-Koopmans Model
- Barro and Sala-i-Martin, Chapter 2.
 - Romer, Chapter 2.
 - Cass, D. “Optimal Growth in an Aggregate Model of Capital Accumulation,” *Review of Economic Studies* 32 (1965), 233-40.
 - Koopmans, T. “On the Concept of Optimal Economic Growth,” in *The Econometric Approach to Development Planning*, Amsterdam, North Holland, 1965.
 - Ramsey, F. “A Mathematical Theory of Saving,” *Economic Journal* 38 (1928): 543-59.
- D. Endogenous Growth: Capital-Based Models
- Barro and Sala-i-Martin, Chapters 4 and 5
 - Romer, P. “Increasing Returns and Long-Run Growth,” *Journal of Political Economy* 94 (1986): 1002-37.
 - Lucas, R.E., Jr. “On the Mechanics of Economic Development,” *Journal of Monetary Economics* 22 (1988): 3-42.
 - Rebelo, S. “Long-Run Policy Analysis and Long-Run Growth,” *Journal of Political Economy* 99 (1991): 500-21.
- E. Endogenous Growth: Innovation-Based Models with Variety Expansion
- Barro and Sala-i-Martin, Chapter 6.
 - Romer, P. “Endogenous Technological Change,” *Journal of Political Economy* 98 (1990): S71-S102.
 - Gancia, G. and F. Zilibotti. “Horizontal Innovation in the Theory of Growth and Development,” in *Handbook of Economic Growth*, North Holland 2005.
- F. Endogenous Growth: Innovation-Based Models with Quality Improvements
- Barro and Sala-i-Martin, Chapter 7.
 - Aghion and Howitt, Chapter 2.
 - Aghion, P. and P. Howitt. “A Model of Growth through Creative Destruction,” *Econometrica* 60 (1992): 323-51.
 - Aghion, P. and P. Howitt. “Growth with Quality-Improving Innovations: An Integrated Framework,” in *Handbook of Economic Growth*, North Holland 2005.
 - Aghion, P. and P. Howitt. “Appropriate Growth Policy: A Unifying Framework,” Working Paper, 2005.
- G. Endogenous Growth in Open Economies
- Grossman, G.M. and E. Helpman. “Comparative Advantage and Long-Run Growth,” *American Economic Review* 80 (1990): 796-815.
 - Grossman, G.M. and E. Helpman. “Quality Ladders and Product Cycles,” *Quarterly Journal of Economics* 106 (1991): 557-586.
 - Howitt, P. “Endogenous Growth and Cross-Country Income Differences,” *American Economic Review* 90 (2000): 829-46.

- Howitt, P. and D. Mayer-Foulkes. “R&D, Implementation and Stagnation: A Schumpeterian Theory of Convergence Clubs,” *Journal of Money, Credit and Banking* 37 (February 2005): 147-77.
 - Aghion, P., P. Howitt and D. Mayer-Foulkes. “The Effect of Financial Development on Convergence: Theory and Evidence,” *Quarterly Journal of Economics* 120 (2005): 173-222.
 - Daron, A., P. Aghion and F. Zilibotti. “Distance to Frontier, Selection and Economic Growth.” *The Journal of the European Economic Association* (2006), forthcoming.
- H. Endogenous Growth, Competition and Finance
- Aghion and Howitt, Chapter 7.
 - Aghion, P. and P. Howitt. “Growth with Quality-Improving Innovations: An Integrated Framework,” in *Handbook of Economic Growth*, North Holland 2005.
 - Helpman, E. “Innovation, Imitation and Intellectual Property Rights,” *Econometrica* 68 (2001): 467-92.
 - Aghion, P, N. Bloom, R. Blundell, R. Griffith and P. Howitt. “Competition and Innovation: An Inverted-U Relationship,” *Quarterly Journal of Economics* 120 (May 2005): 701-28.
 - Aghion, P., C. Harris, P. Howitt and J. Vickers. “Competition, Imitation and Growth with Step-by-Step Innovation,” *Review of Economic Studies* 68 (2001): 467-92.
 - Aghion, P., P. Howitt and D. Mayer-Foulkes. “The Effect of Financial Development on Convergence: Theory and Evidence,” *Quarterly Journal of Economics* 120 (2005): 173-222.
 - Aghion, P., D. Comin and P. Howitt. “When Does Domestic Saving Matter for Economic Growth?” Working paper (2006).
- I. Sources of Growth
- Barro and Sala-i-Martin, Chapters 10 and 12.
 - Easerly, W. and R. Levine. “It’s Not Factor Accumulation: Stylized Facts and Growth Models,” *World Bank Economic Review* 15(2) (2001): 177-219.
 - Barro, R. “Human Capital and Growth,” *American Economic Review* 91 (2001): 12-17.
 - Sachs, J.D. and A.M. Warner. “Fundamental Sources of Long-Run Growth,” *American Economic Review* 87 (1997): 184-188.
 - Sala-i-Martin, X. “I Just Run Two Millions Regressions,” *American Economic Review* 87 (1997): 178-182.
 - Caselli, F. “The Missing Input: Accounting for Cross-Country Income Differences,” in *Handbook of Economic Growth*, North Holland 2005.
- J. Testing for Endogenous Growth
- Aghion and Howitt, Chapters 8 (Section 5) and 12.
 - Jones, C. “R&D-Based Models of Economic Growth,” *Journal of Political Economy* 103 (1995): 759-84.
 - Jones, C. “Time Series Tests of Endogenous Growth Models,” *Quarterly Journal of Economics* 110 (1995): 495-525.

- Howitt, P. “Steady Endogenous Growth with Population and R&D Inputs Growing,” *Journal of Political Economy* 107 (1999): 715-30.
- Mankiw, N.G., D. Romer and D. Weil. “A Contribution to the Empirics of Economic Growth,” *Quarterly Journal of Economics* 107 (1992): 407-37.
- Evans, P. “Using Cross-Country Variances to Evaluate Growth Theories,” *Journal of Economic Dynamics and Control* 20 (1996): 1027-49.

IV. Economic Fluctuations

- A. Stylized Facts of Business Cycles
 - Abel and Bernanke, Chapter 8 (Sections 2 and 3).
 - Romer, Chapters 1 (Sections 1 and 2) and 5 (Section 6).
- B. Real Business Cycle (RBC) Theory
 - Kydland, F. and E. C. Prescott. “Time to Build and Aggregate Fluctuations,” *Econometrica* 50 (1982): 1345-70.
 - Long, J. and C. Plosser. “Real Business Cycles,” *Journal of Political Economy* 91 (1989):39-69.
 - Mankiw, N. G. “Real Business Cycles: A New Keynesian Perspective,” *Journal of Economic Perspective* 3 (1989): 79-90.
 - King, R. and S. Rebelo. “Resuscitating Real Business Cycles,” in *Handbook of Macroeconomics*, 1999 (Chapter 14).
 - Gomme, P., F. Kydland and P. Rupert. “Home Production Meets Time to Build,” *Journal of Political Economy* 109 (2001): 1115-31.
 - Rebelo, S. “Real Business Cycle Models: Past, Present and Future,” *Scandinavian Journal of Economics* 107(2005): 217-38.
- C. (New) Keynesian Theory
 - Romer, Chapters 5 and 6 (Parts B and C)
 - Blanchard and Fischer, Chapters 8 and 10
 - Fischer, S. “Long-Term Contracts, Rational Expectations, and the Optimal Money Rule,” *Journal of Political Economy* 85 (1977): 191-205.
 - Taylor, J. “Staggered Wage Setting in a Macro Model,” *American Economic Review* 69 (1979): 108-113.
 - Taylor, J. “Staggered Price and Wage Setting in Macroeconomics,” in *Handbook of Macroeconomics*, 1999 (Chapter 15).
 - Mankiw, N. G. “Small Menu Costs and Large Business Cycles: A Macroeconomic Model of Monopoly,” *Quarterly Journal of Economics* 100 (1985): 529-39.
 - Ball, L., N. G. Mankiw and D. Romer. “The New Keynesian Economics and the Output-Inflation Trade-off,” *Brookings Papers on Economic Activity* 1 (1988): 1-65.
 - Ball, L and D. Romer. “Real Rigidities and the Non-Neutrality of Money,” *Review of Economic Studies* 57 (1990): 183-302.

V. Inflation and Monetary Policy

- Romer, Chapter 9
- Blanchard and Fischer, Chapters 4, 5 and 11.
- Samuelson, P. A. “An Exact Consumption-Loan Model of Interest With or Without the Social Contrivance of Money,” *Journal of Political Economy* 66 (1958): 1002-11.
- Diamond, P. A. “National Debt in a Neoclassical Growth Model,” *American Economic Review* 55 (1965): 1126-50.
- Kiyotaki, N. and R. Wright. “A Search-Theoretic Approach to Monetary Economics,” *American Economic Review* 83 (1993): 63-77.
- Howitt, P. “Beyond Search: Fiat Money in Organized Exchange,” *International Economic Review* 46 (2005): 405-29.
- Clarida, R., J. Gali and M. Gertler. “The Science of Monetary Policy: A New Keynesian Perspective,” *Journal of Economic Literature* 37 (1999): 1661-1707.
- Kydland, F. and E. Prescott. “Rules Rather Than Discretion: The Inconsistency of Optimal Plans,” *Journal of Political Economy* 85 (1977): 473-91.
- Lucas, R. E. “Econometric Policy Evaluation: A Critique,” *Carnegie-Rochester Conference Series on Public Policy* 1 (1976): 19-46.
- Blanchard, O. and J. Gali. “Real Wage Rigidities and the New Keynesian Model,” Federal Reserve Bank of Boston Working Paper (2005), No. 05-14.
- McCallum, B. “Issues in the Design of Monetary Policy Rules,” in *Handbook of Macroeconomics*, 1999 (Chapter 23).

VI. Unemployment and Coordination Failure

- Romer, Chapter 10
- Blanchard and Fischer, Chapter 9 (Section 5).
- Pissarides, C. A., *Equilibrium Unemployment Theory*, Blackwell, 1990 (Part I).
- Shapiro, C. and J. E. Stiglitz. “Equilibrium Unemployment as a Worker-Discipline Device,” *American Economic Review* 74 (1984): 433-44.
- Diamond, P. “Aggregate-Demand Management in Search Equilibrium,” *Journal of Political Economy* 90 (1982): 881-94.
- Cooper, R. and A. John. “Coordinating Coordination Failures in Keynesian Models,” *Quarterly Journal of Economics* 103 (1988): 441-63.