

14.06

Intermediate Macroeconomics

Growth and Fluctuations

This course is a survey of modern macroeconomics at a quite advanced level. Topics include the neoclassical growth model, overlapping generations, endogenous growth models, business cycles, incomplete nominal adjustment, incomplete financial markets, fiscal and monetary policy, consumption and savings, and unemployment. The course is also an introduction to the mathematical tools used in modern macroeconomics, including dynamic systems, optimal control, and dynamic programming.

This course is a communications intensive subject. Assignments include six problem sets (approximately one every second week) and one paper. The problem sets will count for a total of 20% of the final grade. The paper will count for 30%. A preliminary draft will be due right after spring break. The final draft will be due in late April. Specific dates and more details about the paper will be given later. There will also be a midterm and a final examination, which will count for 25% of the grade each.

The main text for the course is

David Romer, *Advanced Macroeconomics*, 2nd Edition (New York: McGraw Hill, 2001).

Supplementary readings include lecture notes, which I will distribute as we proceed, as well as journal articles and selections from other books. The required readings are indicated by a star; the other items are recommended but not required.

1. Introduction to Growth Facts and Growth Models

* Romer, D. (2001), *Advanced Macroeconomics*, chapter 1.

* Solow, R.M. (1956), "A Contribution to the Theory of Economic Growth", *Quarterly Journal of Economics* 70, 65-94.

Barro, R.J., and X. Sala-i-Martin (1995), *Economic Growth*, chapters 1 and 12.

2. The Neoclassical Growth Model

* Romer, D. (2001), *Advanced Macroeconomics*, chapter 2.

* Mankiw, N.G., D. Romer, and D. Weil (1992), "A Contribution to the Empirics of Economic Growth," *Quarterly Journal of Economics* 107, 401-437.

Barro, R.J., and X. Sala-i-Martin (1995), *Economic Growth*, chapters 2 and 3.

Blanchard, O., and S. Fischer (1989), *Lectures on Macroeconomics*, chapter 3.

3. Overlapping Generations

* Romer, D. (2001), *Advanced Macroeconomics*, chapter 2.

* Barro, R.J. (1974), "Are Government Bonds Net Wealth?" *Journal of Political Economy* 82, 1095-1117.

* Diamond, P. (1965), "National Debt in a Neoclassical Growth Model," *American Economic Review* 55, 1126-1150.

Blanchard, O. (1985), "Debt, Deficits and Finite Horizons," *Journal of Political Economy* 93, 223-247.

4. Applications: Fluctuations, Investment, Asset Pricing, Public Finance, Behavioral

* Romer, D. (2001), *Advanced Macroeconomics*, chapters 7 and 8.

* Barro, R.J. (1979), "On the Determination of the Public Debt," *Journal of Political Economy* 87, 940-71.

Barro, R. (1999), "Ramsey Meets Laibson in the Neoclassical Growth Model," *Quarterly Journal of Economics* 114, 1125-1152.

Laibson, D. (1997), "Golden Eggs and Hyperbolic Discounting," *Quarterly Journal of Economics* 112, 443-478.

Lucas, R.E, Jr. (1978), "Asset Prices in an Exchange Economy," *Econometrica* 46, 1429-1445.

5. Endogenous Growth: Externalities, R&D, Innovation

- * Romer, D. (2001), *Advanced Macroeconomics*, chapter 3.
 - * Romer, P. M. (1986), "Increasing Returns and Long-Run Growth," *Journal of Political Economy* 94, S1002-S1037.
 - * Lucas, R.E., Jr. (1988), "On the Mechanics of Economic Development," *Journal of Monetary Economics* 22, 3-42.
 - * Romer, P.M. (1990), "Endogenous Technological Change," *Journal of Political Economy* 98, 71-102.
- Barro, R.J., and X. Sala-i-Martin (1995), *Economic Growth*, chapters 4-7.
- Lucas, R.E., Jr. (1993), "Making a Miracle," *Econometrica* 61, 251-272.
- Aghion, P., and P. Howitt (1992), "A Model of Growth Through Creative Destruction," *Econometrica* 60, 323-351.

6. Real Business Cycles

- * Romer, D. (2001), *Advanced Macroeconomics*, chapter 4.
 - * Kydland, F., and Prescott, E. C. (1982), "Time to Build and Aggregate Fluctuations," *Econometrica* 50, 1345-1370.
 - * Lucas, R.E. Jr. (1975), "An Equilibrium Model of the Business Cycle," *Journal of Political Economy* 81, 1113-1144.
- Barro, R. (1998), *Macroeconomics*, chapter 9, MIT Press.
- Prescott, E. C. (1986), "Theory Ahead of Business Cycle Measurement," *Quarterly Review*, Federal Reserve Bank of Minneapolis, 9-22.
- Lucas, R.E. Jr. (1987), *Models of Business Cycles*, Oxford: Basil Blackwell.

7. The IS-LM Model

- * Romer, D. (2001), *Advanced Macroeconomics*, chapter 5.
- Blanchard, O. (1990), "Why Does Money Affect Output? A Survey," in B. Friedman and F. Hahn, eds., *Handbook of Monetary Economics*, North Holland, 779-835

8. Incomplete Nominal Adjustment

- * Romer, D. (2001), *Advanced Macroeconomics*, chapter 6.
- * Mankiw, N.G. (1985), "Small Menu Costs and Large Business Cycles: A Macroeconomic Model of Monopoly," *Quarterly Journal of Economics* 100, 529-539.

Calvo, G. (1983), "Staggered Prices in a Utility-Maximizing Framework," *Journal of Monetary Economics* 12, 383-398.

9. Incomplete Financial Markets

* Obstfeld, M. (1994), "Risk-Taking, Global Diversification, and Growth," *American Economic Review* 84, 1310-1329.

* Bernanke, B., and M. Gertler (1989), "Agency Costs, Collateral, and Business Fluctuations," *American Economic Review* 79, 87-114.

Greenwood, J., and B. Jovanovic (1990), "Financial Development, Growth, and the Distribution of Income," *Journal of Political Economy* 98, 219-240.

Banarjee, A., and A. Newman (1993), "Occupational Choice in the Process of Development," *Journal of Political Economy* 101, 274-298.

10. Unemployment

* Romer, D. (2001), *Advanced Macroeconomics*, chapter 9 and 10.

* Shapiro, C. and J. Stiglitz (1984), "Equilibrium Unemployment as a Worker Discipline Device", *American Economic Review* 74, 433-444.

Diamond, P. (1982), "Aggregate Demand Management in Search Equilibrium," *Journal of Political Economy* 90, 881-894.

11. Consumption and Savings

* Romer, D. (2001), *Advanced Macroeconomics*, chapter 7.

* Hall, R.E. (1978), "Stochastic Implications of the Life Cycle-Permanent Income Hypothesis: Theory and Evidence," *Journal of Political Economy* 86, 971-987.