

Universitat de Barcelona
Department of Economic Theory
Master in Economics
Macroeconomics I - Syllabus

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The course aims at introducing the students to modern macroeconomic theory. Topics comprise of an exploration of the main stylized facts that motivate modern models of growth and business cycles, the neoclassical growth model, various one-sector models of endogenous growth, and the foundations of the Real Business Cycle model. The common framework consists of dynamic general equilibrium models in discrete time. The course serves also as an introduction to the mathematical toolbox of modern macroeconomics.

There will be five problem sets (approximately one every second week), a midterm, and a final examination. The final grade of the course will be the maximum between a mixed grade (where problem sets account for 30%, the midterm exam for 30%, and the final exam for 40%) and the grade of the final exam.

Required and recommended readings will be communicated in due time before each lecture.

1 Stylized Facts in Macroeconomics

1.1 Growth and Development Across Countries and Through Time

- Barro, R.J., and X. Sala-i-Martin (2004), *Economic Growth*, 2nd ed., chapter 12.
- Acemoglu, D. (2008), *Introduction to Modern Economic Growth*, Princeton University Press, chapter 1.
- Barro, R.J. (1991), “Economic Growth in a Cross Section of Countries,” *Quarterly Journal of Economics*, 106, 407-443.
- Barro, R.J., X. Sala-i-Martin (1992), “Convergence,” *Journal of Political Economy*, 100, 223-251.
- Mankiw, N.G., D. Romer, and D. N. Weil (1992), “A contribution to the empirics of economic growth,” *Quarterly Journal of Economics*, 107, 407-437.
- Caselli, F. (2005), “Accounting for cross-country income differences.” In P. Aghion and S. Durlauf, eds., *Handbook of Economic Growth*, Elsevier, 1, 679-741.

1.2 Business Cycle Fluctuations

- Romer, D. (2001), *Advanced Macroeconomics*, chapter 4.1-4.2.
- Burns, A. F., and W. C. Mitchell, “Measuring business cycles,” *NBER working paper series*, New York, National Bureau of Economic Research, 1946.
- Hodrick, R., and E. C. Prescott (1997), “Postwar U.S. Business Cycles: An Empirical Investigation,” *Journal of Money, Credit, and Banking*, 29 (1), 116.

1.3 Models and Empirical Analysis

- Kaldor, N. (1957), “A model of economic growth.” *The Economic Journal* 67 (268), pp. 591-624.
- Kaldor, N. (1965), “Capital accumulation and economic growth.” In F. A. Lutz and D. C. Hague, eds., *Proceedings of a Conference held by the International Economics Association*. London: Macmillan.
- Kuznets, S. (1973), “Modern Economic Growth: Findings and Reflections,” *American Economic Review*, 63, 247-258.
- Kuznets, S. (1981), “Modern Economic Growth and the less developed countries.” In *Conference on experiences and lessons of economic development in Taiwan*. Taipei: Institute of Economics, Academia Sinica.
- Lucas, R.E. (1988), “On the mechanics of economic development,” *Journal of Monetary Economics*, 22, 3-42.

2 The Neoclassical Growth Model

2.1 The Solow-Swan Model

- Romer, D. (2006), *Advanced Macroeconomics*, 3rd ed., chapter 1.
- Barro, R.J., and X. Sala-i-Martin (2004), *Economic Growth*, 2nd ed., chapter 1.
- Acemoglu, D. (2008), *Introduction to Modern Economic Growth*, Princeton University Press, chapter 2.
- Solow, R.M. (1956), “A Contribution to the theory of economic Growth,” *Quarterly Journal of Economics*, 70, 65-94.
- Swan, T.W. (1956), “Economic Growth and Capital Accumulation,” *Economic Record*, 32, 334-361.

2.2 The Ramsey-Cass-Koopmans Model

- Acemoglu, D. (2008), Introduction to Modern Economic Growth, Princeton University Press, chapters 5-8.
- Romer, D. (2001), Advanced Macroeconomics, 3rd ed., chapter 2, part A.
- Barro, R.J., and X. Sala-i-Martin (2004), Economic Growth, 2nd ed., chapter 2.
- Ramsey, F. (1927), “A mathematical theory of saving,” *Economic Journal*, 28, 543-559.
- Cass, D. (1965), “Optimum growth in an aggregative model of capital accumulation,” *Review of Economic Studies*, 32, 233-240.
- Koopmans, T. (1965), “On the concept of optimal economic growth.” In *The Econometric Approach to Development Planning*, Amsterdam: North Holland.

2.3 Extensions: Government and Open Economy

- Barro, R.J., and X. Sala-i-Martin (2004), Economic Growth, 2nd ed., chapter 3.

3 One Sector Models of Endogenous Growth

3.1 The AK model

- Barro, R.J., and X. Sala-i-Martin (2004), Economic Growth, 2nd ed., chapter 4.

3.2 Pareto Nonoptimality and Policy

- Arrow, K.J. (1962), “The economic implications of learning-by-doing,” *Review of Economic Studies*, 29, 155-173.
- Frankel, M. (1962), “The production function in allocation and growth: A synthesis,” *American Economic Review*, 52, 995-1022.

- Griliches, Z. (1979), “Issues in assessing the contribution of research and development to productivity growth,” *Bell Journal of Economics*, 10(1), 92-116.
- Romer, P.M. (1986), “Increasing returns and long-run growth,” *Journal of Political Economy*, 94, 1002-1037.
- Lucas, R.E. (1988), “On the mechanics of economic development,” *Journal of Monetary Economics*, 22, 3-42.

4 Real Business Cycles

4.1 The neoclassical growth model with labor supply

- Lucas, R.E. (1990), “Why Doesn’t Capital Flow from Rich to Poor Countries?,” *American Economic Review: Papers and Proceedings*, 80, 92-96.
- Lucas, R.E. (2004), “Some Macroeconomics for the 21st Century,” *The Journal of Economic Perspectives*, 14, 159-168.
- Prescott, E.C. (1988), “Robert M. Solow’s Neoclassical Growth Model: An Influential Contribution,” *Scandinavian Journal of Economics*, 90, 7-12.

4.2 Stochastic growth models and Real Business Cycles

- Galí, J. (2008), *Monetary Policy, Inflation and the Business Cycle: An Introduction to the New Keynesian Framework*, Princeton University Press, Chapter 2.
- Acemoglu, D. (2008), *Introduction to Modern Economic Growth*, Princeton University Press, chapters 16-17.
- Brock, W., and L. Mirman (1972), “Optimal Economic Growth and Uncertainty: The Discounted Case,” *Journal of Economic Theory*, 4(3), 479-513.

- Lucas, R.E. (1975), “An Equilibrium Model of the Business Cycle,” *Journal of Political Economy*, 81, 1113-1144.
- Kydland, F., and E.C. Prescott (1982), “Time to Build and Aggregate Fluctuations,” *Econometrica*, 50, 1345-1370.
- Lucas, R.E. (1987), *Models of Business Cycles*, Oxford: Basil Blackwell.
- Prescott, E. C. (1986), “Theory Ahead of Business Cycle Measurement,” *Quarterly Review*, Federal Reserve Bank of Minneapolis, 9-22.
- Hall, R.E. (1988), “Intertemporal Substitution in Consumption,” *Journal of Political Economy*, 96, 339-357.