

Macroeconomic Theory Course outline and reading list

In most cases the readings cited do not cover everything that will be done in lecture and that you will be responsible for, and in some cases they go beyond what you will be responsible for. The relation of the readings to the lectures and what you are expected to get from the readings will be discussed in lecture. In the listings below, primary readings are marked with •, secondary readings with –. “NTBHO” stands for “notes to be handed out”. “LS” stands for the Ljungquist-Sargent manuscript, which is available in postscript format at Thomas J. Sargent’s web site. There is a course web site, which will contain the most recent version of this reading list, notes, problem sets, answers, etc.

1. Preliminaries (mostly section meetings)

- (a) *Review of continuous time calculus of variations, or Hamiltonian approach (whichever is more familiar).*
- (b) *Conditional expectations, iterated expectations.*
- (c) *Linear stochastic difference and differential equations(TA sessions).*
 - Gregory Chow, *Analysis and Control of Dynamic Economic Systems*, Wiley 1975, Chapters 2-4. This topic is standard and is treated well in other textbooks also.
 - (i) Conditions for stability
 - (ii) Innovations representation. MA representations.
 - (iii) Impulse responses. Structural and reduced form disturbances

2. Linear Rational Expectations Models (CAS 3 lectures)

- Sims, “Solving Linear Rational Expectations Models”, available at Sims web site, or on paper from Diane Bowman for copying.
- (a) *Permanent income model*
 - Hall, R. E., “Stochastic Implications of the Life Cycle-Permanent Income Hypothesis: Theory and Evidence,” *Journal of Political Economy*, December 1978.
- (b) *Modern(?) Versions of ISLM*
 - Clarida, Richard, Jordi Gali and Mark Gertler, “The Science of Monetary Policy,” (September 1997) (This paper uses a model like the one we study, without saying much about its derivation.) It is available at <http://www.econ.nyu.edu/user/gertlerm/index.htm> and is or will be available for copying. It is a long paper and is not required reading.

3. Dynamic Stochastic Optimization (CAS, 2 lectures)

- (a) *Extending the Hamiltonian approach: Obtaining FOCs with stochastic Lagrange multipliers*
 - Notes to be handed out (NTBHO)

- (b) *Continuous Time, Certainty Equivalence*
- (c) *Discrete Time, Stochastic*
- (d) *Dynamic Programming: Bellman Equation and FOC's*
 - NTBHO
 - (i) Asset Pricing
 - (ii) Permanent Income Again
 - (A) LQ case
 - (B) stochastic r case: linearization
 - (iii) The stochastic growth model
 - Campbell, John Y., “Inspecting the Mechanism: An Analytical Approach to the Stochastic Growth Model”, NBER discussion paper No. 4188, 1992.
 - Kydland, F. and E. Prescott, “Time to Build and Aggregate Fluctuations,” *Econometrica*, November 1982.
 - (A) When does it imply the (Robert) Hall “random walk” model is a good approximation?
 - (B) When does it imply that some form of ISLM is a good approximation?

4. More Dynamic Programming (2 lectures)

- Ljungqvist-Sargent, chapters 1 and 4.

5. Search Theory (1 lecture)

- Ljungqvist-Sargent, chapter 2.
 - 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.

6. Risk sharing and accumulation via asset markets (CS, 3 lectures)

- (a) *Two-agent/country model*

- NTBHO
 - Stockman, Alan C. and Linda L. Tesar [1995]. “Tastes and technology in a two-country model of the business cycle: Explaining international comovements”, *American Economic Review* 85 (March), 168-85
 - Feldstein, Martin and Charles Horioka [1980]. “Domestic savings and international capital flows”, *Economic Journal* 90 (June), 314-29.
 - Cole, Harold L. and Maurice Obstfeld [1991]. “Commodity trade and international risk sharing: How much do financial markets matter?”, *Journal of Monetary Economics* 28 (August), 3-24.

- (i) Bonds only
- (ii) Complete Markets
- (iii) Bonds and “market-completing” equity

- NTBHO

- (A) approximate completeness

- (B) Firm/consumer decentralization of the growth model

7. Models with Heterogenous Agents

(a) Heterogeneity in Endowments (2 lectures)

- Ljungqvist-Sargent, chapter 9.
 - 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 (3 lectures)

- Ljungqvist-Sargent, chapter 5
 - 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 (1989) “Cost of Business Cycles with Indivisibilities and Liquidity Constraints” *Journal of Political Economy*, 97:6, 1364-1383.
 - Imrohoroglu, Ayse (1992) “The Welfare Cost of Inflation Under Imperfect Insurance” *Journal of Economic Dynamics and Control*, 16, 79-92.
 - Lucas, Robert E. (1987) *Models of Business Cycles*, Basil Blackwell, chapter III.

(c) Overlapping Generations (2-3 lectures)

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

8. Models with price levels

(a) *Fiscal Theory of the Price Level (CS, 3 lectures)*

- Sims, “A Simple Model for Study of the Determination of the Price Level and the Interaction of Monetary and Fiscal Policy,” *Economic Theory* 4, 1994, 381-399.
- Woodford, M., “Doing Without Money: Controlling Inflation in a Post-Monetary World”, Princeton Discussion Paper, 8/97, available at <http://swopec.hhs.se/>
- Leeper, Eric M., “Equilibria Under Active and Passive Monetary And Fiscal Policies,” *Journal of Monetary Economics* 27, February 1991, 129-47.

- Sims, “Fiscal Foundations of Price Stability in Open Economies”, available at Sims web page
 - “The Precarious Fiscal Foundations of EMU”, available at Sims web page
- (i) Model with no money
- (ii) With money
- (iii) Exchange rates, currency union
- (b) *Stickiness (CS, 3 lectures)*
 - Sims, “Stickiness”, available at Sims web site.
 - Blanchard and Fischer, Chapter 8.
 - Blanchard, Olivier and Nobuhiru Kiyotaki [1987]. “Monopolistic competition and the effects of aggregate demand”, *American Economic Review* 77 (September), 647-66
 - Caplin, Andrew S. and Daniel F. Spulber, “Menu Costs and the Neutrality of Money,” *Quarterly Journal of Economics* 102 (November 1987), 703-725. Reprinted in Mankiw and Romer, *New Keynesian Economics*, volume 1.
 - Rotemberg, Julio J. [1982]. “Monopolistic Price Adjustment and Aggregate Output”, *Review of Economic Studies* 49(4)(October), 517-31
- (i) Monopolistic Competition
 - (A) with menu costs
 - (B) with contracting delay
 - (C) with search
- (c) **Credible Government Policies (2 lectures)**
 - Ljungqvist-Sargent, chapter 11.
 - Abreu, Dilip, David Pearce and Ennio Stacchetti (1990) “Toward a Theory of Discounted Repeated Games with Imperfect Monitoring” *Econometrica* 58, 1041-1063.
 - Barro, Robert and David Gordon (1983) “Rules, Discretion and Reputation in a Model of Monetary Policy” *Journal of Monetary Economics*, 12, 101-121.
 - Barro, Robert and David Gordon (1983) “A Positive Thoery of Monetary Policy in a Natural Rate Model” *Journal of Political Economy*, 91, 589-610.
 - Kydland, Finn and Edward Prescott (1977) “Rules Rather than Discretion: The Inconsistency of Optimal Plans” *Journal of Political Economy*, 85, 473-491.
 - Sargent, Thomas (1998) “The Conquest of American Inflation” manuscript, Stanford University.