#### **Economics 210A – First Year Graduate Macroeconomics**

210A lays the theoretical groundwork for studying macroeconomic issues. We will begin by studying the basic growth facts and growth framework. As part of the theory, we will discuss various methods for continuous time dynamic optimization. We will then discuss discrete time models, including the basic Neoclassical model used to study business cycles and overlapping generations models.

#### **Useful textbooks:**

\*Robert Barro and Xavier Sala-i-Martin, Economic Growth, 2<sup>nd</sup> edition.

Lars Ljungqvist and Thomas Sargent, *Recursive Macroeconomic Theory*, 2<sup>nd</sup> edition.

Nancy Stokey, Robert Lucas, Edward Prescott, *Recursive Methods in Economic Dynamics*, 1989.

David Romer, Advanced Macroeconomics, 3<sup>rd</sup> edition.

Olivier Blanchard and Standley Fischer, Lectures on Macroeconomics, 1989.

#### Journal articles

Most of the journal articles are available on-line, from either jstor.org or other sources. Any required articles not available on-line will be made available for check-out in the graduate student lounge.

\* indicates required reading.

### Grades

20%: Problem Sets. You may work on these together, but must hand in your own write-up of the answers.

30%: Midterm Exam.

50%: Final Exam.

### I. Introduction to Macroeconomics

# A. The Big Questions

## **B.** Brief History of Macroeconomic Thought

### C. Optimal Control in Continuous Time

\* Robert Barro and Xavier Sala-i-Martin, *Economic Growth*, 2<sup>nd</sup> edition, Appendix on Mathematical Methods, Section A.3.

### **D.** Differential Equations

\* Robert Barro and Xavier Sala-i-Martin, *Economic Growth*, 2<sup>nd</sup> edition, Appendix on Mathematical Methods, Section A.1.

#### II. Economic Growth

## A. Growth Facts and Growth Accounting

Romer, Section 1.1

- \* Barro and Sala-i-Martin, "Introduction."
- \* Robert M. Solow, "Technical Change and the Aggregate Production Function," *Review of Economic and Statistics* 39 (August 1957): 312-320.

Romer, Section 1.7

\* Dale Jorgenson and Kevin Stiroh, "Raising the Speed Limit: U.S. Economic Growth in the Information Age," *Brookings Papers on Economic Activity*, 2000:I.

#### **B.** Solow-Swan Growth Model

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

Romer, Ch. 1.

\* Barro and Sala-i-Martin, Ch. 1.

## C. Ramsey Model

\* Barro and Sala-i-Martin, Ch. 2

Romer, Sections 2.1-2.7.

### D. Models with Endogenous Growth

- \* Barro and Sala-i-Martin, Chapter 4.
- \* Robert Lucas, "On the Mechanics of Economic Development," *Journal of Monetary Economics* 22 (July 1988): 3-42.

### E. Empirical Tests

- \* Robert J. Barro, "Economic Growth in a Cross-Section of Countries," *Quarterly Journal of Economics*, 106 (May 1991): 407-443.
- \* N. Gregory Mankiw, David Romer, and David Weil, "A Contribution to the Empirics of Economic Growth," *Quarterly Journal of Economics*, 107 (May 1992): 407-437.

Daron Acemoglu, Simon Johnson, and James Robinson, "The Colonial Origins of Comparative Development: An Empirical Investigation," *American Economic Review* 91 (December 2001): 1369-1401.

### III. Discrete Time Dynamic Optimization

#### A. Time Series and Difference Equation Basics

\* Thomas Sargent, *Macroeconomic Theory*, 2nd ed., Chapter IX: 1-7.

Ljungqvist and Sargent, Chapter 2

# **B.** Optimal Control and Dynamic Programming

\* Thomas Sargent, Macroeconomic Theory, 2nd ed., Chapter IX: 8.

Ljungqvist and Sargent, Chapters 3 and 4

Nancy Stokey, Robert Lucas, Edward Prescott, *Recursive Methods in Economic Dynamics*, 1989.

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### IV. Discrete Time Neoclassical Model

## A. Neoclassical Model with Endogenous Labor Supply

\* Robert King and Sergio Rebelo, "Resuscitating Real Business Cycles," *Handbook of Macroeconomics* Volume 1B, Chapter 14.

Robert King, Charles Plosser, and Sergio Rebelo, "Production, Growth, and Business Cycles: I. The Basic Neoclassical Model," *Journal of Monetary Economics* 21 (1988): 195-232.

Robert King, Charles Plosser, and Sergio Rebelo, "Production, Growth, and Business Cycles: II. New Directions," *Journal of Monetary Economics* 21 (1988): 195-232.

# **B.** Neoclassical Model with Government Spending

\* Marianne Baxter and Robert King, "Fiscal Policy in General Equilibrium," *American Economic Review* 83 (June 1993): 315-334.

## V. Overlapping Generations Models

\* Romer, Section 2.8-2.12

Blanchard and Fisher, Ch. 3

\* Robert Barro, "Are Government Bonds Net Wealth?" *Journal of Political Economy*, 82 (November-December 1974): 1095-1117.

<sup>\*</sup> Robert Lucas, "Econometric Policy Evaluation: A Critique," *Carnegie-Rochester Conference Series on Public Policy*, Vol. 1, 1976.