

This course builds on the macroeconomic theory courses (Economics 309 and 419). These courses along with an understanding of the material contained in mathematics for economists (Economics 314 and 315) are a necessary core. The course considers macroeconomic questions within the context of discrete dynamic systems. Most, but not all, modeling will be in the framework of overlapping generations models.

Course Grading Procedure:

We shall have one mid-term exam and a (non-cumulative) final. Your grade will be an average of the exams (approximately 45 percent on each exam) and classroom participation (approximately 10 percent). Percentages are approximate so as to maintain flexibility in calculating the final grade to the students benefit. I have included a list of homework problems for each section. These problems are for your benefit, but will not be graded. My assistant, Jim Bathgate, will schedule regular working sessions outside the class to go over the course material and other questions that you may have.

Text: (Available in Coop)

1. C. Azariadis, Intertemporal Macroeconomics, Blackwell, 1993.

Reference Books: (On reserve in the library)

1. O. Blanchard and S. Fischer, Lectures in Macroeconomics.
2. G. McCandless with N. Wallace, Introduction to Dynamic Macroeconomics: An Overlapping Generations Approach.
3. R. Farmer, The Macroeconomics of Self-Fulfilling Prophecies.
4. B. Champ and S. Freeman, Modeling Monetary Economies.
5. S. Turnovsky, Methods of Macroeconomic Dynamics.

COURSE OUTLINE AND BIBLIOGRAPHY:

0. **Review of Some Basics (Not covered in class)**
 - A. **Trend Decomposition and Empirical Regularities**

Readings:

1. Blanchard and Fischer, Chapters 1.

- I. **Discrete Dynamic Systems: Techniques and Examples**
 - A. **Difference Equations**
 - 1. **Steady state, periodic equilibrium, and stability**
 - B. **Scalar Linear Equations**
 - 1. **Homogeneous, autonomous, and non-autonomous systems**
 - 2. **Forward- and backward-looking solutions**
 - 3. **Stability**
 - 4. **Stock market bubbles**
 - C. **Linear Systems**
 - 1. **Homogeneous, autonomous, and non-autonomous systems**
 - 2. **Phase diagrams**
 - 3. **Exchange rate overshooting**
 - D. **Non-Linear Systems**
 - 1. **Scalar and planar systems**
 - 2. **Stability**
 - 3. **Growth models**
 - a. **Descriptive growth**
 - b. **Optimal growth**
 - c. **Overlapping generations model**
 - E. **Periodic Equilibrium and Bifurcations**
 - 1. **Periodic equilibrium**
 - 2. **Bifurcation of equilibrium**
 - 3. **Strange attractors and chaos**
 - 4. **Endogenous fluctuations**
 - a. **Business cycles**
 - b. **Growth cycles**
 - c. **Fertility cycles**

Readings:

- 1. Azariadis, Chapters 1-9.
- 2. Farmer, Chs. 2 and 3.

Homework: (Pp. 164-69)

Questions: I.1, I.4, I.6, I.8, I.12, I.14, I.16, I.17, I.18, I.33, I.34, and I.37.

II. Intertemporal Allocation

A. Exchange Equilibrium

1. Inside money
2. Foreign lending and borrowing
3. Credit rationing
4. Intertemporal optimality

B. Neoclassical Growth Theory

1. Overlapping generations models
2. Optimal economic growth
3. Sources of economic growth
 - a. Demographics
 - b. Technological progress
 - c. Human capital
 - d. Increasing returns
 - e. Financial markets

Readings:

1. Azariadis, Chapters 10-14, 16.
2. Blanchard and Fischer, Chs. 2, 3 (pp. 91-110, 115-126, and 135-143), and 7.
3. McCandless with Wallace, Chs. 1, 2, 4, 7, 8, and 9.
4. Farmer, Chs. 4, 5, 6, and 7.
5. Champ and Freeman, Ch. 11.

Homework: (pp. 280-86)

Questions: II.3, II.4, II.9, II.10, II.12, II.13, II.15, II.16, II.19, II.23, II.27, II.36, II.37, and II.38.

III. National Debt and Fiscal Policy

A. Balanced Budget Policies

- 1. Transfer payments (Social security)**
- 2. Government purchases**

B. Budget Deficits in Exchange Economies

- 1. Ricardian equivalence**
- 2. Budget deficits and the national debt**

C. Budget Deficits in Growing Economies

- 1. Burden of the debt**

Readings:

1. Azariadis, Chapters 16-20, 22.
2. Blanchard and Fischer, Chs. 3 (pp. 110-114, and 126-135).
3. McCandless with Wallace, Chs. 3 and 5.
4. Farmer, Chs. 8, 9, 10, and 11.
5. Champ and Freeman, Chs. 10 and 12.

Homework: (Pp. 347-49)

Questions: III.2, III.3, III.5, III.6, III.14, III.16, and III.17.

IV. Money and Asset Prices

A. Preliminaries

- 1. Expectations formation**

B. Asset Prices: Fundamentals and Bubbles

- 1. Pure exchange with perfect foresight**
- 2. Adaptive learning**
- 3. Pricing productive assets**

C. Quantity of Money

1. Neutral money
2. Legal restrictions money
3. Utilitarian money
4. Cash-in-advance money

D. Inflationary finance

1. Seignorage
2. Growth and inflation

E. Effects of Uncertainty on Outside Money Equilibrium

1. Rational expectations
 - a. Information content of prices
2. Market psychology
 - a. Stationary sunspot equilibrium
 - b. Price volatility and price rigidity
 - c. Learning and stability
 - d. Problems of multiple equilibria

Readings:

1. Azariadis, Chapters 23-28, 30.
2. Blanchard and Fischer, Chs. 5, 8, 10 (sect. 10.2).
3. McCandless with Wallace, Chs. 6, 10, and 12.
4. Champ and Freeman, Ch. 13.

Homework: (pp. 487-94)

Questions: IV.2, IV.3, IV.8, IV.13, IV.14, IV.15, IV.16, IV.17, IV.18, IV.21, IV.28, IV.31, and IV.35.