Advanced Macroeconomic Theory (Economics 617)
Miami University, Fall 2008

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Office hours: Tuesday and Thursday 4:00-5:30 pm; Wednesday, 1:00-3:00 pm, and by appointment

Class meets Tuesday and Thursday, 2:00-3:15 pm, in Laws 217

Class web page: www.fsb.muohio.edu/craighwd/econ617.html

The models used in contemporary macroeconomic research are often quite different from those taught to undergraduate students. Modern macroeconomic theory is based on microeconomic foundations of dynamic, optimizing behavior by households and firms. This class will introduce some of the fundamental concepts, techniques and language of modern macroeconomics. The purpose is to develop a set of tools that students will be able to use to understand current research.

The primary source of readings will be David Romer’s text, *Advanced Macroeconomics* (McGraw-Hill, 3rd edition). Other readings will be available through the course web page or library electronic reserve. The lectures will not follow the book closely - the readings will be a poor substitute for class attendance (and attentiveness).

Economics is learned by practice. Problem sets will be assigned periodically. Students may work together, but must turn in the assignments individually. Late assignments will not be accepted and no extensions will be granted. A subsample of the problems will be graded.

Grades will be calculated as a weighted average, based on the problem sets (15%), two in-class midterm exams (25% each) and a comprehensive final exam (35%). Dates for the midterm exams will be announced in class. Midterm exams will not be given late; in the event of a serious illness, family emergency or university-sponsored travel, students may ask, in advance, for permission to take exams early or to have weight added to the final exam grade in place of the midterm.

This syllabus, as well as the outline and reading list, is subject to modifications, which will be announced in class.
Econ 617 Course Outline and Reading List

Readings marked (o) are optional
Internet links to journals subscribed to by the university may not work off campus.

I. Prologue: Getting to Modern Macroeconomics
   Topics/concepts
   • Rational expectations
   • Lucas critique
   Readings
   • Nobel Prize Announcement for Robert Lucas (1995)
   • (o) J. M. Keynes, The General Theory of Employment, Interest and Money, ch. 2, 3.3
   • (o) Romer, ch. 5

II. Consumption: Basic Concepts in a Two-Period Model
   Topics/concepts
   • Lagrangian
   • Euler equation
   • Intertemporal elasticity
   • Mathematical expectation
   • Risk aversion
   Readings
   • Lecture note “Consumption: Basic Concepts in a Two-Period Model”

III. General Equilibrium: Basic Concepts
   Topics/concepts
   • Competitive equilibrium
   • Pareto optimality
   • Welfare theorems
   • Social planner
   • State-contingent claims
   • Risk sharing
   • Market completeness
Readings
- Lecture note “General Equilibrium: Basic Concepts”
- (o) H. Varian, *Microeconomic Analysis*, ch. 18-19

IV. Consumption in a Deterministic Dynamic Endowment Economy
Topics/concepts
- Life-cycle hypothesis
- Permanent income hypothesis
- Ricardian equivalence

Readings
- Romer, ch. 7.1
- Lecture note “Consumption in Dynamic Economies,” 1, 2
- (o) Romer, ch. 11.1-11.3

V. Consumption in a Stochastic Dynamic Endowment Economy
Topics/concepts
- Random walk hypothesis
- Precautionary saving
- Consumption CAPM
- Equity Premium
- Dynamic Programming
- Bellman Equation

Readings
- Romer, ch. 7.2-7.6
- Lecture note “Consumption in Dynamic Economies,” 3-6
- (o) F. Bagliano and G. Bertola, *Models for Dynamic Macroeconomics*, ch. 1
- (o) L. Ljungqvist and T. Sargent, *Recursive Macroeconomic Theory*, ch. 3

VI. Consumption and Capital Accumulation in a Dynamic Economy
Topics/concepts
- Ramsey model
- Hamiltonian
- Phase diagram
- Linearization

Readings
- Romer, ch. 2.1-2.7
- Lecture note “Capital and Labor in Dynamic Economies,” 1, 2
- (o) R. Barro and X. Sala-i-Martin, Economic Growth, Appendix on Mathematical Methods, 1.3
- (o) Romer, ch. 1

VII. Consumption, Capital Accumulation and Leisure in a Dynamic Economy
Topics/concepts
- Optimal taxation
- Ramsey problem
- Dynamic inconsistency

Readings
- Lecture note “Capital and Labor in Dynamic Economies,” 3
- C. I. Plosser, “Credibility and Commitment,” Speech, March 6, 2007
- (o) L. Ljungqvist and T. Sargent, Recursive Macroeconomic Theory, ch. 15.1-15.7
- (o) Romer, ch. 10.3-10.4

VIII. Real Business Cycles
Topics/concepts
- Hodrick-Prescott filter
- Solow residual
- Calibration

Readings
- Romer, ch. 4
- Lecture note “Capital and Labor in Dynamic Economies,” 4

IX. Money in a New Keynesian Economy
   Topics/concepts
   • Monopolistic competition
   • Predetermined prices
   • Menu costs

Readings
• Romer, ch. 6.9