

UNIVERSITY OF COLORADO  
Department of Economics

**ECON7040: MACROECONOMIC THEORY II**  
**Spring 2016**

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Instructor:	Martin Boileau
Class:	Economics 119; MW 9:30 to 10:45
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**COURSE DESCRIPTION**

This course is the second part of the core macroeconomic theory doctoral sequence. We will focus our attention on dynamic optimization and general equilibrium models.

The course has two objectives. The first is the presentation of the tools required to study dynamic, stochastic, general equilibrium models. The second is the application of these tools to topics in macroeconomics.

**EVALUATION**

The assessment for this class consists of a two (2) term tests and a final exam. Tests and final exam are closed notes and closed books. No make-up tests will be given. The tentative schedule and the grade distribution are displayed in the table below.

<b>Evaluation</b>	<b>Date</b>	<b>%</b>
Term Test 1	Week 6: 17 February	25
Term Test 2	Week 13: 4 April	25
Final Exam	5 May: 4:30{7:00pm	50

## REQUIRED TEXT

Ljungqvist, Lars and Thomas J. Sargent, *Real Business Cycles*, Cambridge: MIT Press.

## BACKGROUND TEXTS

Adda, Jerome and Russell W. Cooper, *Macroeconomics*, Cambridge: MIT Press.

Barro, Robert J. and Xavier Sala-i-Martin, *Economic Growth*, New York: McGraw Hill.

Blanchard, Olivier J. and Stanley Fischer, *Lectures on Macroeconomics*, Cambridge: MIT Press.

Farmer, Roger E., *Real Business Cycles*, Cambridge: MIT Press.

Romer, David, *Advanced Macroeconomics*, New York: McGraw-Hill.

Sargent, Thomas J., *Macroeconomics*, Cambridge: Harvard University Press.

Stokey, Nancy L. and Robert E. Lucas, *Dynamic Programming and Rational Expectations*, Cambridge: Harvard University Press.

# COURSE OUTLINE

## I. Introduction

1. National Income Accounting
2. Two Period Economies
  - *Bil*, : Two Period Economies: A Review

## II. Discrete Time

1. Dynamic Programming
  - *Bil*, : A Child's Guide to Dynamic Programming
  - *Lj, gg t d S g t*: 2.A.1, 3.1
2. The One-Sector Neoclassical Growth Model
3. Overlapping Generations Model
  - , : Chapter 2

## III. Continuous Time

1. Dynamic Programming and Hamiltonian
  - *Bil*, : A Child's Guide to Optimal Control Theory
2. The One-Sector Neoclassical Growth Model
  - , : Chapter 2
  - *Bl d d F* : Chapter 2
3. Perpetual Youth
  - Banchar, O., 1985. Debt, De cits, and Finite Horizon *J , l f P l t l E 93.*
  - *Bl d d F* : Chapter 3.3

## III. Dynamic Stochastic General Equilibrium Models

1. Dynamic Programming
  - *Lj, gg t d S g t*: 2.1, 2.2, 2.4, 3.2
2. A Real Business Cycle Model
  - Farmer: Chapters 2 and 3

- Ljungqvist and Sargent: Chapter 12
- Romer: Chapter 4
- King, Robert G., Charles I. Plosser, and Sergio T. Rebelo, 1988. Production, Growth, and Business Cycles: I. The Basic Neoclassical Model, *Journal of Monetary Economics* 7.

### 3. Numerical Issues

- Ljungqvist and Sargent: Chapters 4 and 5
- King, Robert G., Charles I. Plosser, and Sergio T. Rebelo, 2002. Production, Growth, and Business Cycles: Technical Appendix, *Journal of Monetary Economics* 20.
- Uhlig, Harald, 1997. A Toolkit for Analyzing Nonlinear Dynamic Stochastic Models Easily.
- Grioli, Tommaso M., 2013. Dynare: User Guide.

## IV. Advances in DSGE Models

1. Monopolistic Competition and Sticky Prices
2. Monetary Economies: CIA, MIU, and Cashless Economies
3. Preferences: Non-Homotheticity, Habit, GHH, Endogenous Discount, Epstein-Zin
4. Shocks: Investment-specific, News, and Noise

## V. Search and Matching

1. Matching and Bargaining
2. Monopsony
3. Directed Search
4. Search and Money

## V. Policy

1. Time Inconsistency
2. Monetary Policy: Optimal Inflation Rate and Policy Reaction Function
3. Monetary Policy Issue: Zero Lower Bound
4. Fiscal Policy: Ricardian Equivalence and Taxation in Dynamic Economies

## **University Policies**

You should familiarize yourself with the following University of Colorado policies:

1. If you qualify for accommodations because of a disability, please submit to your professor a letter from Disability Services in a timely manner (for exam accommodations provide your letter at least one week prior to the exam) so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities. Contact Disability Services at 303-492-8671 or by e-mail at [dsinfo@colorado.edu](mailto:dsinfo@colorado.edu). If you have a temporary medical condition or injury, see Temporary Medical Conditions: Injuries, Surgeries, and

Honor Code Council ([honor@colorado.edu](mailto:honor@colorado.edu); 303-735-2273). Students who are found to be in