Syllabus for
GENERAL ECONOMIC THEORY: MACROECONOMICS
ECON 510a (second half)

Course Objectives: The purpose of the first part of Econ 510a is to introduce students to modern macroeconomic theory with special emphasis on dynamic general equilibrium models of the macroeconomy. The course will teach students the key tools and central models of modern dynamic macroeconomics and use them to study growth, business cycles, asset pricing, and fiscal policy.

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Office hours: Thursdays from 10AM–noon, or by appointment

Class Meetings: Lectures take place on Mondays and Wednesdays from 10:30AM to 11:50AM in Room B08 (28 Hillhouse). The teaching assistant Theodore Papageorgiou (theodore.papageorgiou@yale.edu) will hold weekly sessions to review the course material and to go over the answers to the homework assignments. The exam for this part of the course takes place during the final exam period (December 8 through December 15).

Grading: Weekly homework assignments will constitute 10% of your grade and the two exams (one for each half of the course) will constitute 90% of your grade.

Readings: The course draws primarily on a set of lecture notes by Per Krusell (available on the course web site). Other readings are drawn from a variety of textbooks and lecture notes, including: Advanced Macroeconomics by David Romer; Lectures on Macroeconomics by Olivier Blanchard and Stanley Fischer; Recursive Methods in Economic Dynamics by Nancy Stokey and Robert Lucas with Edward Prescott; Recursive Macroeconomic Theory (Second Edition) by Lars Ljungqvist and Thomas Sargent (available in draft form on the course web site); and Notes on Macroeconomic Theory by Stephen Williamson (available on the course web site). Journal articles will also be assigned occasionally.
COURSE OUTLINE

1 The neoclassical growth model

This section introduces the basic modern macroeconomic framework. It develops dynamic equilibrium analysis of two kinds (sequential and recursive equilibria), discusses market structures, looks at steady states and dynamics of the basic one-sector growth model, and studies the welfare properties of equilibria. Two demographic structures will be studied: the dynastic model (one infinitely-lived consumer) and the overlapping-generations (OG) model.

1.1 The dynastic model

- **Lecture 1**: Introduction building on the Solow-Swan model. Steady states and dynamics in the neoclassical growth model. Linearization techniques for characterizing local dynamics.

  **Suggested readings**: Chapters 1, 2, and 4 in *Lecture Notes* by Krusell (Chapter 3 reviews dynamic programming); Sections 6.1 and 6.3–6.4 in Chapter 6 in Stokey and Lucas with Prescott.

- **Lecture 2**: Sequential and recursive formulations of competitive equilibrium in the neoclassical growth model.

  **Suggested readings**: Chapter 5 in *Lecture Notes* by Krusell; Chapter 2 of Stokey and Lucas with Prescott; Chapters 1 and 3 in Williamson; Chapters 7 and 12 in Ljungqvist and Sargent.

- **Lectures 3 and 4**: Uncertainty and market structures.

  **Suggested readings**: Chapter 6 in *Lectures Notes* by Krusell; Sections 2.2 and 2.3 on Markov chains in Chapter 2 in Ljungqvist and Sargent; Sections 8.1–8.6 and 8.8–8.9 in Chapter 8 in Ljunqvist and Sargent;

- **Lecture 5**: Welfare properties of equilibria.

  **Suggested readings**: Chapter 5 and Section 7.2 in Chapter 7 in *Lecture Notes* by Krusell; Chapter 2 in Stokey and Lucas with Prescott; Chapters 1 and 3 in Williamson.

1.2 The OG model

- **Lecture 6**: The basic structure without production. Competitive equilibria and their welfare properties.
• Lecture 7: The neoclassical growth model with OG demographics. Welfare properties. Dynamic inefficiency.

Suggested readings: Chapter 7 in Lecture Notes by Krusell; Chapters 2 and 9 in Williamson; Chapter 3 in Blanchard and Fischer; Part B in Chapter 2 in Romer.

2 Growth

• Lectures 8 and 9: Growth facts and theories. Solow’s growth model, the neoclassical growth model with exogenous technological change, and endogenous growth models (the Ak model and human capital accumulation).

Suggested readings: Lecture Notes on Growth by Krusell; Sections 14.1–14.5 in Chapter 14 in Ljungqvist and Sargent; Sections 3.8–3.9 and 3.12 in Part B in Chapter 3 in Romer; Chapter 4 in Williamson; Lucas (1988) on human capital accumulation (in Journal of Monetary Economics); Introduction to Economic Growth by Charles Jones (Norton, 2002).

3 Asset pricing

• Lecture 10: The Lucas tree model and the equity premium puzzle with some suggested solutions.


4 Fiscal policy

• Lectures 11 and 12: Effects of fiscal policies in the nonstochastic growth model; Ricardian equivalence propositions; optimal taxation of capital and labor under commitment.

Suggested readings: Lecture Notes on Economic Policy by Krusell; Chapter 10 on Ricardian equivalence in Ljungqvist and Sargent; Chapter 11 on effects of fiscal policies in Ljungqvist and Sargent; Sections 15.1–15.8 on optimal taxation with commitment in Chapter 15 of Ljungqvist and Sargent; Sections 11.1–11.3 in Chapter 11 of Romer; Atkeson, Chari, and Kehoe (1999) in Federal Reserve Bank of Minneapolis Quarterly Review.