

FINANCE 9240
INTERTEMPORAL MACROECONOMICS AND FINANCE
Fall 2023

Professor Tim Landvoigt

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Hours: Tuesday 5:00-6:00 SHDH 2324

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Review Session: Thursday 2:00-3:30pm SHDH 2422

Course Description

This is a first-year doctoral course on Macroeconomic Theory. We will study the key intertemporal decisions of households and firms, their basic implications for long run economic growth, business cycle fluctuations and asset prices, and the role of monetary policy. We also develop basic numerical techniques to solve dynamic optimization problems and apply them to study a broad range of economic models.

Prerequisites: The prerequisites are a graduate level course in microeconomics (could be taken concurrently) and a strong understanding of algebra and calculus. A basic knowledge of a mathematical programming language is recommended.

Grading

Students are expected to come to class and participate regularly. Grades will be based on six homework assignments (60%) and one final exam (40%). Actively working on the assignments is essential for your understanding of the course material. You *may work in groups*, but you must turn in your own answers. The best set of answers will be anonymized and posted online.

Materials

The main reference for this class are **my slides** which are detailed. Slides, assignments and, occasionally, additional readings will be posted on [Canvas](#). The lecture notes are designed to be self-contained and, together with the problem sets, should be your primary source of study.

There is no required textbook. Most macro graduate sequences include the equivalent to two semesters of course work and virtually all textbooks cover many more topics than what can be discussed in a single course. Nevertheless, the course material is closest to two main books:

- **LS:** Lars Ljungqvist and Thomas J. Sargent. *Recursive Macroeconomic Theory*, MIT.
- **W:** Michael Wickens, *Macroeconomic Theory: A Dynamic General Equilibrium Approach*, 2nd edition, Princeton
- **G:** Jordi Gali, *Monetary Policy Inflation and the Business Cycle*, 2nd edition, Princeton

Wickens (W) offers a fairly straightforward introduction to most topics. Ljungqvist and Sargent (LS) is technically more demanding and also discusses many fairly advanced topics, but is generally considered the standard text for 1st year macro. Gali is a very good source for monetary models.

Additional and complementary discussions of specific topics are provided in

- **DR:** David Romer, *Advanced Macroeconomics*, McGraw Hill.

Finally, a detailed treatment of many of the necessary mathematical methods and numerical tools can be found in

- **SLP:** Nancy Stokey and Robert Lucas, with Edward Prescott, *Recursive Methods in Economic Dynamics*, Harvard.
- **J:** Judd, Kenneth, *Numerical Methods in Economics*, MIT Press.

List of Topics Covered

0. Introduction (advance pre-term reading)
1. Household Consumption and Saving
2. Tools: Dynamic Programming and Numerical Methods
3. Endowment Economies and Asset Prices with Complete Markets
4. Incomplete Markets
5. Production, General Equilibrium and Long Run Growth
6. Business Cycles
7. Monetary Economies
8. Financial Market Frictions
9. Overlapping Generations