FINANCE 924 – INTERTEMPORAL MACROECONOMICS AND FINANCE

Fall 2022

Professor Joao F. Gomes
Email: gomesj@wharton.upenn.edu
Hours: Tuesday 3:45-5 SHDH 2329

Sergey Sarkisyan: sesar@wharton.upenn.edu
Hours: Wednesday 10 AM 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 extremely 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 Ljunqvist 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. Ljunqvist and Sargent (LS) is technically much more demanding and also discusses many fairly advanced topics too. 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 and Readings:

0. Introduction (pre-term readings)
1. Household Consumption and Saving
2. Tools I: Dynamic Programing
3. Tools II: Numerical Methods
4. Competitive Equilibrium with Complete Markets
5. Endowment Economies and Asset Prices
6. Competitive Equilibrium with Incomplete Markets
7. General Equilibrium and Long Run Growth
8. Production and Investment
9. Business Cycles
10. Monetary Economies
11. Models with Financing Frictions
12. Overlapping Generations Models