

**The University of Florida
Department of Economics**

**ECO 7938: Applied Macroeconomic Theory I
Fall 2023 Syllabus**

Instructor:

Jonathan Adams adamsjonathan@ufl.edu

Office: MAT 333 **Office Hours:** Tuesdays 9:30 am - 11:30 am

Class Schedule

Lecture: Mondays and Wednesdays, Periods 3-4 (9:35 am – 11:30 am), Room - MAT 114

Reading Group: Tuesdays, Time TBD, Room - MAT 224A

Recommended Texts:

Sargent and Ljungqvist, *Recursive Macroeconomic Theory*

Weekly Readings

Objectives:

This course is designed to prepare PhD students to be researchers in macroeconomics. You will become familiar with several areas of current research in macroeconomics, and the specific tools to contribute to these subfields. You will practice carefully reading and understanding current research, and presenting results. You will become familiar with empirical methods specific to macroeconomics. Finally, you will gain experience structuring and writing a research paper.

Coursework:

Coursework consists of three components:

- *Problem Sets:* There will be (approximately) four problem sets. These assignments will focus on computational elements (solving models and communicating results graphically) and empirical applications (estimating models and running some regressions)
- *Paper Presentations:* Students must attend the weekly reading group meeting. Participants will rotate through weekly readings, each selected from a pool of new and relevant papers. Students will present 3-4 papers during these meetings.
- *Final Paper.* The final assignment will be a small paper relating to one of the topics covered in the course. This is intended to give some experience writing a short paper, so the research contribution can be small. As examples, a theoretical paper might slightly modify a model we study in class, while an empirical paper could estimate an existing model on new data.

Grading:

Problem sets will account for **30%** of your grade, paper presentations will account for **30%**, and the final paper will account for **40%**.

Course Outline

The class will be ordered as follows, although I reserve the right to adjust the schedule as the course progresses:

1. Dynamic Stochastic General Equilibrium models
 - a. General structure and solutions to DSGE models
 - b. Computation
 - c. Estimating DSGE models
 - i. Calibration
 - ii. MLE
 - iii. Bayesian estimation
 - iv. Model selection
 - d. Applications
 - i. Monetary policy
 - ii. Financial Frictions
 - iii. News
 - e. Open Economy Macro
 - i. Differences from GE
 - ii. Solution methods
 1. Global methods
 2. Perturbation challenges
2. Time Series Basics
 - a. Transforming the data
 - i. Normalization
 - ii. Filtering/detrending
 - b. Stationarity
 - i. Autocovariance Function
 - ii. Roots
 - iii. Wold Representation
 - c. VARs
 - d. Local Projections
 - e. Shocks and Structure
3. Fiscal/Monetary Unions
 - a. Overview
 - b. Computation
 - c. Empirical resources
 - d. Applications
 - i. Housing bubble
 - ii. Fiscal transfers
4. Imperfect Information
 - a. History
 - b. Static financial models
 - c. Beauty contests
 - d. News and Noise
 - e. Dynamic models
 - f. Endogenous information

5. Additional Topics

- a. Non-rational expectations
- b. Monetary search theory
- c. Fiscal theory of the price level

Boilerplate:

Enrollment in this course constitutes acknowledgement of the following:

- 1) I understand that the University of Florida expects its students to be honest in all of their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action, up to and including expulsion from the University.
- 2) I will adhere to university copyright policies.
- 3) Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

Economics Department Recording Policy:

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A "class lecture" is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To "publish" means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.