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.