ECO 7298 - Applied Macroeconomic Theory II

University of Florida

Spring 2024

Instructor: Eugenio Rojas

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Class Meetings: Tuesdays-Thursdays 11:45 AM - 1:40 PM (Periods 5-6), Room TBA

Office Hours: By appointment.

Introduction and Objectives: This course is aimed to provide a comprehensive review of theory, quantitative methods, and evidence related to topics in advanced macroeconomics. The course focuses on expanding the set of tools that students have in order to answer important questions in macroeconomics. We will particularly focus on models that capture the interactions between decisions of heterogeneous agents, such as households or firms, and their implications for the macro economy, as well as methods to study these interactions. We will also study models where market imperfections, such as financial frictions and limited commitment, affect the equilibrium outcomes of the macro economy. The main goal of the course is to get the students familiarized with the topics and be able to develop independent but related research ideas.

Recommended Texts: The main reference for the course is Recursive Macroeconomic Theory (4th edition) by Sargent and Ljunqvist. Other (optional) textbooks are: Recursive Methods in Economic Dynamics by Stokey and Lucas, Dynamic General Equilibrium Modeling (2nd) by Heer and Maussner, Numerical Methods in Economics by Kenneth Judd, and Open Economy Macroeconomics by Uribe & Schmitt-Grohé. There will be readings assigned by the instructor that will be related to the topics of the course.

Class Schedule: All the relevant dates for this course, including lectures and due dates for problem sets, are set in a calendar that will be posted in Canvas. Make sure you can access and see the information with no problem. Important dates:

- First Day of Class: January 8th
- Problem Sets: Due February 13th, March 19th, and April 23rd
- Final Paper: Proposal due February 27th, paper due April 30th
- Last Day of Class: April 23rd

Class Format: Each session is scheduled to last one hour and fifty-five minutes. We will have a fifteen-minute break towards the middle of the session. Class meetings will be in person.

Canvas: Canvas is the official website for this course. All the material such as slides, problem sets, additional study material and your grades will be included in Canvas. Please make sure you are able to log on to this course site. If you have are not able to log in, you should contact me immediately.

Academic Integrity: You are expected to comply with the University's rules for academic honesty (which can be found here). Confirmed violations of these rules will result in disciplinary actions. Cheating is considered a serious offense to your classmates, to the University, and to the instructor. I have a zero tolerance policy for cheating in this class and I will not make any exception.

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 pre-

sentations, 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.

Course Schedule & Topics:

- Week 1 (01/08-01/12): Syllabus & Numerical techniques for value function iteration I.
- Week 2 (01/15-01/19): Numerical techniques for value function iteration II.
- Week 3 (01/22-01/26): Heterogeneous Agents: Households & Idiosyncratic Risk I.
- Week 4 (01/29-02/2): Heterogeneous Agents: Households & Idiosyncratic Risk II.
- Week 5 (02/05-02/09): Heterogeneous Agents: Firms & Idiosyncratic Risk I.
- Week 6 (02/12-02/16): Heterogeneous Agents: Firms & Idiosyncratic Risk II.
- Week 7 (02/19-02/23): Topics in Macro-Finance I.
- Week 8 (02/26-03/01): Topics in Macro-Finance II.
- Week 9 (03/04-03/08): Student Presentations
- Week 10 (03/11-03/15): Spring Break.

- Week 11 (03/18-03/22): Topics in International Finance: Models of Financial Crises I.
- Week 12 (03/25-03/29): Topics in International Finance: Models of Financial Crises II.
- Week 13 (04/01-04/05): Topics in International Finance: Macroprudential Policy.
- Week 14 (04/08-04/12): Topics in International Finance: Sovereign Default I.
- Week 15 (04/15-04/19): Topics in International Finance: Sovereign Default II.
- Week 16 (04/22-04/26): Student Presentations.

Assignments and Grading

The Final Grade is composed by 3 different elements, which are:

- Problem Sets, 30% of Final Grade
- Paper presentations, 30% of Final Grade
- Final Paper, 40% of Final Grade

Problem Sets: There are three problem sets during the semester. These will involve a combination of data work, problem solving, and numerical computation of models related to the topics seen in class. Problem sets may require time to be solved so I suggest you to work with anticipation on them. Problem sets have to be submitted physically or electronically (to my email) before the start of the corresponding lecture. No late submissions are allowed and there will be no exceptions.

Paper Presentations: Students are expected to present papers related to the class material by the end of each section. I will let you know in advance a list of papers from which the presenter will select one.

Final Paper: The final assignment is a short paper that should be related to topics covered in class. The paper may consist of an empirical and/or theoretical analysis, but should contain some original aspects. You are to complete a two-page research proposal by **February 27th**, and you have until **April 30th** to complete the paper. Please let me know you have difficulties with developing a

topic, and we will work on it together. The goal is to get you started on your first research projects, which can potentially be turned into publications and/or chapters of your dissertation.