16:220:605:01 Spring 2021

Macroeconomic Theory II

Course: Economics 605 (Section 01)
Lecture: Monday and Wednesday, 9:50 am – 11:10 am **Room:** Remote Class
Recitation: Wednesday, 1:10 pm – 2:30 pm

Instructor: Prof. Carlos Esquivel
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Office hours: Monday and Wednesday 11:10am – 12:10pm

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Teaching assistant: Min Kim
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Office hours: Tuesday 2:00pm – 3:00pm ET or by appointment

Prerequisites: Macroeconomic Theory I (220:604).

Course Materials: The recommended book for most of the course is *Recursive Macroeconomic Theory* by Lars Ljungqvist and Thomas Sargent (LS). For the lectures on Dynamic Programming I will follow the book *Recursive Methods in Economic Dynamics* by Nancy Stokey, Robert Lucas, and Edward Prescott (SLP). For the lectures on open economy business cycles I will follow the book *Open Economy Macroeconomics* by Martin Uribe and Stephanie Schmitt-Grohe (USG). While you are not required to purchase all of these books, keep in mind that they are excellent references that will continue to be useful to you in the future. Additionally, I will base lectures on some topics on various journal papers.

This is the first half of the semester-long course on Macroeconomic Theory II. Our first meeting will be Wednesday January 20th and our last will be Monday March 8th.

Grading: The grade you get on this first half will be 50% of the grade for the entire course and will be calculated as follows:

Exam	20%
Project	15%
Homework	15%

The other 50% of your grade will depend on your performance on the second half of the course.

Exam: There will be a mid-semester exam on March 8th during class.

Project: The project will consist on replicating some results from a paper and doing additional related exercises. I will provide two or three options from which you will be able to choose.

There will be **no extra credit** work.

Attendance: Students are expected to attend all classes. If you expect to miss more than one or two classes because of illness or a family emergency, please use the University absence reporting website: https://sims.rutgers.edu/ssra/ to indicate the dates and reason for your absence. An email is automatically sent to me.

Academic Integrity: Cheating will not be tolerated. The University has established severe penalties for cheating. The University's policy on academic integrity is found in the official catalogue at http://academicintegrity.rutgers.edu/.

Learning outcomes: The course will be centered on recursive methods and their applications to various topics in macroeconomics. The main objective is for you to be able to understand the most recent literature and to conduct independent research with the language and tools used at the frontier.

Course outline: The outline below provides an overview of the topics we will cover. I included the references from the textbooks and academic papers that I will mostly be following.

1. Dynamic programming
    a. Principle of optimality
        i. Chapter 4 in SLP
    b. Recursive competitive equilibrium
        i. Chapter 7 and 12 in LS 4th edition
2. Search, matching, and unemployment
    a. Job search
        i. Chapter 6 in LS 4th edition
    b. Search and matching
        i. Chapter 29 in LS 4th edition
3. Real business cycles
    a. Neoclassical growth model
        i. Kydland, F., and Prescott, E., (1982): "Time to Build and Aggregate Fluctuations," *Econometrica*
    b. Business Cycle Accounting
        i. Chari, V., Kehoe, P., McGrattan, E., (2007): "Business Cycle Accounting," *Econometrica*
4. Small open economy
    a. Real Business Cycles
        i. Chapter 4 in USG
        ii. Mendoza, E. (1991): "Real Business Cycles in a Small Open Economy," *American Economic Review*
    b. Sovereign Default
        i. Arellano, C. (2008): "Default, Risk and Income Fluctuations in Emerging Economies," *American Economic Review*