Objective of the course:
This course is intended to introduce some basic analytical tools and frontier research topics in modern dynamic macroeconomics (also known as rational expectation macroeconomics or recursive macroeconomics). First half of the lecture time will be devoted to give a brief introduction to the dynamic method used widely in recursive macroeconomics: theoretical and practical Dynamic Programming, and its application to neoclassical growth model. Once we lay out this theoretical foundation, we can tackle some advanced topics such as growth and development, financial economics, international macroeconomics, and so on. I will address these topics both qualitatively and quantitatively. Through the study, hopefully students can get familiar with formulating a theoretical question into dynamic general equilibrium framework and get some feeling about what is the frontier of macroeconomic research.

Textbooks:


Grading:

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<tr>
<td>Homework</td>
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<td>Midterm</td>
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<td>Final Exam</td>
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Contents (Tentative)

1. Introduction to Dynamic Programming
   LS: chapter 3,4
   SLP: chapter 3,4

2. Linear Quadratic Dynamic Programming
   LS: chapter 5

3. Equilibrium Concepts and Welfare Theorems
   SLP: chapter 2, chapter 15
   LS: chapter 7, 8

4. Economic Growth Model: from Solow to Ramsey
   Romer: chapter 1, 2 (part A)
   Barro & Sala-i-Martin: chapter 1, 2

5. Overlapping-Generations Model
   LS: chapter 9
   Romer: chapter 2 (part B)

6. Using Neoclassical Growth Model to Study Business Cycle (RBC model)
   Romer: chapter 4
7. New Growth Model
Barro & Sala-i-Martin: chapter 4, 5
Romer: 3

If time allows

8. Incomplete Market Model with Heterogeneous Agents
LS: chapter 16, 17

Note: * indicates the required reading.