Course: ECON 5133
Course Title: Macroeconomic Theory I
Instructor: Abdul Munasib
Class: T 12:30-3:15 (CLB 221)

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Course Website: Go to http://spears.okstate.edu/home/munasib/ then click “Teaching” and then click “Macro Dynamics”. Or, go directly to webpage by clicking http://spears.okstate.edu/home/munasib/MacroI/Firstpage.html.

Scope of the course
This course will cover some of the dynamic techniques that are most commonly used in modern macroeconomics. The primary goal of this course is to equip the student with the necessary tools that are needed to read and understand the recent macro literature. Topics covered in this course are:
(a) A (really) brief introduction of the concepts of steady state and stability
(b) A discrete time workhorse model: The overlapping generations (OLG) models
(c) Discrete time dynamic programming: theory and examples
(d) Discrete time dynamic programming macro models: dynamics of capital accumulation and employment adjustment
(e) Introduction to the New-Keynesian framework
(f) Continuous time dynamic programming macro model: Unemployment

It is important to recognize that the techniques taught in this course are widely used in almost every area of recent economic research (e.g., labor and household economics, structural estimation, asset pricing, resource economics, international trade and finance, and so on). Therefore, this course will generate substantial positive externalities for those who will be specializing in areas outside of macroeconomics.

Homework Assignments and Examinations
There will be 10-12 homework assignments and two examinations (one midterm and one final).

<table>
<thead>
<tr>
<th>Points</th>
<th>Date and time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>20</td>
</tr>
<tr>
<td>Examination I</td>
<td>40</td>
</tr>
<tr>
<td>Examination II</td>
<td>40</td>
</tr>
</tbody>
</table>
Core Texts

Course outline

Topic I: A (really) brief introduction of the concepts of steady state and stability
- Dynamical systems, steady state, stability. [Azariadis, chapter 1, chapter 2 (pages 14-18)]
- Non-linear systems: phase diagram, stability. [Azariadis, chapter 6 (pages 52-55)]

Topic II: Overlapping generations (OLG) models
- OLG models: basic structure, planner versus market, altruism, social security, government spending [Blanchard-Fisher, chapter 3, sections 3.1, 3.2]

Topic III: Discrete time dynamic programming and applications
- Discrete state model: theory, general setup, examples. [Miranda-Fackler, chapter 7]
- Continuous state, discrete choice economic examples. [Miranda-Fackler, chapter 8]
- Continuous state, continuous choice economic examples. [Miranda-Fackler, chapter 8]

Topic IV: Discrete time dynamic programming macro models
- Dynamics of capital accumulation: adjustment costs, borrowing constraints, non-convexities, machine replacement, etc. [Adda-Cooper, chapter 8]
- Dynamics of employment adjustment: convex, quadratic, non-convex adjustment costs. [Adda-Cooper, chapter 9]

Topic V: Introduction to the New-Keynesian framework
- The ‘Classical’ Model [Galí, chapters 2]
- The basic New-Keynesian Model [Galí, chapters 3]

Topic VI: Continuous time dynamic programming and application: Unemployment
- Search and Matching Models of Unemployment. [Pissarides, chapters 1 and 6]
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