EC392 - Advanced Topics in Macroeconomic Theory

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Palmer 125 - Block 6 - Spring 2010

Contact Information

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Office Hours

Monday to Thursday from 1:30 p.m. to 2:30 p.m. or by appointment

Course Objective

This course will introduce you to different macroeconomic models. Even though this is not a math course, but an economics course with mathematical applications, we will use mathematical techniques in order to solve such models. The course will also focus on model interpretation and applications. The standard macroeconomic problem is the maximization of a concave or quasi-concave objective function subject to linear constraints. We will solve and analyze such problems using the Lagrange method, dynamic programming, and phase diagrams with the goal to enable you to thoroughly understand published macroeconomic papers as well as working papers. I expect that by the end of the block, you will be able to offer suggestions on how to improve research in macroeconomics.

Course Structure

There will be two parts to this course. For the first couple of weeks, we will focus on learning optimization techniques and how to interpret the solution to various macroeconomic models. You will solve different types of models in and out of class. The idea is to go as far as we can into the material to make you comfortable solving such problems and to expand your knowledge about economic models getting you ready to read and analyze journal articles. You will have three problem sets throughout this part of the course and one open-note midterm. After the midterm, the course will become a seminar-type course. Every day, we will discuss a journal article in class. The catch here is that you will be doing most of the presentations. Every student is required to present two published papers and write two referee reports on current working papers; at the end of the block you will have a comprehensive oral examination.

Course Material

Because I will be using material from many different sources, this course does not have a required text. I will either print or post on the web all relevant materials. It is your responsibility to check the webpage for updates.

Some References

Sargent, Thomas J., "Dynamic Macroeconomic Theory," Harvard University Press, 1st ed, 1987

McCandless, George, "The ABCs of RBCs: An Introduction to Dynamic Macroeconomic Models," Harverd University Press, 1st ed., 2008

Heijdra, Ben J., "Foundations of Modern Macroeconomics," Oxford University

Press, 2nd ed., 2009

Williamson, Stephen D., "Macroeconomics," Pearson Addison-Wesley, 3rd ed., 2008

Adda, J. and Cooper, R., "Dynamic Economics," MIT Press, 1st ed., 2003

Dixit, A.K., "Optimization in Economic Theory," Oxford University Press, 2nd ed., 1990

Chiang, A. and Wainwright, K., "Fundamental Methods of Mathematical Economics," McGraw-Hill Irwin, 4th ed., 2005

Simon, C. and Blume, L., "Mathematics for Economists," W. W. Norton & Company, 1st ed., 1994

Dowling, Edward, "Schaum's Outline Introduction to Mathematical Economics," McGraw-Hill Irwin, 3rd ed., 2000

Thomson, William, "A Guide for the Young Economist," MIT Press, 1st ed., 2001

Course Assignments and Weights

Pre-Test - 5%

Three problem sets - 8% each

Midterm exam - 16%

Two article presentations - 15% each

Two referee reports - 5% each

Oral exam - 15%

Problem Sets

There will be 3 problem sets in this course. These problems were designed to get you to practice your problem solving skills. They will be variations of problems solved in class. You are strongly encouraged to work and hand in each assignment in groups. Each group should not contain more than 2 members.

Midterm Exam

The midterm exam will be open book, open notes; however, no collaboration will be permitted. You will have a maximum of 8 hours to complete the exam. A penalty of 10 points will be applied onto your midterm grade for each additional 30 minutes you take completing the test. This exam will cover all the material taught in class up until the day of the test.

Article Presentations

You will be required to prepare two 45 minute presentations on two pre-selected published articles in this class. A list of possible journal articles will be given to you by the middle of the second week of the block. You are also free to choose any other article that is not on the list; however, it will need my approval. Since the same article cannot be presented twice, I will assign articles on a first come first serve basis. You need to prepare slides for your presentation and every student in the class is required to read the article beforehand.

Your grade for this portion of the course will be determined in 2 ways. Seventy five percent of your grade will be based on your presentation skills. I will grade you on content - how well can you explain the main ideas and conclusions of the

paper; on mathematical knowledge - how well can you explain how the authors derived the most significant equations in the paper; on structure - how well organized is your presentation; on your ability to answer questions from me and your peers; and on your presentation skills in general - voice volume, posture, and clarity. The final third of your grade will be based on your participation as an attendee during one of your peers' presentations. Each student in class needs to ask at least 2 questions to the presenter during the talk and your grade will be determined based on the relevancy of your questions. Therefore, I strongly encourage you have more than 2 questions prepared beforehand.

Below are some tips on how to prepare a good presentation:

- Make sure your slides have only the necessary information
- Do not put too much information in one slide
- Structure your presentation in the following way:
  - What is the main question of the paper?
  - How did the author answer the question?
  - Describe the set up of the model and the solution technique in detail
  - Explain the results in detail
  - What is the main conclusion? Did the author answer its original question?
  - Provide possible extensions to the article.

Referee Reports

You will be required to read current working papers and write two referee reports. We will spend some time in class talking about referee reports and you will be required to read the third chapter of Thomson's book on how to write one. You are free to pick any working paper, however, I need to approve it before you begin. Good places to find working papers (but not the only places) are: the National Bureau of Economic Research (NBER) and the Social Science Research Network (SSRN).

You will have the option to turn in a first draft of your reports early - at most two days before the due date. I will provide information on how to improve your paper. Also, I will put a partial grade on every first draft I receive in order for you to assess if any additional work is needed. I strongly encourage you to consider turning in a first draft, but by no means you will be penalized if you decide not to, it is just an option.

Oral Exam

The last day of class will consist of oral examinations. Each student will meet me in my office for 45 minutes, where I will ask questions covering the material from the first part of the course, 1 paper of my choosing, and 1 paper chosen by the student. The oral exam will be treated as a job interview; you are interviewing for a job as my research assistant. This means that 25% of your grade will be determined by how well you interview (good eye contact, posture, etc...), with the remaining 75% being weighted toward content.

GRADE DISTRIBUTION

A	100-93	B	85-78	C	70-63	D	55-49
A-	93-89	B-	78-74	C-	63-59	NC	49-0
B+	89-85	C+	74-70	D+	59-55		

TENTATIVE COURSE OUTLINE

Week 1:
Math Review
The Lucas Critique
Work-Leisure Model
Two-Period Models
Week 2:
Models with Infinitely Lived Agents
Dynamic Programming
Overlapping Generations Models
Week 3:
Models with Money
Open Economy Macro Models
Midterm
Presentations
Week 4:
Presentations
Oral Exams

IMPORTANT DATES

Problem Set 1 - due Friday, February 19
Problem Set 2 - due Friday, February 26
Referee Report 1 - due Monday, March 1
Problem Set 3 - due Wednesday, March 3
Midterm Exam - Thursday, March 4
Referee Report 2 - due Wednesday, March 10
Oral Exam - Wednesday, March 10

ATTENDANCE

Attendance is not mandatory; however, do not expect me to cover material taught in class during office hours if you were not present for that particular day unless you have proper documentation justifying your absence.

CHEATING

For every assignment in this course you must follow CC's honor code. If you have not yet done so, I encourage you to read the honor code, which can be found at the Pathfinder under Honor Council Constitution. The penalty for cheating in this course is a final grade of no credit (NC).

DISABILITY

If you have a disability that requires accommodation for this course, please see me by Wednesday, February 17, so that your needs are appropriately met. If you have not already done so, you will need to register with and get the appropriate paperwork from the Disability Services office (227-8285). The Disability Services office is located in the Learning Commons of Tutt Library.