Econ 20210: Elements of Economics Analysis 3 - Honors Syllabus

Lun Li

University of Chicago

Spring 2017

Logistics

Lecture: Tuesdays and Thursdays, 1:30-2:50 PM, STU 104
Discussion Session: Mondays, 7:00-7:50 PM, RO 011

Instructor: Lun Li
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Office Hours: Wednesdays, 4:00-5:00 PM and by appointment.

TA: Sheila Jiang
Email: sheilajb@uchicago.edu
Office Hours: Mondays, 10:30-11:30 AM and by appointment.

Overview

The main objective of this course is to provide a mathematically rigorous framework for understanding modern macroeconomics. We will study how the behavior of optimizing agents (households, firms, government, etc) is aggregated in the economy with the crucial notion of equilibrium. With this framework, we will be able to discuss some of the most important macroeconomic phenomena, including growth, business cycle and unemployment. If time allows, we will also discuss more advanced topics such as inequality, endogenous growth theory, and search models in labor market.

Note that the class material will be treated in a mathematically rigorous manner. To do so, the course will develop the required analytical and computational tools for solving macroeconomic models. These include unconstrained and constrained optimization, social planner's problem, competitive markets, general equilibrium, dynamic programming, Hamiltonians as well as an introduction to Matlab.

Texts

Due to the advanced nature of the honors section and the wide range of subjects covered, there is **no required textbook** for the class. The class will be self-contained, and lecture notes/slides will be provided. Required and recommended readings will be provided along with the lecture notes.

Barro's *Macroeconomics: A Modern Approach* is a useful reference (although below the level of this course). A copy will be placed on the library course reserves.

Barro, Robert J. *Macroeconomics: a modern approach*. Thomson South-Western, 2008.

Software

This course will require the use of MATLAB software, which is available on school computers. An introductory guide will be provided through the quarter, and the TA will offer a tutorial for students unfamiliar with the software or programming. No prior programming experience is required.

Formal Requirements

Problem Sets. There will be six or seven problem sets, which can be submitted in a group of two (one write-up for both students). Both members' names must be listed on problem set submissions.

Midterm. The midterm will be held during lecture, tentatively on April 27th, 2017.

Final Exam. The location and time of the final exam will be announced by the registrar later in the quarter, through this link. An early final exam could be scheduled for graduating seniors, or students with summer internships that require them to leave town before the final exam date.If the latter case applies, students must send official proof of employment to Julie Wong: juliew@uchicago.edu, at least four weeks before the final exam date. Unless approved by the instructor, no other excuses will be accepted as reasons to take the early final exam. The early exam will be held during reading period.

MATLAB project. There will be a MATLAB project assigned after the midterm. It will be due in the last week of classes.

Class participation. Students are highly recommended to participate in lectures and discussion sessions. Any material presented by the instructor and the TA may appear in the exams, even when not covered in the posted lecture notes. During class, students are encouraged to ask questions and participate in discussions. Behaviors such as private conversations, browsing the web and checking email will be considered inappropriate, resulting in a deduction of class participation score.

Grading

Final grades will be determined according to the following weights.

Problem Sets. 20%

Midterm and Final. 30% and 35% respectively, or 25% and 40%, whichever is higher.

MATLAB project. 10%.

Class participation. 5%

Integrity

It is the students' responsibility to comply with the University of Chicago's policies on academic honesty and student conduct. Any instances of plagiarism or cheating will be reported to the Department of Economics and the Dean of Student Affairs.