

# E522: Macroeconomic Theory I

## Syllabus

Fall 2019

## Course Information

Instructor: Joshua Bernstein, Email: jmbernst@iu.edu.

Lectures: Monday/Wednesday 1pm - 2.15pm, Wylie Hall 329.

Office Hours: Tuesday 3.30pm - 4.30pm, Wylie Hall 251.

AI: Seok Il Kang, Email: sk86@indiana.edu.

Recitation: TBD

Office Hours: TBD

## Assessment

Assignments: there will be weekly problem sets, which you are welcome to study in groups. However, each student must turn in her own set of solutions. Problem sets will be graded on a 1, 2, 3 scale. A 3 indicates a strong understanding of the material, while a 1 is a sign that the student should revisit the material in order to improve her understanding of it.

Midterm: there will be a midterm exam in class on October 21, 2019. All the material previously covered in class is fair game for the midterm.

Final: the final exam will take place on December 20, 2019 from 12.30pm to 2.30pm. All the material covered in the course is fair game for the final exam.

Grading: problem sets (20%) + midterm (30%) + final (50%).

## Goals of the course

Understand how to formulate a macroeconomic model, and define the corresponding notion of equilibrium.

Be able to analyze key economic issues within a given model, through the use of optimization in both sequential and recursive settings.

Be familiar with applications of these techniques to growth, optimal fiscal policy, and search theory.

Understand the mechanics of OLG models.

# **Readings and Course Materials**

## **Textbooks**

(Ac.) An Introduction to Modern Economics Growth, D Acemoglu, (2009).

(LS) Recursive Macroeconomic Theory, L Ljungqvist and T Sargent, (2012).

## **Lecture Notes**

I will post lecture notes on the canvas site before each class. They will be heavily based on the above textbooks, so I encourage you to read the relevant sections before and after each class.

## **Papers**

Since this is an introductory methods course, I will not assign papers from the literature as compulsory readings. However, the textbooks contain excellent summaries of the relevant literature for each topic that we discuss. If you find a particular topic interesting, you should definitely look further into the papers that the authors reference.

## **Course Outline**

### **Sequential Methods + Applications**

The Solow Growth Model (Ac. Ch. 2).

General Equilibrium Theory for Macroeconomics (Ac. Ch. 5).

The Neoclassical Growth Model (Ac. Ch. 8).

Fiscal Policy in the Neoclassical Growth Model (LS Ch. 10 and Ch. 16).

### **Recursive Methods + Applications**

Dynamic Programming (Ac. Ch. 6; LS Ch. 3, 4).

Recursive methods in the Neoclassical Growth Model (Ac. Ch. 8).

Recursive approach to search and matching (LS Ch. 6).

### **Overlapping Generations Models (OLG Models)**

Introduction to OLG models (Ac Ch. 9; LS Ch. 9).

### **Stochastic Sequence Problems (if time permits)**

The Neoclassical Growth Model with Aggregate Uncertainty (Ac. Ch. 17).

Optimal Fiscal Policy with Aggregate Shocks (LS Ch. 16).

# **University Policies**

## **Academic Integrity**

As a student at IU, you are expected to adhere to the standards detailed in the Code of Student Rights, Responsibilities, and Conduct (Code). Academic misconduct is defined as any activity that tends to undermine the academic integrity of the institution. Violations include: cheating, fabrication, plagiarism, interference, violation of course rules, and facilitating academic dishonesty. When you submit an assignment with your name on it, you are signifying that the work contained therein is yours, unless otherwise cited or referenced. Any ideas or materials taken from another source for either written or oral use must be fully acknowledged. All suspected violations of the Code will be reported to the Dean of Students and handled according to University policies. Sanctions for academic misconduct may include a failing grade on the assignment, reduction in your final course grade, and a failing grade in the course, among other possibilities. If you are unsure about the expectations for completing an assignment or taking a test or exam, be sure to seek clarification from your instructor in advance.

## **Sexual Misconduct and Title IX**

As your instructor, one of my responsibilities is to create a positive learning environment for all students. Title IX and IU's Sexual Misconduct Policy prohibit sexual misconduct in any form, including sexual harassment, sexual assault, stalking, and dating and domestic violence. If you have experienced sexual misconduct, or know someone who has, the University can help.

If you are seeking help and would like to speak to someone confidentially, you can make an appointment with:

- The Sexual Assault Crisis Services (SACS) at (812) 855-8900 (counseling services)
- Confidential Victim Advocates (CVA) at (812) 856-2469 (advocacy and advice services)
- IU Health Center at (812) 855-4011 (health and medical services)

It is also important that you know that Title IX and University policy require me to share any information brought to my attention about potential sexual misconduct, with the campus Deputy Title IX Coordinator or IU's Title IX Coordinator. In that event, those individuals will work to ensure that appropriate measures are taken and resources are made available. Protecting student privacy is of utmost concern, and information will only be shared with those that need to know to ensure the University can respond and assist.

I encourage you to visit <http://stopsexualviolence.iu.edu/index.html> to learn more.