

**University of Virginia**  
**Department of Economics**  
**ECON 4810 Advanced Macroeconomic Theory**  
**Syllabus**

Spring 2014  
Thursday 8:15am-10:45am  
New Cabell Hall 042

Instructor: Toshihiko Mukoyama ([tm5hs@virginia.edu](mailto:tm5hs@virginia.edu))

Office: 256 Monroe Hall

Office hours: Thursday 1:30pm-2:30pm or by appointment. You can make an appointment by e-mail.

### **Description**

This course studies the macroeconomic theory beyond the intermediate level. The dynamic aspect of macroeconomic analysis is particularly emphasized. First, basic mathematical tools are reviewed. Then, we cover basic models of economic growth. We also study macroeconomic analysis under uncertainty, asset pricing, and various topics of macroeconomic policy.

### **Prerequisite**

ECON 3010 and ECON 3020. Basic knowledge of calculus is also required.

### **Textbooks**

There is no required textbook. The readings are distributed as necessary. You can use the following books for supplementary purposes, if necessary. (All of them are at Clemons library reserve.)

- Acemoglu, *Introduction to Modern Economic Growth*, Princeton University Press.
- Barro and Sala-i-Martin, *Economic Growth, 2nd ed.* MIT Press.
- Romer, *Advanced Macroeconomics, 4th ed.*, McGraw-Hill.
- Simon and Blume, *Mathematics for Economists*, Norton.

### **Course Webpage**

Class webpage is available through Collab.

### **Grades**

Presentation 15%

Assignments 5%

Midterm exam (in class, February 27) 30%

Final exam 50% (May 2, 9:00am-12:00am)

There will be one bonus point (1%) added for filling out the course evaluation.

- Late assignments are not accepted. I'll reserve the right to make an exception only in extreme cases (due to personal or medical emergencies, in which case the student must provide a written excuse signed by a doctor, parent, or university official). Even for the exception case, a delay of over one week will not be accepted.
- There will be no makeup exams for the midterms. In case of absence, the final exam will count for a larger fraction of the final grade (80%). If your performance is better in the final exam than in the midterm exam, I will increase your weight of the final exam to 80%. (But be careful, the final exam tends to be more difficult.)
- The final exam must be taken on the scheduled dates. I'll reserve the right to arrange a make-up examination for the final exam only in extreme cases (due to personal or medical emergencies, in which case the student must provide a written excuse signed by a doctor, parent, or university official). If a medical emergency occurs during the exam, with doctor's notes I may allow the student to stop taking the exam and continue at a later date.
- The grades cannot be renegotiated.

### Course Outline

**\* are the main topics. Other topics can change depending on students' interest. I may cover topics in a different order.**

1. \*Mathematics
  - \*Dynamic optimization
  - \*Differential and difference equations
2. \*Asset pricing
3. \*Economic growth
  - \*Solow model (review)
  - \*Determinants of Economic Growth
  - \*Ramsey model
  - \*Policies with Ramsey model
  - Other topics on economic growth
4. \*Uncertainty and rational expectations
5. Topics on economic policy
6. Unemployment