212106: Advanced Macroeconomics
Spring, 2016

Can Tian (田粲)
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ADVANCED MACROECONOMICS

*THE SYLLABUS SERVES AS THE GUIDELINE FOR THIS COURSE AND PROVIDES EXPLICIT ANSWERS TO GENERAL QUESTIONS. THE INSTRUCTOR RETAINS THE RIGHT TO INTERPRET AND CHANGE THE TERMS. ANY SUCH TERM CHANGE WILL BE MADE IN WRITTEN FORM ON THE COURSE WEBPAGE.

Class Requirements

There will be about 3 problem sets. These will be graded coarsely. It is strongly recommended that you attempt the problem sets yourself. You may discuss difficulties with your classmates, the TA, myself (in that order) if you are stuck.

Further, there will be 2 in-class midterm tests and a final exam (all are closed-book). The 2nd midterm will only cover material since the first midterm. The final exam is cumulative. I will make sample exams available about a week before the actual exam. Grades for the class will be based on:

1. Midterms (scheduled on March 30, May 4, subject to change.)
2. Problem sets
3. Final Exam (date TBD)

There will be no make-up exams for the two midterms. The weight will add to the final exam if you fail to take one or both of the midterms.

Your actual final grade will be:

min{100, max{Final, 20%M1+20%M2+10%PS+50%Final}+Bonus}

You are expected to conform to the student code and/or other school policies as per usual.

Course Website

All slides, syllabus, problem sets and answer keys, announcements, sample exams, and/or other related materials will be posted on:

http://bb.shufe.edu.cn/

Please check our course page on a regular basis.

Prerequisite

This course requires that you have learned (but potentially not limited to) calculus, real analysis, probability theory and statistics, and also consumer and firm theory from

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microeconomics. I assume that you have experience in working with MS Excel. Programming background is preferred.

Course Objective

The focus of this course is to provide a basic understanding of the language used in modern macroeconomic research. We start from the measurement of key macroeconomic variables, then warm up with the static models, and eventually discuss the dynamic ones, especially the neoclassical growth model. OLG model and the search model will also be discussed if time permits. This course is not intended to provide a comprehensive coverage of the latest development in macroeconomic research, nor does it attempt to provide an explicit answer to any specific macroeconomic question. Rather, it is better viewed as an in-depth introduction to the set of tools adopted by macroeconomists. For all intents and purposes, as part of the training process, this course serves as the first step towards the realm of modern macroeconomic research.

Suggested Reference

I will post slides and lecture notes on BB. The following books are recommended (but not required) for reference.

- Stephen D. Williamson, Macroeconomics, 5th Edition, Pearson Prentice Hall (2013)
- Lars Ljungqvist and Thomas J. Sargent, Recursive Macroeconomic Theory, 3rd Edition, The MIT Press (2012)
- Nancy L. Stokey and Robert E. Lucas, with Edward C. Prescott, Recursive Methods in Economic Dynamics, Harvard University Press (1989)
- Daron Acemoglu, Introduction to Modern Economic Growth, Princeton University Press (2009)
- Thomas Cooley, Frontiers of Business Cycle Research, Princeton University Press (1995)

Class Logistics

The class meets on Wednesday 13:20-16:10. You are expected to attend all classes. Assignments will be posted on Blackboard. Your TA will arrange the review sessions when necessary. Assignments are due on the due date. No late assignments. Points forfeited.

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Contacting Us

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My office is SOE 306.
My office hour is Wed/Thu 16:10-17:10 (or by appointment if necessary).

Tentative Agenda

Below is a list of topics that I intend to cover in this course. The agenda is tentative and may be subject to change. [# of weeks needed]

0. Introduction [0.5]
1. Measurement and Data [1]
2. Growth [2]
    - 2.1 Introduction to Growth Theory and Growth Accounting
    - 2.2 Malthusian Growth Model
    - 2.3 Solow Growth Model, Convergence and World Income Distribution
    - 2.4 Endogenous Growth Theory (Optional)
    - 2.5 Human Capital and Growth (Optional)
3. One-period (Static) Macroeconomic Models [2.5]
    - 3.1 General Equilibrium & Welfare Theorems
    - 3.2 Choice under Uncertainty
    - 3.3 Search and Unemployment (Optional)
4. Dynamic Macroeconomic Models [8]
    - 4.1 Two-period Intertemporal Choice and General Equilibrium
    - 4.2 Neoclassical Growth Model
    - 4.3 Models with Risk
    - 4.4 Business Cycles
        - 4.4.1 Real Business Cycles
        - 4.4.2 Monetary Cycles (Optional)
        - 4.4.2 Coordination Failure Cycles (Optional)
    - 4.5 Overlapping Generations Model (Optional)
    - 4.6 Search Model (Optional)