

University at Albany
Department of Economics
Economics 601 - Macroeconomics I
Fall 2009: T/TH 2:45PM-4:05PM
Room BA 213

Prof: Adrian Masters
Phone:437-4418
Email: amasters@albany.edu

Office: Economics BA 111B
Office Hours: W, 1:30-3:30

GA: Si Gao
E-mail: sg146415@albany.edu

Office: TBA
Hours: TBA

Course Description:

This course introduces the three main workhorse models that are used in modern macroeconomic analysis. These are optimal growth, overlapping generations and search. The aim of the macroeconomics sequence is to have students learn how to develop market (general equilibrium) models to address issues of relevance to macroeconomists. Much of this course is spent on the required analytical tools that are used. These are learned through the exposition of increasingly sophisticated macroeconomic models.

Reading:

Most of the semester will utilize the notes at <http://www.artsci.wustl.edu/~swilliam/courses/notes06.pdf> developed by Prof. Steve Williamson at Washington University in St. Louis. They will be supplemented by what we do in class. Beyond this there is no necessary reading but I will make reference at time to the following texts.

Ljungqvist, L. and Sargent, Thomas J. (2004). *Recursive Macroeconomic Theory 2nd ed.*, MIT Press, Cambridge, MA.

Blanchard, O. and Fischer, S. 1989. *Lectures on Macroeconomics*, MIT Press, Cambridge, MA

Stokey, N., Lucas, R. and Prescott, E. (1989). *Recursive Methods in Economic Dynamics*, Harvard University Press, Cambridge, MA.

Notes on Dynamic Programming and Search are available from Prof. R. Wright's web page: <http://www.ssc.upenn.edu/~rwright/>

A math text referenced is:

Rudin, W. (1976) *Principles of Mathematical Analysis* 3rd ed. McGraw-Hill.

Those of you have not had a modern intermediate level macroeconomics course might want to look at Prof Williamson's Book: *Macroeconomics*, published by Addison-Wesley.

Homework: These will be taken from those devised by Prof. Steve Williamson, and myself. You will typically get at least one week to hand in your homework solutions.

Grading: The course grade will depend on a midterm, a final exam and homework. The mid-term will be 30% of the grade. The final will be 60%. The remaining 10% will be for homeworks. Homeworks will be graded by the TA on a pass/fail basis. If you do not make the deadline you automatically get a fail on that homework.

Outline of Content

Part 1 Methodology and Introductory models

- (a) 1 period model with production
Williamson notes: static models
- (b) 1 period model with production and government
Williamson notes: government
- (c) Simple dynamic model, with government
Williamson notes: Ricardian Equivalence
- (d) 2 Period model with inside money (saving)
Class notes only.

Part 2: Overlapping generation models

- (a) Endowment economy
Blanchard and Fischer
- (b) Social security/outside money in endowment economy
Blanchard and Fischer
- (c) Diamond economy including government debt and failure of Ricardian equivalence
Williamson notes.

Part 3: Optimal growth and dynamic programming

- (a) Basic model environment
- (b) Planners version
Williamson notes
- (c) Introduction to dynamic programming (DP),
Wright notes (metric spaces, Rudin p30, contraction principle, Rudin p220)
- (d) Optimal growth planners problem using DP
Williamson notes
- (e) Decentralized optimal growth model and competitive equilibrium
Williamson notes

Part 4: Elementary Monetary Economics

- (a) Money in Utility Function models
Blanchard and Fischer
- (b) Cash-in-Advance Models
Williamson notes, Chapter 8

Part 5: Search

- (a) Stochastic Dynamic programming
Williamson notes, Chapter 5
- (a) One-sided search and the reservation wage
Williamson notes, Chapter 7
- (b) Diamond's Coconut model
Williamson notes, Chapter 7
- (c) Jovanovic's learning-about-the-match model
Ljungqvist and Sargent