Advanced Macroeconomics

Lecture: MW 8:30-10:20 ARC G070

Class Website: https://catalyst.uw.edu/workspace/oml/35295/
Check this site regularly as class-related information will appear often.

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Description and Learning Objectives

This course provides a more in depth look into contemporary macroeconomic concepts, theoretical and quantitative analysis. We will learn how empirical observations help us discern the validity of different models. We will also learn how empirical observations can be used to calibrate economic models, which is a necessary step for quantitative inquiry into important questions. The main learning objective is for you to gain a deeper understanding of how modern economic analysis is conducted. In the meantime, you will learn a number of widely used economic models and results. A secondary goal is to introduce you to the existing data sources.

Topics

The first part of the course will be devoted to understanding growth and development. The question that remains unanswered is why some countries are poor while others are rich. We will study the Malthusian model, which is successful at explaining the experience in preindustrial time. We will then study two simple growth models aimed at capturing the growth experience of post-war period: The Solow growth model extended to include exogenous technical progress and the AK endogenous growth model. We will then move on to more difficult models of endogenous growth and also study the issue of the demographics and how it relates to growth. In the second part of the course, we will focus on public finance issues, i.e. study the effects on labor supply and welfare of different types of fiscal policy (taxes). We will also study a simple version of overlapping generations model and use it to talk about social security issues.

Reading Material

My lecture notes and notes you take in class. There is no official text for this class, as none exists that adequately presents the material I want to cover.

Prerequisites

2.0 in ECON 301; either MATH 126, MATH 129, or MATH 136; recommended: 3.0 in ECON 301.

Your Grade

There will be 2 exams (30% of the final grade each) and 4 homework assignments (10% of the final grade each).
Administrative rules

• Checking your university e-mail/catalyst is a must. I will often communicate with you via e-mail.

• Homework Assignments. When homework assignment is due (always on a Wednesday), they are due at the beginning of the lecture. Homework will be posted on line at least 1 week in advance. Late homework submitted on the day assignment is due will be discounted at 20%. Homework submitted the next day or later will not be accepted. I require that homework assignments are typed (If you cannot type formulas, you can hand-write those).

• Make up exams. In case of a documented emergency, the weight of the missed first exam will be added to the second exam. There will be a make-up for the second exam in the case of a documented emergency.

• Missed class. You are not required to attend. However, it is important to come to class if you want to understand all of the material covered. Although there will be lecture notes posted on my website, I recommend that you also take class notes as I will explain concepts in more detail. I further recommend to print the notes out prior to class, because I do not allow laptops in class.

• No Laptops/electronic devices are allowed in class. If you choose to attend the lecture, please pay attention and turn off all your electronic devices. If you actually take notes using a laptop (very few people can keep up with the formulas if they attempt to type things), then I ask you to sit in the very back of the class. This way, you will not distract others should you decide to check your email.

• Class Participation. I strongly encourage class participation. Please stop me if you are not following. Chances are you are not the only one. Voice your opinion. Question the validity of the theory I am teaching.

Tips on how to do well in this class
Get a study partner. Exchange emails with the person next to you.

Work on homework assignments with your study partner/partners. Submit homework assignment for groups of up to 3 (3 people is okay).

Homework assignments for this class are time consuming. Start working on your homework as early as possible and bring your questions to class (on Monday) prior to the homework due date (Wed). Note that my office hours are on Mondays, so you should really make sure you have your questions answered by then.

I will not answer homework related questions by email. Do not take this personally. I will be happy to answer your questions in class on Monday, or during my office hours on Monday. In addition, the grader will hold office hours on Tuesdays, in case you still have questions.

Read lecture notes before coming to class. This way you can be more engaged, and ask questions during the lecture.

Practice exams are available, and after you study for the exams, you should time yourself and take a practice exam. Only after that you should look at the answer key.

Everything you need to know is in the lecture notes. So, as long as you study those and understand them thoroughly, you will do well in the class.

Preliminary Schedule
### I. Economic growth unit

Facts prior to 1800, Malthusian Model  
Growth Accounting, Level Accounting, Cross-country income differences

Facts, post 1800  
Exogenous Growth Models:  
- baby Solow Model  
- Solow Model with technical change  
Endogenous Growth Models:  
- AK Endogenous Growth Model  
- Expanding Variety Model (Romer 1987)

Using the exogenous and endogenous growth models to interpret and to make predictions about the relative country performance

### II. Growth and Demographics over the Long Run

Unified growth theory (Galor-Weil 2000), solving the model in Excel  
Understanding the transition from the Malthusian to Post-Malthusian Regime, and from Post-Malthusian Regime to Modern Regime.

### III. Fiscal Policy Unit

Lump Sum taxation, government debt and Ricardian equivalence (a 2 period model)  
Overlapping Generations model and Social Security systems  
Paying for the Social Security Reform (Krugman’s article)

Distortionary Taxation  
Which distortionary taxes distort less? (Poterba’s article)

Public finance in the simple Neoclassical Growth Model  
Why do Americans work so much more than the Europeans? (i.e. do taxes account for the cross-country differences in the labor supply (Prescott’s article)

Inequality and Redistributive Aspects of Taxes

### Important Dates

Exam 1: Wed, Feb 11 (covers Unit 1)
Exam 2: Wed, March 11 (covers Units 2 and 3)

### Holidays:

- Monday, Jan 19
- Monday, Feb 16