

# Syllabus

## Macroeconomics

Course Name	Course type (credit/hours)	전선(3/3)			Course code	
	Target students Division/major/grade	/			Opening semester	2017년 1학기
	Class time and classroom	월B(다505) 수B(다505)(다505)				
Reference to this course	Related basic courses					
	Recommended concurrent courses					
	Related advanced courses					
Instructor	Name (title/division)					
	Office Room Number		Office phone Number	3670	e-mail	janeyoo@ajou.ac.kr
	Office hours		Homepage address			
Teaching Assistant	Name (title/division)					
	Office Room Number		Office phone Number		e-mail	

### 1. Introduction

This is a graduate course in macroeconomics. We will cover range of topics including

- 1) Introduction to dynamic programming in a deterministic, and then a stochastic environment;
- 2) Contingent claims pricing;
- 3) Consumption and asset pricing;
- 4) Dynamic Stochastic General Equilibrium models.

Mastery of graduate level mathematics is assumed;

- 1) Real Analysis
- 2) Mathematical Statistics
- 3) Time series Econometrics

### 2. Course Objectives

### 3. Class types and activities

This is a graduate course in macroeconomics. We will cover range of topics including

- 1) Introduction to dynamic programming in a deterministic, and then a stochastic environment;
- 2) Contingent claims pricing;
- 3) Consumption and asset pricing;
- 4) Dynamic Stochastic General Equilibrium models.

### 4. Teaching Method

Most of classes will be based on my lecture notes. I will use E-class extensively for posting lecture notes, related journals, book chapters, problem sets and sample exams etc. We will have two main sources of readings in the course. The first is lecture notes written by Steve Williamson in Washington University at St. Louis. Secondly, you are encouraged to read the relevant journal articles or book excerpts cited in the notes for extra clarifications. These notes are available online.

### 5. Knowledge and ability required for taking this course

### 6. Method of Evaluation

Evaluation Item	The Number of Times	Evaluation Proportion	Remarks
Attendance			
midterm exam	1	20	take-home
final exam	1	60	in-class, comprehensive
quiz			
presentation			
discussion			
homework	3	20	take-home
etc			

3 Problem sets: 20%  
 Midterm Exam: 20%  
 Final Exam: 60% (Comprehensive)

There will be NO makeup final exam in any chance for any reason.

## 7. Textbooks

Main/Sub	Title	Writer	Publisher	Publication year
참고자료	Dynamic Economics: quantitative methods and applications	Adda, Jerome and Russell Cooper	MIT Press	2003
참고자료	Methods for Applied Macroeconomic Research	Canova, Fabio	Princeton	2007
참고자료	Advanced Macroeconomics	Romer, David	McGraw-Hill Irwin	2005
참고자료	Recursive Macroeconomic Theory	Ljungqvist, Lars and Thomas J. Sargent	MIT Press	2004

## 8. Lecture Schedule

Week	Lecture contents	Lesson type	Remark
1	Simple Representative Agent Models	Lecture	
2	Competitive Equilibrium and Pareto Optimality	Lecture	
3	Deterministic Dynamic Programming 1:	Lecture	
4	Deterministic Dynamic Programming 2: Computing in Matlab	Lecture	
5	Stochastic Dynamic Programming 1	Lecture	
6	Stochastic Dynamic Programming 2	Lecture	
7	Contingent Claims Pricing 1	Lecture	
8	Contingent Claims Pricing 2	Lecture	
9	Consumption under Uncertainty	Lecture	
10	Asset Pricing: Notes on Equity Premia	Lecture	
11	Dynamic Stochastic General Equilibrium Models (DSGE Models)	Lecture	
12	DSGE Models: The Real Business Cycle Theory	Lecture	
13	Time Series and DSGE Models: Computing in Dynare	Lecture	
14	Final Exam		

## 9. Others

The overdue problem sets will receive zero credit. Studying in pairs or groups is highly recommended. If you work on the problem sets in a group, please turn in a single copy of the answers with the names of the contributors. Each person will receive the same score.