

MACROECONOMIC ANALYSIS I

Syllabus

Semester:	Spring 2018		
Time:	Th, 17:30-20:00		
Place:	East Quad Building 200		
Instructor:	Ignacio González	TA:	Stephan Lefebvre
Email:	ignaciog@american.edu	Email:	sl3640a@student.american.edu
Office:	Kreeger G11	Office:	Kreeger G02
Office Hours:	W & Th 15:00-17:00 (or by appointment)	TA session:	TBA
		Office Hours:	M 14:00 - 16:00

Course Description and Objectives: This course presents standard models used in modern macroeconomics. Most of the material will be studied from a theoretical perspective, emphasizing both the general picture and the technical aspects of the models. We will begin with a partial equilibrium discussion of the consumption/saving problem of households, including the role of uncertainty. We will also use a partial equilibrium approach to study different models of investment behavior, including the relationship between firms and financial markets. We move next to a discussion of dynamic programming techniques in order to make these models easy to solve. Then we will turn our attention to general equilibrium models and we will first focus on the neoclassical growth model (with and without uncertainty). We will also learn how to solve this model using dynamic programming techniques. Then we enrich the environment of the neoclassical growth model by introducing nominal rigidities and monopolistic competition, and we will build a canonical New Keynesian model. We will use this model to study fiscal and monetary policy, and we will discuss important financial imperfections. We will move next to a discussion of unemployment and the main frameworks that the literature uses to understand unemployment fluctuations. We will conclude the course with an introduction of incomplete markets models, which are becoming an increasingly popular framework to study wealth inequality and its policy implications.

Prerequisites: ECON-705 (Mathematical Economic Analysis).

Course website: Information about course as well as lecture notes will be posted on Blackboard: <http://blackboard.american.edu>

Required Reading: I will provide lecture notes. You must also check Blackboard for additional readings per topic (compulsory when indicated). They will be announced as the course progresses. Material from the following books will be used in this course but you are not required to buy any of them. Chapters indicated below usually overlap so you are not expected to read all them, but they are useful references to complement the lecture notes.

- David Romer, *Advanced Macroeconomics*. 4th edition (DR)
- Olivier Blanchard and Stanley Fischer, *Lectures on Macroeconomics*. MIT Press, 1989. (BF)
- Angus Deaton, *Understanding Consumption*. Oxford University Press, 1992. (AD)
- Carl Wash, *Monetary Theory and Policy*. 2nd Edition (CW)

- Lars Ljungqvist and Thomas Sargent, Recursive Macroeconomic Theory. 2nd or 3rd Edition. (LS)
- Michael Wickens, Macroeconomic Theory. 2nd Edition. (MW)
- Jianjun Miao, Economic Dynamics in Discrete Time. MIT Press, 2014. (JM)
- Adda and Cooper, Dynamic Economics. MIT Press, 2003. (AC)

Class Policy:

- Our class meetings are on Thursday 17.30-20.00. I will start sharply at 17.30. You are expected to attend all lectures. If you are not able to attend a lecture, please email me in advance.
- You are responsible for making up anything that was covered during the lectures you missed.

Grading Policy:

- Home assignments (30%), Final exam (70%).

Home assignments: There will be 7 assignments throughout the semester. The assignments will consist of some modelling, analytical and basic numerical tasks. We will have the chance to learn some programming with Matlab and simple codes will be provided and discussed during class and/or TA sessions. Assignments will not be accepted after the indicated deadline (no exceptions will be made, apart from documented medical or family emergencies). Assignments are extremely important for the exam and for your future research. They allow us to learn not only about existing work but also about how to do work. You are encouraged to work in groups to solve them. However, each of you must hand in his own independently written answers to Stephan (hard copy or via email).

Final Exam: The final exam is closed book and will cover the entire material. A general review session will be given by the instructor prior to the exam.

Important Dates:

First day of class	January 18, 2018
No class (Spring break)	March 15, 2018
Instructor's review session for final exam	April 30, 2018
Final Exam	May 3, 2018

Academic Integrity:

- Students must comply with the Academic Integrity Code available at <http://www.american.edu/academics/integrity/code.cfm>.
- You should read it carefully, particularly section II.A (definition of academic integrity violations, including plagiarism and dishonesty in examinations) and section III.C (sanctions).

Academic Support:

- All students may take advantage of the [Academic Support and Access Center \(ASAC\)](#) for individual academic skills, counseling, workshops, tutoring and writing assistance, as well as Supplemental Instruction.

- Students who wish to request accommodations for a disability, must notify me with a letter of approved accommodations from the ASAC. As the process for registering and requesting accommodations can take some time, and as accommodations, if approved, are not retroactive, I strongly encourage students to contact the ASAC as early as possible. For more information about the process for registering and requesting disability-related accommodations, contact ASAC.

COURSE OUTLINE:

Introduction to the Course and Review of Traditional Models.

Solow Model, IS-LM, Phillips Curve.

Jan 18

Consumption. (AD 1.1, 1.3, 3; AC 6.2; DR 8; MW 4.2, 4.3)

Intertemporal Consumption Problem. Labor Supply and Consumption. The Euler Equation. Consumption and saving under uncertainty.

Jan 25 and Feb 1

Investment. (DR 9; MW 2.7; JM 8.6.1, 8.6.2)

The Hall-Jorgenson Model of Investment. The Q-Theory of Investment. Financial Markets and Firms Behaviour. The Modigliani-Miller theorem.

Feb 8

Introduction to Dynamic Programming (AC 2; 3, 6.3, 8.1-8.4; LS 3, 4; JM 6, 7, 8.3-8.4; BF 6.2, 6.3)

Finite and Infinite Horizon Problems. Recursive formulation and Bellman's equation. The Envelope Theorem. Value and Policy Functions. Key examples: Investment and Consumption problems.

Feb 15 and 22

The Neoclassical Growth Model (MW 2, 4; DR 5; AC 5.1-5.4; LS 12; JM 14)

Without uncertainty (a basic Ramsey model) and with uncertainty (a canonical RBC model)

March 1 and 8

New Keynesian Models. (MW 9; DR 6, 7; CW 6, 8; JM 19; BF 8)

Sticky prices. Monopolistic competition. Monetary and Fiscal Policy Design. A Medium-Scale DSGE.

March 22 and 29, and April 5

Financial Market Imperfections (MW 15)

Financial intermediation. Borrowing Constraints. Default.

April 12

Unemployment and Wages (DR 10; MW 10; JM 18; BF 9.3-9.4)

Wage Determination. Efficiency-Wage theory. An introduction to Search Theory

April 19

Incomplete Markets (LS 17 (2nd ed) or 18 (3rd ed); JM 17)

An introduction to incomplete markets models (Bewley models). Idiosyncratic shocks. Precautionary savings. Endogenous wealth inequality.

April 26