

12E004

Advanced Microeconomics I

Term 1 - 6 ECTS

Mandatory Course

Prof. Larbi Alaoui

Prerequisites to Enroll

A solid mathematical background is essential for this course. The class is almost entirely proof-based, as is the exam.

Overview and Objectives

This course lays down the foundations of modern economic theory. We will start with the classical theory of choice by first describing in detail the setting, the preferences of the agent, the representation of the agent's preferences by way of utility functions, and finally the behavior of the agent. We will then study these questions in a market setting to model the behavior of the consumer. Our next step will model a firm as a single actor, and will study its production decisions subject to technological constraints. We will then study decision making under uncertainty, and close this course with social choice theory.

This course is the first in a sequence of three, designed *only* for students that intend to pursue a PhD in Economics. It is assumed that the students have an advanced knowledge of intermediate microeconomics and a strong mathematical background.

Note: attending the first lecture is mandatory. Students who are not certain of pursuing their PhD must email the professor for permission to take the course.

Course Outline

1.- Abstract Individual Choice Theory.

Mas-Colell, Whiston and Green (1995): Chapter 1.

Rubinstein (2006): Lectures 1, 2, and 3.

Jehle and Reny (2001): Chapter 2.3.

2.- Consumer Choice

Mas-Colell, Whiston and Green (1995): Chapters 2 and 3.

Rubinstein (2006): Lectures 4, 5, and 6.

Jehle and Reny (2001): Chapter 1.

3.- The Firm

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Mas-Colell, Whiston and Green (1995): Chapter 5.
Rubinstein (2006): Lecture 7.
Jehle and Reny (2001): Chapter 3.

4.- Uncertainty

Mas-Colell, Whiston and Green (1995): Chapter 6.
Rubinstein (2006): Lectures 8 and 9.
Jehle and Reny (2001): Chapter 2.4.

5.- Social Choice Theory

Mas-Colell, Whiston and Green (1995): Chapters 21-22.
Rubinstein (2006): Lecture 10.
Jehle and Reny (2001): Chapter 6.

Required Activities

There will be take home problem sets to hand in. The practical sessions, managed by the TA, will be devoted to the solution of some key problems in the problem sets. Students are expected to actively participate.

Evaluation

The final grade of the course will be the average of 25% of the problem set grades and 75% of the final exam grade.

Competences

- Capacity of utilization of the theoretical instruments of the to analyze situations of coherent form.
- Ability to use the appropriate (statistical and numerical) techniques.
- Ability to make independent judgments and defend them dialectically.
- Acquire a solid knowledge base for the study of quantitative issues.
- Ability to work with microeconomic analysis tools and their empirical and theoretical applications.

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Learning Outcomes

- Students should get an overview of economic and financial theory.
- Students must be able to recognize theories and present arguments with precise examples.
- Students will know what the appropriate inference for each situation is.

Materials

The main textbooks are:

Mas-Colell, A., M. Whinston and J. Green, *Microeconomic Theory*. Oxford University Press, Oxford 1995.

Rubinstein, A. *Lecture Notes in Microeconomic Theory*. Princeton NJ: Princeton University Press 2006.

Other recommended textbooks are:

Jehle, G. and P. Reny, *Advanced Microeconomic Theory*, 2nd edition. Addison Wesley, 2001.

Kreps, D., *Notes on the Theory of Choice*, Westview Press, New York 1988.

Kreps, D., *A Course in Microeconomic Theory*, Princeton University Press, Princeton 1990.

Varian, H. *Microeconomic Analysis*, 3rd Edition. W. W. Norton & Co, New York 1992.