

Microeconomic Theory I

Ph.D. in Economics

Instructors: Boris Ginzburg and Belén Jerez

Universidad Carlos III de Madrid

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Overview

This course provides an introduction to microeconomic theory designed to meet the needs of students in the economics Ph.D. program. Some parts of the course are designed to teach material that all graduate students should know. Others are used to introduce methodologies. The topics include some of the most fundamental topics of classical microeconomics: consumer and producer theory, choice under uncertainty, general equilibrium and social choice, and tools of comparative statics.

Textbooks

A standard textbook is A. Mas-Colell, M. Whinston and J.Green, *Microeconomic Theory*, Oxford UP 1995, and for short it will be referred to as MWG below. This is the recommended, primary text for the course and is a detailed, dense text that covers most of the course content and much more.

Other textbooks that can be helpful are:

C. Hara, I. Segal and J. R. Green, *Solutions Manual for Microeconomic Theory*, Oxford University Press, 1997

D. Kreps, *A course in Microeconomic Theory*, Princeton U Press, 1990

G. Jehle, and P. Reny, *Advanced Microeconomic Theory*, Prentice-Hall 2000

For the part of the program that covers general equilibrium theory, the following are useful references:

B. Ellickson, *Competitive Equilibrium: Theory and Applications*, Cambridge 1993.

G. Debreu, *Theory of Value*, Cowles Foundation, 1959.

K. Arrow and F. Hahn, *General Competitive Analysis*, Holden Day, 1971.

W. Hildenbrand and A. Kirman, *Introduction to Equilibrium Analysis*, North-Holland, 1976.

Some classical articles in general equilibrium theory are also assigned:

- L. Makowski and J.M. Ostroy, "Perfect Competition and the Creativity of the Market," *Journal of Economic Literature*, 39, 2001, 479-535
- L. Makowski and J.M- Ostroy, "Appropriation and Efficiency: A Revision of the First Theorem of Welfare Economics," *AER*, 85, 4, 808-27
- K. Arrow, "The Role of Securities in the Optimal Allocation of Risk-Bearing," *REStud*, 31, 1964, 91-96.

Grading

Problems sets will be assigned during the quarter to check your understanding of the material. The grading will be based on a midterm exam (20%) and a final exam (80%).

Course structure

The following list describes the main structure of the course (and the Chapters in MWG that cover each topic).

1. Consumer Theory: preference, utility functions, utility maximization, demand functions, indirect utility functions, expenditure minimization, duality, comparative statics, revealed preference (Chapters 1 to 4)
2. Production Choice: technology, production sets, profit maximization and cost minimization, input demands, supply function (Chapter 5)
3. Choice under Uncertainty: expected utility theory (Chapter 6)
4. Partial Equilibrium: supply and demand, equilibrium in competitive markets, efficiency, taxes, subsidies, price controls (Chapter 10)
5. General Equilibrium in Competitive Economies: partial and general equilibrium, existence of competitive equilibrium, cooperative and non-cooperative foundations of the competitive equilibrium, welfare theorems (Chapters 15 to 19)
6. Social Choice Theory: preferences aggregation, social choice functions, Arrow's Theorem (Chapter 21)