

17P025

Microeconomics

Fall Term - 6 ECTS

Mandatory Course

Prof. Pau Olivella and Prof.
Ramon Caminal

Prerequisites to Enroll

None.

Overview and Objectives

The course aims at providing students with the basic tools of Game Theory and Microeconomic Analysis, while bearing in mind the main objectives of the MCR and EPP programs. Applications to these areas will be given to illustrate the predictive power of these tools, with the final objective of making policy recommendations.

Course Outline

1. **Game theory: simultaneous-move games.** Best response, dominant strategies, rationalizable strategies, Nash equilibrium. Applications: oligopoly, auctions, electoral competition, provision of public goods.
2. **Game Theory: dynamic games.** Backward induction, subgame perfection. Applications: price leadership, entry deterrence, rules versus discretion in economic policy.
3. **Game Theory: topics.** Repeated games, incomplete information, bounded rationality, social behavior. Applications: collusion, bargaining.
4. **Consumer theory:** Preferences, budget constraints, choice, utility maximization, demand functions, inverse demand functions, aggregate demand, elasticity.
5. **Externalities and public goods** and the need of market intervention
6. **Applications of consumer theory:** Decision theory under uncertainty: Risk aversion and insurance; Endowment effects: the labor-leisure decision.
7. **Producer theory:** Technology, production functions, cost minimization, cost functions, returns to scale, long and short-run cost functions.
8. **Profit maximization and equilibrium in perfectly competitive markets:** a firm's supply and aggregate supply, short-run and long-run market equilibrium.
9. **Welfare analysis:** Consumer and producer surplus, taxes and subsidies.
10. **Adverse Selection:** Akerlof's model, screening, signaling. Applications: insurance and labor markets, monopoly regulation.
11. **Moral hazard.** Principal-agent problem, dynamic considerations. Applications: credit, labor, insurance markets.

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Required Activities

Problem sets will be distributed regularly. Some selected problems will be graded. Solutions for all problems will be published in the intranet.

Evaluation

Problem sets (20%) and a Final Examination (80%)

Competences

- To (be able to) communicate with determination and in the English Language, the results and implications of the required analytical study using a language that the receiver can relate to.
- To work within a heterogeneous team of researchers as economic analyst using specific group techniques.
- To fit in diverse professional environments and varied types of collaborations in different professional projects
- To possess and understand the knowledge that provides a basis or opportunity to be original in the development and / or application of ideas, often in a research context.
- That students know how to apply the acquired knowledge and their ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study.
- That the students be able to integrate knowledge and face the complexity of making judgments based on information that, being incomplete or limited, include reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments.
- That the students be able to communicate their conclusions and the knowledge and the ultimate reasons that sustain them to both, specialized and non-specialized publics in a clear and unambiguous way.
- That students possess the learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous.
- To identify and apply the insights of the theory, the models, and the analytical tools of modern economy to its global dimension

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Learning Outcomes

- Knows the quantitative economy
- Knows the different specific fields in economy
- Knows the theory, practice, fundamentals and applications of economic policies
- Knows the theory and practice of financial markets
- Analyzes the problems of banking management and other financial institutions using economic theory.

Materials

Units 1-3

Harrington, J. (2009), *Games, Strategies and Decision Making*. Worth Publishers.

Watson, J. (2013), *Strategy: An Introduction to Game Theory*. Norton. 3th edition.

Units 4-9

Varian, Hal, *Microeconomic Analysis*, Norton

Mas-Colell-Whinston-Green, *Microeconomic Theory*, Oxford University Press

Units 10-11

Macho-Stadler, I. and D. Perez-Castrillo (2005), *An Introduction to the Economics of Information*. Oxford University Press, 2nd edition.