

Academic Year: (2022 / 2023)

Review date: 20-05-2022

Department assigned to the subject: Economics Department

Coordinating teacher: LOEPER , ANTOINE

Type: Compulsory ECTS Credits : 9.0

Year : 1 Semester : 2

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Microeconomics I, Mathematics

OBJECTIVES

Basic competences:

To possess and fully understand the knowledge to be able to develop and apply ideas in an original way in a research context.

Students should be able to apply acquired knowledge and skills to solve problems to new environments.

Students should be able to integrate knowledge and face complex situations in which to formulate an educated opinion based on available information, that may be incomplete and limited. These opinions must include a reflexion on the social and ethical responsibilities of the application of the knowledge.

Students should be able to communicate their conclusions and knowledge, and the bases for them, to non specialized audiences.

Students should acquire the skills to keep learning in an autonomous way.

General competences:

Students should be able to analyze and summarize a scientific text.

Students should be able to interpret and write advanced texts on Economics and using the English language.

Students should be able to apply the advanced knowledge from the specific programs on Economics, Mathematics and Econometrics.

Students should be able to evaluate a scientific text.

Students should be able to write scientific texts and presentations.

Students should be able to identify the standard procedures in science and in particular in the economic science.

Students should be able to identify the added value of a contribution in Economics.

Specific Competences:

Students should be able to apply and interpret the standard model of rational choice under static conditions and without uncertainty.

Students should be able to apply and interpret the extension of the rational choice model to risk and uncertainty.

Students should be able to apply and interpret the extension of the rational choice model to the dynamic framework.

Students should be able to propose applications of the rational choice model, the competitive model and the strategic model to the market.

Students should be able to apply and interpret the standard model of non-strategic interaction: the competitive model and general equilibrium.

Students should be able to apply and interpret the standard model of strategic interaction (game theory) in static and dynamic situations and with or without asymmetric information.

Students should be able to apply and interpret the mechanism design model both under symmetric and asymmetric information.

Students should be able to apply contract theory and its most recent advances.

Students should be able to apply and interpret the design and implementation of laboratory experiments in economics.

Students should be able to apply and interpret the analysis of imperfect competition and industrial organization models.

Learning outcomes:

1. Understanding the concepts of preferences and utility function in individual choice problems.
2. Mastery of consumer and producer theories.
3. Mastery of the choice model under risk and / or uncertainty.
4. Familiarity with the application to microeconomic analysis of the theorems of fixed points, separating hyperplanes and Kuhn-Tucker conditions.
5. Understanding of the competitive general equilibrium model.
6. Understanding of the cooperative and non-cooperative foundations of competitive equilibrium.
7. Familiarity with the theory of intertemporal choice.
8. Familiarity with the theoretical ideas and standard tools in the analysis of the imperfect competition models that constitute the industrial organization.
9. Ability to investigate the implications of the strategic interaction of companies in the market outcome, in the appearance of inefficiencies.
10. Ability to critically evaluate public intervention measures in non-competitive markets.
11. Mastery of game theory.
12. Understand the fit of Game Theory in modern Economic Analysis and, in particular, its relationship with the General Equilibrium Theory.
13. Ability to describe a variety of economic problems as games and to solve these games with the appropriate instruments.
14. Knowledge of the theory of the design of mechanisms to solve economic problems.
15. Mastery of the techniques and concepts of the information economy.
16. Familiarity with the model of contracts with hidden actions or with adverse selection.
17. Understanding of the relationship between assumptions and results.
18. Introduction to the contrast of microeconomic theories.

DESCRIPTION OF CONTENTS: PROGRAMME

MICROECONOMICS II

This course develops the appropriate analysis to study the interactions among rational individuals in a non-cooperative, strategic context.

1 - Risk and uncertainty: preferences under uncertainty, expected utility theory, attitudes towards risk, risk premium, certainty equivalent, the value of information, state dependent utilities.

2 - Market failure: bilateral and multilateral externalities, network externalities, solutions to externalities (taxes, property rights, emissions markets, Coase theorem); public goods, voluntary contribution and other provision mechanisms.

3 - Game Theory: static and dynamic games, normal and extensive form games, the Nash equilibrium, subgame perfect equilibrium, repeated games, games with asymmetric information.

4 - Imperfect competition: market power, monopoly pricing, static models for oligopoly (Bertrand, Cournot, Stackelberg), repeated interaction, entry.

LEARNING ACTIVITIES AND METHODOLOGY

Formative activities:

Theoretical class

Practical class

Individual work (homework)

Introduction to work with bibliographical sources

Tutoring

Teaching methodology:

Teacher's exposition in class. In this class the professor develops the main concepts and provides the bibliography for the students to complement their learning.

Resolution of practical cases, problems, etc. given by the professor.

Exposition and discussion in class of the course material and the practical cases and problems.

ASSESSMENT SYSTEM

Final exam: 60%

Continuous evaluation: one midterm exam (30%), and 10 individual homework during the course (10%)

% end-of-term-examination: 60

% of continuous assessment (assignments, laboratory, practicals...): 40

BASIC BIBLIOGRAPHY

- Andrew Mas-Colell, Michael D. Whinston, Jerry R. Green Microeconomic Theory, Oxford University Press, 1995
- Steve Tadelis Game Theory: An Introduction, Princeton University Press, 2013

ADDITIONAL BIBLIOGRAPHY

- Drew Feudenberg and Jean Tirole Game Theory, The MIT Press, 1991
- Roger Myerson Game Theory. Analysis of Conflict, Harvard University Press, 1991
- Steve Tadelis Game theory: an introduction, Princeton University Press, 2013