

Academic Year: (2023 / 2024)

Review date: 24-04-2023

Department assigned to the subject: Economics Department

Coordinating teacher: ROMERO MEDINA, ANTONIO

Type: Compulsory ECTS Credits : 3.0

Year : 1 Semester : 1

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

The objective is to provide students with the standard tools of economic analysis. This material is presented formally, using differential calculus, in order to facilitate applications. Students are expected to have basic understanding on economics and differential calculus.

OBJECTIVES

- Understand the functioning of markets.
- Being able to work with mathematical functions that capture the behaviour of economic agents.
- Being able to develop models about the behaviour of economic agents.
- Being able to state hypotheses from problems' description based on the analyzed models.
- Being able to state and discuss the consequences of the market interventions in a clear, schematic way.

DESCRIPTION OF CONTENTS: PROGRAMME

Unit 1. Introduction: Preliminaries. The basics of Supply and Demand.

Unit 2. Household Economics: Preferences, utility function, budgetary restriction, consumer choice, individual demand, duality in consumer theory, income and substitution effects, aggregate demand. Household Production and Consumption. Labor supply.

Unit 3. Choice under uncertainty

Unit 4. Producer and Cost Theory: Production function. Cost minimization: Inputs demand, cost function. Profit maximization: Supply function.

Unit 5. Competitive Markets: Equilibrium and welfare.

Unit 6. Strategic Interaction and Market Power: Monopoly, Nash equilibrium, equilibrium in mixed strategies, Oligopoly models: cournot, stackelberg equilibrium.

Unit 7. Markets with Asymmetric Information: Hidden characteristics: Adverse Selection. Hidden characteristics: Signaling. Hidden actions: Moral Hazard.

LEARNING ACTIVITIES AND METHODOLOGY

Acquire theoretical knowledge through:

- Master classes where theoretical and practical key concepts are developed in order students acquire them. Students will be provided with class notes and problem sets. Likewise, main references and complementary bibliography will be provided to go deeper into those topics in which students are more interested.
- Resolution of problems by the professor, promoting active participation of students in solving such problems, individually and/or in groups. Exercises will be solved during master classes.

Acquire abilities and skills through:

- Resolution by students of problem sets to be handed in every week. The aim will be to assess students' knowledge and to acquire the skills needed.

ASSESSMENT SYSTEM

Students are expected to attend every class. In addition, they are expected to be active participants, intellectually curious and imbued with fruitful doubt. Class participation and pop-up homework accounts for a 10% of the final grade. All students will solve problem sets and present or discuss some solutions. Problem sets will account for a 10% of the final grade. A mid-term evaluation accounts for a 40% of the final grade.

The remaining 40 % will be based on a final exam.

% end-of-term-examination:	40
% of continuous assessment (assignments, laboratory, practicals...):	60

BASIC BIBLIOGRAPHY

- Jehle & Reny Advanced Microeconomic Theory, Addison-Wesley.
- Varian Microeconomic Analysis, W. W. Norton.

ADDITIONAL BIBLIOGRAPHY

- Deaton and Muellbauer Economics and Consumer Behavior, Cambridge U.P.
- Kreps A course in Microeconomic Theory, Princeton U.P..
- Variant Microeconomic Analysis, W. W. Norton.