

Academic Year: ( 2023 / 2024 )

Review date: 27-01-2024

Department assigned to the subject: Economics Department

Coordinating teacher: SIOTIS , GEORGIOS

Type: Compulsory ECTS Credits : 6.0

Year : 3 Semester :

**REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)**

Microeconomics, Game Theory

**OBJECTIVES**

The objective of this course is to introduce the student to understand strategic behaviour of firms. To achieve this goal the student needs to acquire certain skills, capacities and attributes.

After successfully completing the course the student will be able to:

- Understand the working of oligopolistic markets and the decisions that firms face in these markets.
- Understand concepts such as market concentration and market power.
- Apply these concepts (above) to markets where the number of firms is small.
- Understand firm strategies such as price discrimination, entry deterrence or choosing a market location. For example, firms may choose a pricing strategy that exploits consumer transportation costs to increase market power.

We can classify capacities into two groups; specific and generic capacities. Under specific capacities, after successful completion of the course, the student will be able to:

- Obtain information on prices and market shares.
- Calculate concentration indices in markets.
- Calculate the market power of a firm.
- Be able to identify variables that increase market competition and similarly, variables that increase a firm's market power.

Under general capacities, during the course we will be working on:

- Develop a deeper understanding of market structure and see how the knowledge from this course can be applied to better understand certain specific problems.
- Acquiring tools that will enable the students to develop descriptive studies of industry.
- Improve the analytical capacity of the student.
- Improve both written and verbal skills.

Regarding student attitude after course completion; students should have:

- A critical understanding of market functioning and fundamentals of oligopolistic markets (mainly firm strategic behaviour). This will enable them to understand factors that influence market competition in oligopolistic markets.

**DESCRIPTION OF CONTENTS: PROGRAMME**

\*Monopolistic behavior in markets with a single- and multi-producing company. Study of how companies can discriminate in prices to increase company profits.

\*In oligopolistic markets, study of the strategic behavior of companies in their choice of quantities and prices.

Generalization of the models to include a time horizon, capacity constraints, and product differentiation (both horizontal and vertical). Study of specific strategies such as modifying capacity to block entry or changing product location to increase market power and affect prices.

\* Detailed program:

1. Introduction
2. The Monopoly Problem
  - 2.1 The Monopoly Model
  - 2.2 Multiproducer Monopoly
  - 2.3 Price Discrimination
  - 2.4 Bundling and Tying
3. Oligopoly Models

- 3.1 Characteristics of Strategic Behavior
- 3.2 Competition in Quantities: The Cournot Model
- 3.3 The Stackelberg Model
- 3.4 Input Models
- 3.5 Price Competition: The Bertrand Model
- 3.6 Tacit Collusion: Repeated Games

4 Platforms: Situation of a platform in a monopoly situation. Setting prices for sellers and buyers

- 5. Model with Product Differentiation
  - 5.1 Product Differentiation: Definitions
  - 5.2 Horizontal Differentiation without Location
    - 5.2.1 The Cournot Model
    - 5.2.2 The Bertrand Model
  - 5.3 Horizontal Differentiation with Location
    - 5.3.1 Linear City Model: The Hotelling Model
    - 5.3.2 Circular City Model: The Salop Model
  - 5.4. Vertical Differentiation

## LEARNING ACTIVITIES AND METHODOLOGY

This course has three key components. The first is the use of examples with real world data that will enable the student to address the underlying questions. The second component is the use of theoretical models to develop analytical capacities to be able to formalize the underlying question. The third component is using numerical examples to apply different models to various market situations. The problems analysed are of both practical and theoretical importance. The student is expected to look for similar situations in the real world to try to understand the implications of the theoretical models. For example, the student is asked to study how airlines, cinemas, etc. use price discrimination on the internet. Problem solving classes are included where students are expected to solve problems directly related with theory.

## ASSESSMENT SYSTEM

The course is organized so as to continually evaluate the student. Students are expected to submit problems, take two mid-term exams and a final exam. The practice sessions include numerical examples and problem solving using the theoretical concepts studied in class.

It is mandatory to get a minimum of 3,5 in the mark of the continuous assessment to take the final exam.

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

## BASIC BIBLIOGRAPHY

- Cabral, L. , "Introduction to Industrial Organization", MIT Press, 2000 (<http://luiscabral.org/economics/books/iio2/>)
- Tirole, J. ¿The Theory of Industrial Organization¿, The Mit Press, 1988