

# Course Syllabus

## 1. Descriptive data of the course

- **Course Title:** Microeconomics I
- **Academic year:** 2015/2016    **Course:** 1    **Term:** 3
- **Titulación / Estudios:**            GRAU DRET/ADE                            **Code:** 20836
- **Number of credits ECTS:** 5                    **Hours dedicated by students:** 125
- **Language:**  
English (Groups 1 and 2)
- **Professor:** Fabrizio Germano

## 2. Course description

*Microeconomics I* is the first subject of the training cycle in Economic Theory. Its importance and complexity arise from the fact that it is the first time the student becomes familiar with current and abstract economic models.

The course covers the basic economic models of consumer theory, production theory, and partial equilibrium. The student will learn how to formalize and therefore gain a deeper understanding of economic phenomena.

The course takes a first deep look at Microeconomics. This entails a change in thinking (from observed reality to formal models and back) and you can view the course as one of learning a new language.

The previous knowledge required to follow the class consists in basic knowledge of mathematics and basic notions of economics.

Consistent with the Bologna methodology, learning of the material is gradual and continuous, which is meant to facilitate the preparation on the part of the student and of the teacher. To think that in this course you can jump steps is like thinking that when learning a language you can skip the alphabet and directly go and write an essay.

### 3. Requirements

This course teaches a change of approach to the analysis of economic phenomena. Its importance is due to the fact that it teaches how to create the first abstract mathematical-economic models. Within the curriculum, on the one hand, it is the basis to understand many theoretical and non-theoretical subjects in economics of the following years and, on the other hand, it is the first part of the training cycle in Economic Theory.

The basic skills necessary to begin the process of learning in this course are:

1. Knowledge of economic reality. Apart from the acquired during the studies necessary that the student knows their own economic reality.
2. The ability of abstraction of the most important features of microeconomic phenomena. It is necessary to filter information and create a model of reality.
3. The ability to relate the results of mathematical models with the actual facts.
4. The ability to contrast the model results with actual results, with the aim of improving the model.

The previous knowledge required to follow this class are divided into two parts:

1. *Knowledge of basic mathematics:* Algebra, Probability, Optimization. Most of this knowledge is basic, and students have acquired it before University. Other parts they have learned during the first year at the University in the courses of Mathematics and Data Analysis.
2. *Basic knowledge of economics:* Basic knowledge acquired during the first year of Bachelor studies. Building on topics covered in Introduction to Economics, in Microeconomics I the student learns how to model economic reality.

#### 4. Competences to be attained

General competences	Special competences
<p><b>Instrumental</b></p> <ol style="list-style-type: none"> <li>1. Ability to summarize</li> <li>2. Skills to manage information</li> <li>3. Abstract and critical thinking</li> <li>4. Adaptation and clear understanding of the ideas</li> </ol> <p><b>Interpersonal</b></p> <ol style="list-style-type: none"> <li>5. Ability to work in teams</li> <li>6. Ability to criticize</li> </ol> <p><b>Systemic</b></p> <ol style="list-style-type: none"> <li>7. Creativity (ability to generate new ideas)</li> <li>8. Independence (ability to work independently)</li> </ol>	<ol style="list-style-type: none"> <li>1. Analysis of microeconomic models</li> <li>2. Understanding of economic reality</li> <li>3. Ability to translate economic reality to economic models</li> <li>4. Ability to apply Basic mathematical Concepts to mathematical models</li> </ol>

## 5. Learning Objectives

The ultimate goal of this course is that students understand and learn to work with economic models. Through the training itinerary, the student becomes familiar with the process of constructing and solving of the models. At the end of this process the student must be able to build and work with such models, more specifically with models of consumer theory, theory of the firm and of market equilibrium. Such models are the basis for the remainder of the cycle of economic theory.

## 6. Course Content

### Part One: Consumer Choice and Demand

1. Elements of the problem.  
Limits of consumer choice: the budget constraint. Reasons for choice: preferences. Representation of preferences: Utility.
2. The choice. The formal problem of maximization of preferences and derivation of the demand function.
3. Revealed preference and Slutsky equation. Weak and strong axioms of revealed preference. Price indices. The Slutsky equation: Income and substitution effects. Income and substitution effects of Hicks.
4. Consumer surplus and market demand. Consumer surplus: Discrete goods and continuous goods. Market demand: Aggregation of individual demands. The elasticity of demand and its relation with income.

### Part Two: The Firm and the Supply Function.

5. Technology. Technological constraint. Different types of technology. Marginal product and marginal rate of technical substitution. Returns to scale.
6. Benefit maximization and cost minimization. The formal problem of profit maximization. The cost minimization problem. Cost functions: marginal cost and average cost.
7. Supply curve. The supply function of a competitive firm. The relation of the supply with marginal costs. The producer surplus. Supply curve of an industry.

### Part Three: Supply and Demand.

8. The equilibrium.  
Equilibrium in a competitive market. Comparative statics. Taxes and welfare.

## 7. Evaluation

The course *Microeconomics I* will be evaluated as follows:

**Continued Evaluation:**

- a) Participation in seminars is **mandatory**. In the seminars homework is handed in and discussed, and new exercises are solved. Participation is also taken into account in grading.
- b) Midterm exam

**Final Evaluation:**

- c) Final exam (a minimum of **5/10** is required to pass the class)

The weights for the different activities are distributed as follows:

Seminar participation / Homework	15%
Midterm Exam	25%
Final Exam	60%

## 8. References

Varian, H. R. *Intermediate Microeconomics*. 7th, 8th, or 9th Edition.  
Varian, H. R. *Microeconomía Intermedia*. Edición 7, 8 o 9.

## 9. Methodology

During the course, the following activities will be carried out:

- a) Theoretical sessions in a big group to introduce the concepts and their basic applications.
- b) Seminar sessions in a small group where different concepts introduced during the course are discussed in an interactive way.

## 10. Schedule

Week	Topics covered in class	Activity outside class
<b>Week 1:</b> <u>April 11 to 15</u> 2 theory classes	Introduction, Consumer Preferences and Utility	Read the theory (Varian 1,3,4) Solve problems
<b>Week 2:</b> <u>April 18 to 22</u> 2 theory classes	Utility and Budget Constraint	Read the theory (Varian, 2,4) Solve problems
<b>Week 3:</b> <u>April 25 to 29</u> 2 theory classes Seminar 1	Consumer Choice and Demand	Read the theory (Varian,5, 6) Solve problems
<b>Week 4:</b> <u>May 2 to 6</u> 2 theory classes	Demand	Read the theory (Varian 6) Solve problems
<b>Week 5:</b> <u>May 9 to 13</u> 2 theory classes Seminar 2	Revealed Preferences and Slutsky Equation	Read the theory (Varian 7,8) Solve problems
<b>Week 6:</b> <u>May 16 to 20</u> 1 theory class Seminar 3	Consumer Surplus Aggregate Demand	Read the theory (Varian 14, 15) Solve problems
<b>Week 7:</b> <u>May 23 to 27</u> --Midterm Exam-- 1.5 theory classes Seminar 4	Midterm Exam Technology	Read the theory (Varian18) Solve problems
<b>Week 8:</b> <u>May 30 to June 3</u> 2 theory classes Seminar 5	Profit Maximization Cost Minimization	Read the theory (Varian 19, 20) Solve problems
<b>Week 9:</b> <u>June 6 to 10</u> 2 theory classes Seminar 6	Cost Curves and Firm Supply	Read the theory (Varian 21, 22) Solve problems
<b>Week 10:</b> <u>June 13 to 17</u> 2 theory classes	Industry Supply Partial Equilibrium	Read the theory (Varian 23, 16) Solve problems