

INTRODUCTION TO MICROECONOMICS (22096)

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OBJECTIVES

On this course you will learn about economic principles, first by participating directly in experiments and subsequently by studying the related economic theory and its applications. You can observe economic principles in action while participating in economic experiments. After each experiment, after collecting and working on your data, we will present the economic theories designed to explain the principles you have discovered in the laboratory and its applications. This process enables you to appreciate economic theory's ability to simplify the economic world in which we live.

BIBLIOGRAPHY

The main textbook is *Experimentos con los Principios Económicos* (2nd edition), by Theodore C. Bergstrom and John H. Miller [BM]. This textbook is designed to teach economic principles using experiments. Other introductory books to microeconomics should also be consulted for help. In particular, the syllabus also refers to the chapters of the book *Principios de Economía* (3rd edition), by Gregory Mankiw [M] (any later edition is also suitable).

This course requires extensive reading of the books and completion of the exercises. A number of complementary reading materials will also be recommended during the course and will be available through the Aula Global.

PROGRAMME

First part: Competitive markets

Topic 1. Introduction to economics

Bibliography: Harford, Tim (2007). *El Economista Camuflado. La economía de las pequeñas cosas*. Chapter 3.
[M] Chap. 1:1-8 and chap. 2.

Topic 2. Supply and demand

- 2.1. A competitive markets model
- 2.2. The supply curve
- 2.3. The demand curve
- 2.4. Equilibrium price and quantity
- 2.5. Who trades at the equilibrium?
- 2.6. Reservation price, the seller's profit and consumer surplus
- 2.7. The efficiency of competitive equilibrium
- 2.8. Competitive market model with smooth supply and demand curves

Bibliography: [BM] Chap. 1 and appendix A.1. [M] Chap. 4; chap. 7.

Topic 3. Displacements of supply and demand

- 3.1. Review of the competitive markets model: *input* and *output*
- 3.2. The supply curve with variable costs and fixed costs
- 3.3. Comparative statics: displacements of supply
 - 3.3.1. What happens with the equilibrium amount?
 - 3.3.2. What happens with the equilibrium price?
 - 3.3.3. What happens with equilibrium benefits?
- 3.4. Comparative statics with smooth demand and supply curves
 - 3.4.1. What happens with the equilibrium amount?
 - 3.4.2. What happens with the equilibrium price?
 - 3.4.3. What happens with equilibrium benefits?
- 3.5. Gradient and elasticity of supply and demand curves

Bibliography: [BM] Chap. 2, appendix A.2.-A.3. [M] Chap. 4 and 5.

Second part: Intervention in the market and economic policy

Topic 4. A sales tax

- 4.1. Sales tax for vendors
 - 4.1.1. How does the supply curve change?
 - 4.1.2. The equilibrium price and quantity
- 4.2. Sales tax for purchasers
 - 4.2.1. How does the demand curve change?
 - 4.2.2. The equilibrium price and quantity
- 4.3. Comparison of results: tax for the vendor and purchaser
- 4.4. Who pays the tax? It depends on elasticity
- 4.5. Taxation and welfare

Bibliography: [BM] Chap. 3. [M] Chap. 6:77-82.

Topic 5. The labour market and the minimum wage

- 5.1. Introduction
- 5.2. The demand for labour
 - 5.2.1. The value of marginal product rule
 - 5.2.2. Marginal product and average product
 - 5.2.3. A company's labour demand curve
 - 5.2.4. The market's labour demand curve
- 5.3. The supply of labour
- 5.4. Competitive equilibrium in the labour market
- 5.5. Effects of a minimum wage
- 5.6. Minimum prices and maximum prices

Bibliography: [BM] Chap. 5. [M] Chap. 6:71-77; chap. 18:239-247.

Third part: Consumer behaviour

Topic 6. The consumer decision

- 6.1. The budget restriction
- 6.2. Consumer preferences
- 6.3. The optimal basket
- 6.4. Changes in income and prices

Bibliography: [BM] Chap. 3. [M] Chap. 6:77-82.

Fourth part: Imperfect markets and technology

Topic 7. Externalities

- 7.1. Introduction
- 7.2. Competitive markets and externalities
- 7.3. Pollution taxes
- 7.4. Transferable permits
- 7.5. Positive externalities and subsidies

Bibliography: [BM] Chap. 6. [M] Chap. 10.

Topic 8. Monopolies and cartels

- 8.1. Monopoly and competitive markets
- 8.2. Behaviour of a monopoly
 - 8.2.1. Total revenue and total cost
 - 8.2.2. Marginal revenue and marginal cost
 - 8.2.3. Quantity and monopoly price
- 8.3. Comparison of monopolies and competitive markets
- 8.4. Monopoly with smooth curves
- 8.5. Cartels

Bibliography: [BM] Chap. 7 (except pages 231-234).
[M] Chap. 13; chap. 15:193-204.

Topic 9. Network externalities

- 9.1. What are network externalities?
- 9.2. Network externalities and the demand curve
- 9.3. Equilibrium with network externalities
- 9.4. Stable equilibria, unstable equilibria and critical mass

Bibliography: [BM] Chap. 9.

ASSESSMENT CRITERIA

- 50%: **Final examination.** During the examination period (9-23 December). **It is necessary to obtain 40% in the final examination to pass the subject.**
- 20%: **Partial examination** (3-4 November, during the seminar).
- 20%: **Weekly tasks.** Each task will be assessed as to whether it is complete and will be corrected based on one or two randomly chosen questions.
- 10%: **Experiments.** 5% will depend on attendance. Failure to participate in an experiment entails 0 profits being awarded in that experiment. The remaining 5% will be proportional to your average profits obtained (excluding the maximum and minimum) compared to the profits obtained by the rest of the class.

Important:

- The mark for your profits depends on all the experiments and your results compared to all the students in class, not only the students in your group.
- Several sessions and rounds in the same experiment will take place in a seminar. Not all the rounds/sessions will count towards the profits. We will choose the profits randomly from the rounds and sessions in each experiment. The session and/or round counting towards the profits will be announced after the profits from the experiment have been announced.
- The greater the profits you obtain, the higher your score. In order to obtain high profits you must obtain the best price possible according to your role in the experiment. The formula used will be:

$$\left[0,5 \times \{Asistencia\} \right] + \left[0,5 \times \frac{\text{Benef.Medios} \{ \text{desc.} \text{Benef}_{\max} \text{ y } \text{Benef}_{\min} \} - \text{Benef}_{\min} \text{ clase}}{\text{Benef}_{\max} \text{ clase} - \text{Benef}_{\min} \text{ clase}} \right]$$

- The September sitting is exclusively to resit the final examination, with the marks from the partial examination, weekly tasks and experiments retained.

CALENDAR

- 21 Sept.: Introduction: Contents and organization
- 28 Sept.: Topic 1: Introduction to economics
 - 29-30 Sept.: Seminar 1: Supply and demand
- 5 Oct.: Topic 2: Supply and demand
- 12 Oct.: *PUB. HOLIDAY*
 - 13 Oct.: Seminar 2: Displacements of supply
Hand-in of task 1 (tasks 1-2)
- 19 Oct.: Topic 3: Displacements of supply and demand
 - 20 Oct.: Seminar 3: Sales tax
Hand-in of task 2 (topic 3)
- 26 Oct.: Topic 4: Taxation and welfare
 - 27 Oct.: Seminar 4: A minimum wage
Hand-in of task 3 (topic 4)
- 2-11 Nov.: Topic 5: A minimum wage
 - 3-4 Nov.: Seminar 5: **Partial examination** (topics 1-4)
- 9-11 Nov.: Topic 6: The consumer decision
 - 10-11 Nov.: Seminar 6: Externalities
Hand-in of task 4 (topic 5)
- 16-11 Nov.: Topic 7: Externalities
 - 17-18 Nov.: Seminar 7: Monopolies and cartels
Hand-in of task 5 (tasks 6-7)
- 23-11 Nov.: Topic 8: Monopolies and cartels
 - 24-25 Nov.: Seminar 8: Network externalities
Hand-in of task 6 (topic 8)
- 30-11 Nov.: Topic 9: Network externalities
Hand-in of task 7 (topic 9) on 2 December.

INSTRUCTIONS FOR EXPERIMENTS / SEMINARS

- The mark for the experiments depends on attendance and the profits accumulated.
- You must be punctual and have an identification number (NIA) **in order to be able to take part in the experiment**. Non-members of the seminar group will not be admitted after the experiment begins.
- **Before** the seminar when the experiment is carried out, you must have read the **introduction** to the topic in the text book and done the **warm-up exercises**. These tasks not only ensure the smooth running of the seminars, but also increase the opportunities to obtain greater profits.
- At the beginning of the experiment, you will receive a sheet containing information about your role in the experiment. This sheet must be returned at the end of each experiment, with the details of your participation.
- The **laboratory notes** from the experiments necessary for completing the tasks will be published in the subject's Aula Global.
- As in any company, unethical behaviour or infringement of the rules may be penalized losses of profits.