

Industrial Organisation

Code: 102334
ECTS Credits: 6

| Degree | Type | Year | Semester |
|--|------|------|----------|
| 2501572 Business Administration and Management | OT | 4 | 2 |
| 2501573 Economics | OT | 3 | 2 |
| 2501573 Economics | OT | 4 | 2 |
| 2504216 Contemporary History, Politics and Economics | OT | 3 | 2 |
| 2504216 Contemporary History, Politics and Economics | OT | 4 | 1 |
| 2504216 Contemporary History, Politics and Economics | OT | 4 | 2 |

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Use of Languages

Principal working language: english (eng)
Some groups entirely in English: Yes
Some groups entirely in Catalan: No
Some groups entirely in Spanish: No

Prerequisites

Introduction to Economics
Microeconomics I
Mathematics I and II

Objectives and Contextualisation

Develop the theory to understand and analyze the behavior of firms and market outcomes.

Competences

- Economics
- Analyse situation in which there is unequal information between the two sides involved.
 - Capacity for adapting to changing environments.
 - Demonstrate initiative and work individually when the situation requires it.
 - Formulate recommendations of economic policy that improve efficiency and equity in market operations.
 - Identify the processes that govern the operation of markets in different competition systems, different scenarios of interrelationship and different timescales.
 - Organise the work in terms of good time management, organisation and planning.
 - Select and generate the information necessary for each problem, analyse it and take decisions based on that information.
 - Students must be capable of applying their knowledge to their work or vocation in a professional way and they should have building arguments and problem resolution skills within their area of study.

- Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
- Students must develop the necessary learning skills in order to undertake further training with a high degree of autonomy.
- Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.
- Take account of social, economic and environmental impacts when operating within one's own area of knowledge.
- Take decisions in situations of uncertainty, demonstrating an entrepreneurial and innovative attitude.

Contemporary History, Politics and Economics

- Assess the social, economic and environmental impact when acting in this field of knowledge.
- Distinguish between and analyse the type of relations that have been established over the last century among the different social, political and economic agents on national, regional and international frameworks.
- Identify the fundamental analytical principles in international economics, globalisation of market and processes of economic integration.
- Identify the main actors, structure and functioning of political systems in the internal and international sphere from a theoretical or applied perspective.
- Innovate in the methods and processes of this area of knowledge in response to the needs and wishes of society.
- Manage and apply data to solve problems.
- Recognise the basic foundations of economic analysis from both a microeconomic and macroeconomic perspective.
- Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
- Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
- Students must develop the necessary learning skills to undertake further training with a high degree of autonomy.
- Work cooperatively in multidisciplinary and multicultural teams implementing new projects.

Learning Outcomes

1. A capacity of oral and written communication in Catalan, Spanish and English, which allows them to summarise and present the work conducted both orally and in writing.
2. Analyse the distribution of costs in view of the implementation of a new shared service.
3. Analyse the operating conditions of markets and other forms of social interaction.
4. Analyse the strategic interactions between participants and the effects of their actions on third-party decisions.
5. Apply the game theory to economic and business decisions.
6. Apply the game theory to the case of agents in a negotiation, in auctions and in macroeconomic matters.
7. Assess the consequences of changing a particular representation system for another.
8. Assess the different proposals of implementing public goods in terms of social welfare.
9. Capacity to adapt to changing environments.
10. Communicating in oral and written form in Catalan, Spanish and English, in order to be able to summarise and present the carried out project in both forms.
11. Consider formal models which can be used to study situations with information asymmetry between the parts.
12. Demonstrate capacity to adapt to changing environments.
13. Demonstrate initiative and work independently when required.
14. Demonstrate motivation regarding the quality of the work performed and sensitivity regarding the consequences on the environment and society.
15. Identify the basic elements that characterise the organisation of a market.
16. Identify the conditions and processes that generate externalities as well as the problems posed by public goods.

17. Identify the consequences of the existence of information asymmetry among different economic agents on the way in which these organise themselves and on the efficiency of the relationship they establish.
18. Make decisions in situations of uncertainty and show an enterprising and innovative spirit.
19. Organise work in relation to good time management and planning.
20. Organise work, in terms of good time management and organisation and planning.
21. Propose the optimum design of the institutions regulating the markets and of its equipment.
22. Select and generate the information necessary for each problem, analyse it and take decisions based on that information.
23. Solve the models formulated to obtain empirically stable predictions.
24. Students must be capable of applying their knowledge to their work or vocation in a professional way and they should have building arguments and problem resolution skills within their area of study.
25. Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
26. Students must develop the necessary learning skills in order to undertake further training with a high degree of autonomy.
27. Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.
28. Take account of social, economic and environmental impacts when operating within one's own area of knowledge.
29. Understand the different voting systems and the consequences of each of these.
30. Use basic optimisation tools and the game theory, and include these elements in a theoretical model.
31. Use of the available information technology and adaptation to new technological environments.
32. Value ethical commitment in professional practice.
33. Work cooperatively in multidisciplinary and multicultural teams implementing new projects.

Content

SYLLABUS

I. INTRODUCTION

Delimitation of the subject. Examples of industrial organization issues.

II. PERFECT COMPETITION vs. MONOPOLY (Review of Microeconomics II)

II.1 Perfect competition

Short-run analysis vs. Long-run analysis

II.2 Non-discriminating monopoly

Single-product monopoly. General loss of welfare. Regulation.

III. EXTENSIONS OF THE MONOPOLY MODEL

III.1 Multi-product monopolist with interdependent demands

III.2 Price discrimination

Perfect price discrimination, 3rd degree price discrimination (independent demands), 2nd degree price discrimination: two-part tariffs

III. MARKET POWER

Concept. Consequences. Arguments for and against concentration. Concentration measures. The relationship between concentration measures and the profits in the industry.

IV. OLIGOPOLY WITH HOMOGENEOUS PRODUCT

IV.1 Competition in quantities

Cournot, Stackelberg, Cartel

IV.2 Price competition

The Bertrand's Paradox, the repeated Bertrand game and tacit collusion

V. PRODUCT DIFFERENTIATION

V.1 Horizontal Differentiation (Hotelling)

Fixed prices. Variable prices. Location choice.

V.2 Search and replacement costs.

V. CAPACITY CONSTRAINTS

Efficient and random rationing rules. Capacity choice. Equivalence with Cournot.

Methodology

Teaching will be offered on campus.

- All teaching material will be available exclusively in digital format in the Moodle classroom of the course.

The proposed teaching methodology may undergo some modifications according to the restrictions imposed by the health authorities on on-campus courses.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Activities

| Title | Hours | ECTS | Learning Outcomes |
|----------------------------------|-------|------|--|
| Type: Directed | | | |
| Practicum | 17 | 0.68 | 3, 1, 15, 13, 20, 18, 21, 23, 30 |
| Theory lectures | 32.5 | 1.3 | 3, 9, 1, 15, 16, 17, 11, 21, 23, 30 |
| Type: Supervised | | | |
| Office hours | 5 | 0.2 | 3, 1, 15, 16, 17, 11, 21, 23, 30 |
| Type: Autonomous | | | |
| Study, problem sets and readings | 90.5 | 3.62 | 3, 9, 15, 16, 17, 13, 20, 11, 21, 23, 30 |

Assessment

Evaluation process

The evaluation of the course will consist of a written midterm, non-liberatory, with a weight of 30%; a written final exam, with a weight of 50%; and other non-liberatory (graded exercises solved in class or presentations in class by students), with a weight of 20%. This last evaluation item may include class attendance. The final exam will include all topics in the syllabus, including the problem sets.

A student is considered to be "No evaluable" if she/he has not participated in any of the evaluation activities. Therefore, it is considered that a student who has participated in at least one evaluation activity will no longer be eligible for the grade "No evaluable".

Calendar of evaluation activities

The dates of the evaluation activities except the final exam will be announced well in advance during the semester.

The date of the final exam can be found in the Exam Calendar of the Facultat.

*"The dates of evaluation activities cannot be modified, unless there is an exceptional and duly justified reason why an evaluation activity cannot be carried out. In this case, the degree coordinator will contact both the teaching staff and the affected student, and a new date will be scheduled within the same academic period to make up for the missed evaluation activity."***Section 1 of Article 115. Calendar of evaluation activities (Academic Regulations UAB).**

Students of the Faculty of Economics and Business, who in accordance with the previous paragraph need to change an evaluation activity date must process the request by filling out an Application for exams' reschedule at

https://eformularis.uab.cat/group/deganat_feie/nou-reprogramacio-de-proves

The teaching faculty will select the type of evaluation activity most suitable and efficient for the individual reprogrammed evaluation activity, including oral examinations.

Grade revision process

After all grading activities have ended, students will be informed of the date and way in which the course grades will be published. Students will be also be informed of the procedure, place, date and time of grade revision following University regulations.

Retake Process

"To be eligible to participate in the retake process, it is required for students to have been previously been evaluated for at least two thirds of the total evaluation activities of the subject." Section 3 of Article 112 ter. The recovery (UAB Academic Regulations).

Additionally, it is required that the student to have achieved an average grade of the subject between 3.5 and 4.9.

The grading of the retake examination will be qualitative, with two possible options: "pass" or "fail". If the grade is "pass", the numerical grade will be of 5 for the course. If the grade is "fail", the student will not pass the course and the final grade will be the existing one prior to the retake examination.

The date of the retake exam will be posted in the calendar of evaluation activities of the Faculty.

Irregularities in evaluation activities

In spite of other disciplinary measures deemed appropriate, and in accordance with current academic regulations, *"in the case that the student makes any irregularity that could lead to a significant variation in the grade of an evaluation activity, it will be graded with a 0, regardless of the disciplinary process that can be instructed. In case of various irregularities occur in the evaluation of the same subject, the final grade of this subject will be 0"*. **Section 10 of Article 116. Results of the evaluation. (UAB Academic Regulations).**

The proposed evaluation activities may undergo some changes according to the restrictions imposed by the health authorities on on-campus courses.

Assessment Activities

| Title | Weighting | Hours | ECTS | Learning Outcomes |
|---------------------|-----------|-------|------|---|
| Final exam | 50% | 2 | 0.08 | 2, 3, 4, 5, 6, 9, 1, 12, 13, 29, 15, 16, 17, 14, 19, 20, 11, 18, 21, 23, 22, 10, 30, 32, 7, 8 |
| Midterm | 30% | 1.5 | 0.06 | 3, 9, 1, 15, 16, 17, 13, 20, 11, 18, 21, 23, 30 |
| Other ongoing tests | 20% | 1.5 | 0.06 | 28, 3, 9, 1, 12, 13, 15, 17, 19, 20, 18, 21, 27, 26, 25, 24, 22, 10, 33, 30, 31 |

Bibliography

The fundamental books to follow the course are:

- Luís Cabral, Industrial Economics, McGraw Hill, 1997.
- Jean Tirole, Theory of the Industrial Organization, Ed. Ariel, 1990.
- Xavier Martínez-Giralt (MG), Industrial Organization: Strategic Behavior and Competition, Publications Service of the Autonomous University of Barcelona, 2006.

The following are also useful:

- Hal R. Varian (Varian I), Intermediate Microeconomics: A Modern Approach, ed. Antoni Bosch, any edition.
- Hal R. Varian (Varian II), Microeconomic Analysis, 2nd. Extended edition, Ed. Antoni Bosch, 1986. (Although there are later editions, the references of the syllabus are to this edition of 1986.)

If you want to delve into one of the topics covered (optional), the following book is recommended

- L. Cabral, Readings in Industrial Organization, Blackwell 2000.

Software

There is no need of any special software.