

**COURSE DATA****Data Subject**

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|----------------------|----------------------|
| Code | 44339 |
| Name | Industrial economics |
| Cycle | Master's degree |
| ECTS Credits | 5.0 |
| Academic year | 2023 - 2024 |

Study (s)

| Degree | Center | Acad. Period | year |
|-------------------------------------|----------------------|---------------------|-------------|
| 2202 - Master's Degree in Economics | Faculty of Economics | 1 | First term |

Subject-matter

| Degree | Subject-matter | Character |
|-------------------------------------|---|------------------|
| 2202 - Master's Degree in Economics | 4 - Analytical and conceptual subject areas | Optional |

Coordination

| Name | Department |
|--------------------------------|--------------------------|
| AÑON HIGON, MARÍA DOLORES | 132 - Economic Structure |
| MAÑEZ CASTILLEJO, JUAN ANTONIO | 132 - Economic Structure |
| MONER COLONQUES, RAFAEL | 10 - Economic Analysis |

SUMMARY

This course provides the student with a basic understanding of the building blocks of Industrial Organization models, which are the modelling tools commonly used in the modern economic analysis of markets. Specifically, the course focuses on the study of oligopoly markets, leaving some time to deal with some selected topics such as product differentiation, R&D competition and cooperation, and productivity measurement.



PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

Other requirements

Good knowledge of Mathematics and, in particular, of Game Theory is recommended

COMPETENCES (RD 1393/2007) // LEARNING OUTCOMES (RD 822/2021)

2202 - Master's Degree in Economics

- Students should apply acquired knowledge to solve problems in unfamiliar contexts within their field of study, including multidisciplinary scenarios.
- Students should be able to integrate knowledge and address the complexity of making informed judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities associated with the application of their knowledge and judgments.
- Students should communicate conclusions and underlying knowledge clearly and unambiguously to both specialized and non-specialized audiences.
- Students should demonstrate self-directed learning skills for continued academic growth.
- Students should possess and understand foundational knowledge that enables original thinking and research in the field.
- Develop time management skills for learning: skills for organisation, planning and decision making in the process of learning advanced economics.
- Desarrollar la capacidad crítica, impulsar la inquietud y el interés investigador en el ámbito de la economía, especializarse en el manejo de material bibliográfico, en la utilización de bases de datos económicas y programas matemáticos y estadísticoeconómicos, así como aprender a transmitir de forma adecuada los resultados de investigadora a través de artículos científicos y ?ponencias en congresos.
- Gain the capacities of abstraction and logical reasoning that are essential for the creation of economic models: ability to express oneself using formal, graphic and symbolic languages, to apply analytical and mathematical methods to economics, and to relate and manipulate concepts according to a purpose.
- Know how to promote, in academic and professional contexts, technological, social or cultural progress in a knowledge-based society that is founded on the respect for: (a) fundamental rights and the principles of equal opportunities for men and women, which involves using an inclusive and egalitarian language that promotes the visibility of women; (b) the principles of equal opportunities and universal accessibility for people with disabilities, and (c) the distinctive values of a culture of peace and democratic values.



- Saber identificar el mercado relevante y el modelo de competencia más ajustado al comportamiento estratégico de los agentes en el mercado. Conocer el papel del estado en el análisis de los mercados y las instituciones.
- Saber analizar los modelos de competencia imperfecta en los mercados tanto bajo certidumbre como con información imperfecta e incompleta. Conocer la regulación de los mercados e implementación de las políticas microeconómicas.

LEARNING OUTCOMES (RD 1393/2007) // NO CONTENT (RD 822/2021)

- To be familiar with Industrial Organization Theory that allows the student to understand more sophisticated models, as well as the implications of public policies.
- Being able to show the acquired knowledge and abilities in exams.

DESCRIPTION OF CONTENTS

1. Introduction

Markets and Strategies
Market power and welfare
Tools

BP 1, 2, 3
Cabral 2, 3, 9
CW 1, 2, 15

2. Monopoly

Monopolist equilibrium and welfare loss
Price discrimination

BP 2, 8
Cabral 5, 10
CW 4, 5
Tirole 1, 3

3. Basic Models of Oligopoly

Bertrand
Cournot
Repeated interaction
Sequential choice
Entry deterrence



BP 3, 4, 16
Cabral 7, 8, 15
CW 8, 10, 13, 14
Tirole 5, 6, 8

4. Product Differentiation

Introduction to product differentiation
The non-address approach
The address approach
The Mussa-Rosen Model

BP 3
Cabral 12, 13
CW 11
Tirole 7

5. Productivity Measurement Using Firm Level Data

Endogeneity and estimation of total factor productivity
The control function approach
ACF and Wooldridge alternative approaches
Endogenising the law of motion of productivity

Akerberg, D. A., Caves, K., & Frazer, G. (2015)
Levinsohn, J. and Petrin, A. (2003)
Olley, G. and Pakes, A. (1996)
Wooldridge, J. M. (2009)

6. Innovation and Firm Performance

- Introduction
- Theoretical framework
- Measurement issues
- Estimates of the private returns to R&D
- Estimates of R&D spillovers and channels of knowledge transmission
- Policy implications

References:

Añón Higón, D., (2007). "The impact of R&D spillovers on UK manufacturing TFP: a dynamic panel approach". *Research Policy*, 36(7), pp. 964-979

Griliches, Z. (1979). "Issues in assessing the contribution of research and development to productivity growth", *Bell Journal of Economics*, 10(1), 92-116.



Hall B.H., Mairesee J. and P. Mohnen (2009): "Measuring the returns to R&D". NBER Working Paper No.15622.

7. Internationalization and Firm Performance

- Introduction
- Theoretical framework
- Measurement issues
- Learning by exporting or self-selection into exports.

References:

Girma, S., D. Greenaway, and R. Kneller (2004). "Does exporting increase productivity? A microeconometric analysis of matched firms" . *Review of International Economics*, 12(5): 855-66.

Mañez, J.A., Rochina-Barrachina, M. E., and Sanchis-Llopis, J. A. (2015) "The dynamic linkages among exports, R&D and productivity", *The World Economy*, 38(4), 583-612.

Roberts, M., and J. Tybout (1997). "The decision to export in Colombia: an empirical model of entry with sunk costs". *American Economic Review*, 87(4): 545-64

WORKLOAD

| ACTIVITY | Hours | % To be attended |
|--|---------------|------------------|
| Theory classes | 40,00 | 100 |
| Classroom practices | 10,00 | 100 |
| Preparation of evaluation activities | 60,00 | 0 |
| Preparation of practical classes and problem | 15,00 | 0 |
| TOTAL | 125,00 | |

TEACHING METHODOLOGY

Students are expected to attend all lectures and practical sessions. Additionally, students must devote a considerable amount of time to personal study, as well as to working out the problem sets that will be distributed. Solutions to the problem sets as well as some extensions will be discussed.



EVALUATION

Grading:

Problem sets: 30%

Final exam: 70%

It is required to pass the final exam in order to pass the subject

REFERENCES

Basic

- (BP) Belleflamme, P. and M. Peitz. 2010. *Industrial Organization: Markets and Strategies*. Cambridge University Press, UK.

(Cabral) Cabral, L. 2000. *Introduction to Industrial Organization*. The MIT Press

(CW) Church, J. and R. Ware. 2000. *Industrial Organization. A Strategic Approach*. Irwin McGraw-Hill

(Tirole) Tirole, J. 1988. *The Theory of Industrial Organization*. The MIT Press

Others

Ackerberg, D. A., Caves, K., & Frazer, G. (2015). Identification properties of recent production function estimators. *Econometrica*, 83(6), 2411-2451.

Levinsohn, J. and Petrin, A. (2003). Estimating production functions using inputs to control for unobservables. *The Review of Economic Studies*, 70(2), 317-341.

Olley, G. and Pakes, A. (1996). The dynamics of productivity in the telecommunications equipment industry. *Econometrica*, 64(6), 1263-1297.

Wooldridge, J. M. (2009). On estimating firm-level production functions using proxy variables to control for unobservables. *Economics Letters*, 104(3), 112-114.