# UAB
## Universitat Autònoma de Barcelona

## Advanced Microeconomics

Code: 40100
ECTS Credits: 10

**2024/2025**

| Degree | Type | Year |
|---|---|---|
| 4313805 Economic Analysis | OT | 2 |

## Contact

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## Teachers

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(External) Mar Reguant

(External) Marta Troya Martinez

(External) Peter Bayer

## Teaching groups languages

You can view this information at the end of this
document.

## Prerequisites

No specific prerequisits.

## Objectives and Contextualisation

This module covers advanced theoretical models that are in the frontier of modern microeconomic analysis. Using rigorous mathematical analysis, this module provides the student with frontier knowledge in contract design and game theory, as well as in different applications. The models seen in this module are applied in novel research in Microeconomics and are instrumental to obtaining public policy implications. The student can acquire this knowledge from the fields of economics of information, industrial organization, contracts, incentives and behaviour, corporate finance, health economics, development economics, microeconometrics, public economics,labor economics, asset pricing, political economics and experimental economics.

## Competences

- Apply the methodology of research, techniques and specific advanced resources to research and produce innovative results in a specific area of specialisation
- Capacity to articulate basic economic theory, analytically deriving them from mathematical reasoning
- Conceptually analyse a specific economic problem using advanced analytical tools
- Demonstrate an open , innovative and analytical attitude towards research questions
- Design, plan and carry out economic research
- Express recommendations about economic policy at macro and micro levels
- Make independent judgements and defend them dialectically
- Possess and understand knowledge that provides a basis or opportunity for originality in the development and/or application of ideas, often in a research context
- Search for information in the scientific literature using the appropriate channels and integrate the information to propose and contextualise a research topic
- Student should possess the learning skills that enable them to continue studying in a way that is largely student led or independent
- Students should be able to integrate knowledge and face the complexity of making judgements based on information that may be incomplete or limited and includes reflections on the social and ethical responsibilities associated with the application of their knowledge and judgements
- Students should know how to apply the knowledge they have acquired and their capacity for problem solving in new or little known fields within wider (or multidisciplinary) contexts related to the area of study
- Students should know how to communicate their conclusions, knowledge and final reasoning that they hold in front of specialist and non-specialist audiences clearly and unambiguously

## Learning Outcomes

1. Analyse games theory to describe topics of industrial organisation
2. Apply the methodology of research, techniques and specific advanced resources to research and produce innovative results in a specific area of specialisation
3. Demonstrate an open , innovative and analytical attitude towards research questions
4. Describe decision-making in the most complex strategic contexts, including the relationship between the different economic agents and the information structure of the economic context
5. Distinguish between different principal-agent models
6. Make independent judgements and defend them dialectically
7. Possess and understand knowledge that provides a basis or opportunity for originality in the development and/or application of ideas, often in a research context
8. Recognise the deficiencies in the existing models in the field of information economics and industrial organisation and propose a strategy to be followed to shift the borders of knowledge.
9. Search for information in the scientific literature using the appropriate channels and integrate the information to propose and contextualise a research topic
10. Student should possess the learning skills that enable them to continue studying in a way that is largely student led or independent
11. Students should be able to integrate knowledge and face the complexity of making judgements based on information that may be incomplete or limited and includes reflections on the social and ethical responsibilities associated with the application of their knowledge and judgements
12. Students should know how to apply the knowledge they have acquired and their capacity for problem solving in new or little known fields within wider (or multidisciplinary) contexts related to the area of study
13. Students should know how to communicate their conclusions, knowledge and final reasoning that they hold in front of specialist and non-specialist audiences clearly and unambiguously
14. Use the principal-agent models and notions of games theory to draw conclusions about the appropriateness of certain policies

# Content

- Behavioural Economics
- Corporate Finance
- Data
- Economics of Information
- Energy
- Industrial Organisation
- Industrial and Energy Economics
- Networks
- Public Economics

*For a detailed description of the content of topics in this module go to https://sites.google.com/view/idea-program/master-program .*

## Activities and Methodology

| Title | Hours | ECTS | Learning Outcomes |
|---|---|---|---|
| Type: Directed | | | |
| Theory classes | 75 | 3 | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 |
| Type: Supervised | | | |
| Practice classes, problems sets, tutorials | 25 | 1 | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 |
| Type: Autonomous | | | |
| Learning based on problem solving, personal study, study groups | 150 | 6 | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 |

The course will consist of sessions where the instructor presents the material, and sessions specifically dedicated to problem solving. Students are encouraged to form study groups to discuss assignments and readings.

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.

## Assessment

## Continous Assessment Activities

| Title | Weighting | Hours | ECTS | Learning Outcomes |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Class Attendance and Problem sets and assignments | 22% | 0 | 0 | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 |
| Midterm Exam | 26% | 0 | 0 | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 |
| Midterm Exam | 26% | 0 | 0 | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 |
| Midterm Exam | 26% | 0 | 0 | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 |

This modul does not contemplate an evaluation from a single comprehensive exam

| | |
|---|---|
| Midterm Exam | 26% |
| Midterm Exam | 26% |
| Midterm Exam | 26% |
| Problem sets, assignments & Class attendance and active participation | 22% |

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

## Bibliography

Aghion, P. and Bolton, P. (1992), "An Incomplete Contracts Approach to Financial Contracting," Review of Economic Studies 59: 473-494.

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Akerlof, G.A., Kranton, R.E., 2000. Economics and Identity. Q. J. Econ. 115, 715-753

Allen, F. and Michaely, R. (1995), "Dividend Policy," in Handbooks of Operation Research and Management Science: Finance (ed. Jarrow, R., Maksimovic, V. and Ziemba, W.), Amsterdam: North-Holland.

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Cameron, A. C. and P. K. Triverdi (2005), Microeconometrics: Methods and Applications, Cambridge University Press

Carvalho, J.-P. (2013) "Veiling" Quarterly Journal of Economics 128(1); 337-370

Caselli, F.and W. J. Coleman, II, On The Theory of Ethnic Conflict, Journal of the European Economic Association, Volume 11, Issue suppl_1, 1 January 2013, Pages 161-192

Davis P. and E. Garcés, Quantitative Techniques for Competition and Antitrust Analysis, Princeton University Press

Jackson, M. O. Social and economic networks. Princeton University Press,2010.

Newman, M.. Networks: an introduction. Oxford University Press, 2009.

Shum, M. Econometric Models of Industrial Organization, World Scientific

Tirole, J. (2006), "The Theory of Corporate Finance," Princeton University Press.

Tirole, J. The Theory of Industrial Organization, The MIT Press

Toke, A. , F. Albornoz and E. Hauk (2021) "Foreign influence in domestic policy", Journal of Economic Literature 59(2):426-87

Víctor Aguirregabiria's notes (University of Toronto, Department of Economics)

Wooldridge, J. M. (2002), Econometric Analysis of Cross Section and Panel Data, MIT Press

*Additional references will be provided during the course.*

## Software

- Matlab
- R
- Phyton
- Stata

## Language list

| Name | Group | Language | Semester | Turn |
|---|---|---|---|---|
| (PLABm) Practical laboratories (master) | 1 | English | second semester | morning-mixed |
| (PLABm) Practical laboratories (master) | 2 | English | second semester | morning-mixed |
| (PLABm) Practical laboratories (master) | 3 | English | second semester | morning-mixed |
| (TEm) Theory (master) | 1 | English | second semester | morning-mixed |