

Advanced Microeconomics

Code: 40100
ECTS Credits: 10

Degree	Type	Year	Semester
4313805 Economic Analysis	OT	2	1

The proposed teaching and assessment methodology that appear in the guide may be subject to changes as a result of the restrictions to face-to-face class attendance imposed by the health authorities.

Contact

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Use of Languages

Principal working language: english (eng)

Teachers

Inés Macho Stadler
Pau Olivella Cunill
Jesús David Pérez Castrillo
Joan Lluís Cabrer
Amedeo Piolatto
Pau Milan Sole

External teachers

Hanna Wang

Prerequisites

No specific prerequisites.

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

- Corporate Finance
- Industrial Organization
- Microeconometrics
- Contracts, Incentives and Behavior
- Networks

- Structural Microeconometrics

Methodology

- Theory classes
- Practice classes
- Learning based on problem solving
- Tutorials
- Personal study
- Study groups
- Textbook reading
- Article reading

Activities

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

Assessment

Final Exams	50%
Class attendance and active participation	20%
Problem sets and assignments	30%

A module consists of different courses which are evaluated through final exams, problem sets and assignments and other class activities such as class attendance, presentations, etc.

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Class Attendance and Problem sets and assignments	50%	0	0	1, 2, 9, 3, 4, 5, 6, 11, 12, 13, 10, 8, 7, 14
Final Exams	50%	0	0	1, 2, 9, 3, 4, 5, 6, 11, 12, 13, 10, 8, 7, 14

Bibliography

- Tirole, J. (2006), "*The Theory of Corporate Finance*," Princeton University Press.
- Brealey, R.A. and Myers, S.C. (1997), "*Principles of Corporate Finance*," New York McGraw-Hill.
- Kaplan, S. and Strömberg, P. (2003), "Financial Contracting Meets the Real World: An Empirical Study of Venture Capital Contracts," *Review of Economic Studies* 70: 281-315.
- Macho-Stadler, I. and Pérez-Castrillo, D. (2010), "Incentives in University Technology Transfers", *International Journal of Industrial Organization* 28 : 362-367.
- Armstrong, Mark and Porter, Robert H. eds. "Handbook of industrial organization," Vol. 3. Elsevier, 2007.
- Belleflamme, P. and Peitz, M., *Industrial Organization: Markets and Strategies*, Cambridge University Press, 2009.
- Bolton, P. and Dewatripont, M., *Contract Theory*, MIT Press, 2004.
- Macho-Stadler, I. and Pérez-Castrillo, D., *An Introduction to the Economics of Information*, Oxford University Press, 1997.
- Shy, Oz, *Industrial Organization: Theory and Applications*, The MIT Press, 1997.
- Tirole, J., *Theory of Industrial Organization*, Cambridge, MIT Press, 1989
- Cameron, A. C. and P. K. Triverdi (2005), *Microeconometrics: Methods and Applications*, Cambridge University Press
- Wooldridge, J. M. (2002), *Econometric Analysis of Cross Section and Panel Data*, MIT Press
- Angrist, J. D. and J.-S. Pischke (2009), *Mostly Harmless Econometrics, An Empiricist's Companion*, Princeton University Press.
- Bolton, P. and M. Dewatripont (2005). *Contract theory*. MIT press.
- Macho-Stadler, I. and D. Pérez-Castrillo (2001). *An Introduction to the Economics of Information*, 2nd Edition. Oxford University Press.
- Mas-Colell, A, M. Whinston and J. Green (1995). *Microeconomic Theory*. Oxford University Press.
- Salanié, B. (2005). *The Economics of Contracts: A Primer*. MIT Press Books.
- Laffont, J.-J. (1989). *The Economics of Uncertainty and Information*. The MIT Press, Cambridge, Massachusetts.
- Jackson, Matthew O. *Social and economic networks*. Princeton University Press, 2010.
- Newman, Mark. *Networks: an introduction*. Oxford University Press, 2009.
- Adda, J. and R. W. Cooper (2003), *Dynamic Economics: Quantitative Methods and Applications*. The MIT Press.
- Aguirregabiria, V. and P. Mira (2002), "Swapping the Nested Fixed Point Algorithm: A Class of Estimators for Discrete Markov Decision Models", *Econometrica*, 70, 1519-1543.
- Aguirregabiria, V. and P. Mira (2007), "Sequential Estimation of Dynamic Discrete Games", *Econometrica*, 75, 1-53.
- Aguirregabiria, V. and P. Mira (2010), "Dynamic Discrete Choice Structural Models: A Survey", *Journal of Econometrics*, 156: 38-67
- Arcidiacono, P. and P. B. Ellickson (2011), "Practical Methods for Estimation of Dynamic Discrete Choice Models", *Annual Review of Economics*, 3, 363-394.

- Arcidiacono, P. and R. A. Miller (2011), "Conditional Choice Probability Estimation of Dynamic Discrete Choice Models with Unobserved Heterogeneity", *Econometrica*, 79, 1823-1867.
- Hong, H. and M. Shum (1998), "Structural Estimation of Auction Models", In: Patrone F., García-Jurado I., Tijs S. (eds) *Game Practice: Contributions from Applied Game Theory. Theory and Decision Library (Series C: Game Theory, Mathematical Programming and Operations Research)*, vol 23. Springer, Boston, MA.
- Hotz, V. J. and R. A. Miller (1993), "Conditional Choice Probabilities and the Estimation of Dynamic Models", *Review of Economic Studies*, 60, 497-529.
- Keane, M. P. and K. I. Wolpin (1997), "The Career Decisions of Young Men", *Journal of Political Economy*, 105, 473-522.
- Rust, J. (1987), "Optimal Replacement of GMC Bus Engines: An Empirical Model of Harold Zurcher", *Econometrica*, 55, 999-1033.