UAB
Universitat Autònoma de Barcelona

Research Techniques in Economics

Code: 40170
ECTS Credits: 10

2024/2025

Degree	Type	Year
4313805 Economic Analysis	OT	2

Contact

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Teachers

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Teaching groups languages

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

Prerequisites

No specific prerequisits.

Objectives and Contextualisation

In this module students learn advanced research methods in Economics. These methods include frontier techniques in quantitative methods that allow the student to analyze complex datasets. Students will learn to use econometric techniques for both aggregate and micro data, networks and experimental methods. The different methods presented are used and derived from their theoretical foundations.

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
- Capacity to identify basic statistical analysis and econometric techniques deriving them from the laws of probability and statistics
- Demonstrate an open , innovative and analytical attitude towards research questions
- Design, plan and carry out economic research
- Develop the ability to assess sex and gender inequalities in order to design solutions.
- 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
- Use new technology for the collection and organisation of information to solve problems in professional activities
- Use the main computer packages to program economic data analysis

Learning Outcomes

1. Adapt microeconometric methodologies to specific fields such as the labour market or immigration or education policies
2. Apply the methodology of research, techniques and specific advanced resources to research and produce innovative results in a specific area of specialisation
3. Conceptualise the design of an experiment and the analysis of data to give a rigorous response to an economic question
4. Demonstrate an open , innovative and analytical attitude towards research questions
5. Describe the models of decision-making that include different assumptions from the neoclassical ones on the behaviour of economic agents
6. Know how to apply the instruments of gender perspective in the analysis of organisations.
7. Know how to carry out a gender-sensitive analysis.
8. Know how to carry out research with a gender perspective.
9. Know how to integrate the conditions and needs of women and men, in addition to a human- rights approach, into development-cooperation policies.
10. Know how to make an inclusive and non-sexist use of language.
11. Make independent judgements and defend them dialectically
12. 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
13. Produce, collect and interpret empirical data in a gender-sensitive manner.
14. Program microeconometric methodologies in different applied contexts
15. Search for information in the scientific literature using the appropriate channels and integrate the information to propose and contextualise a research topic
16. Student should possess the learning skills that enable them to continue studying in a way that is largely student led or independent
17. 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

18. 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
19. 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
20. Use new technology for the collection and organisation of information to solve problems in professional activities

Content

- Behavioural economics
- Economy of information
- Growth
- Industrial Organisation
- Microeconometrics
- Money and Banking
- Networks
- Policy evaluation

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, 11, 12, 14, 15, 16, 17, 18, 19, 20
Type: Supervised			
Practice classes, problems sets, tutorials	25	1	1, 2, 3, 4, 5, 11, 12, 14, 15, 16, 17, 18, 19, 20
Type: Autonomous			
Learning based on problem solving, personal study, study groups,	150	6	1, 2, 3, 4, 5, 11, 12, 14, 15, 16, 17, 18, 19, 20

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, 15, 16, 17, 18, 19, 20
Midterm Exam	26%	0	0	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
Midterm Exam	26%	0	0	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
Midterm Exam	26%	0	0	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

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

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Additional references will be provided during the course.

Software

- Matlab
- R
- Phyton
- Stata

Language list

Name	Group	Language	Semester	Turn
(PLABm) Practical laboratories (master)	30	English	annual	morning-mixed
(TEm) Theory (master)	30	English	annual	morning-mixed