UAB
Universitat Autònoma de Barcelona

2019/2020

Applied and Quantitative Economics

Code: 41832
ECTS Credits: 10

Degree	Type	Year	Semester
4313805 Economic Analysis	OT	2	1

Contact

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Teachers

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External teachers

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Use of Languages

Principal working language: english (eng)

Prerequisites

No specific prerequisits.

Objectives and Contextualisation

This module provides students with advanced econometric techniques for analyzing micro and macro data. These techniques can be applied to (and be learned from) the areas of Health economics, labor economics, public economics, experimental economics, empirical finance, trade and International economics, development economics and political economy. The advances microeconometric techniques that are seen in this module include models for discrete and truncated variables, multinomial models, binary models for panel data, the Heckman model, duration models and structural discrete dynamic models a la Rust, that are widely applied in frontier research in 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
- Capacity to identify basic statistical analysis and econometric techniques deriving them from the laws of probability and statistics

- Conceptually analyse a specific economic problem using advanced analytical tools
- Demonstrate an open , innovative and analytical attitude towards research questions
- Find, compile and analyse economic data using advanced econometric techniques
- 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
- 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 empirical methodologies to the questions posed, the models used to represent them and the existing data
2. Apply the methodology of research, techniques and specific advanced resources to research and produce innovative results in a specific area of specialisation
3. Carry out a microeconometric analysis using the information packages available
4. Demonstrate an open , innovative and analytical attitude towards research questions
5. Frame a question of applied economics in a mathematical problem and derive the answer using mathematical logic
6. Implement empirical analysis, including all its stages, using the available data
7. Make independent judgements and defend them dialectically
8. 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
9. Recognise the elements that enable the construction of a model in more specific fields of microeconomics, such as health, economic policy
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. Understand the possibilities and limitations of microeconometric analysis
15. Use new technology for the collection and organisation of information to solve problems in professional activities

Content

- Industrial Organization
- Quantitative Macroeconomics
- Structural Microeconomics
- Asset Pricing

Methodology

• Theory classes

• Practical classes

• Learning based on problem solving.

• Tutorials

• Personal study

• Study groups

• Textbooks reading

• Article reading

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Theory classes	75	3	1, 2, 4, 7, 5, 14, 3, 6, 11, 12, 13, 10, 9, 8, 15
Type: Supervised			
Practical classes,learning based on problems sets, tutorials	25	1	1, 2, 4, 7, 5, 14, 3, 6, 11, 12, 13, 10, 9, 8, 15
Type: Autonomous			
Personal study, study groups, textbook readings, article readings	150	6	1, 2, 5, 14, 3, 6, 11, 12, 13, 10, 9, 8, 15

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,

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Class Attendance and Problem sets and assignments	50%	0	0	1, 2, 4, 7, 5, 14, 3, 6, 11, 12, 13, 10, 9, 8, 15
Final Exams	50%	0	0	1, 2, 4, 7, 5, 14, 3, 6, 11, 12, 13, 10, 9, 8, 15

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