Name of subject:	
APPLIED AND QUANTITATIVE ECONOMICS	**Contact:** joan.llull at uab.cat
Code: OT	**Term:** Year 2, Semester 1
ECTS Credits: 10	**Working language:** English

Instructors

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Objectives and Contextualization

This module provides students with advanced econometric techniques for analyzing micro data. These techniques can be applied to (and be learned from) the areas of health economics, labor economics, public economics, finance and political economy. The advanced 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 à la Rust, that are widely applied in frontier research in economics.

Skills

CB6	To acquire the knowledge that provides the basis for originality in developing and/or applying ideas, often in a research context
CB7	The students can apply the acquired knowledge to solve problems in new environments, within broader contexts, that are related to their field of study
CB8	Students should be able to integrate knowledge and be confronted with the difficulty of formulating judgments based on incomplete and limited information
CB9	The students can communicate their conclusions to both specialists and non-specialists in a clear and unambiguous way
CB10	Students must have the learning skills necessary to continue studying in a way that is, mostly, self-directed and autonomous

Learning Outcomes

Specific:

E01	Ability to articulate the fundamentals of economic theory analytically, deriving them with mathematical reasoning
E01.13	To understand the elements required to build models in specific fields like health

	economics or political economy
E02	Ability to identify the fundamentals of statistical analysis and econometric techniques, deriving them from the laws of probability and statistics
E02.06	Understanding what the possibilities and limitations of microeconometric analysis are
E02.07	Ability to adapt the existing methodology to address the question in hand
E03	To use the main software packages to program the analysis of economic data
E03.03	To perform the microeconometric analysis using the existing econometric software
E04	To analyze a particular economic problem using advanced analytical tools
E04.11	To frame an applied economics question as a mathematical problem and derive its response with mathematical logic
E05	To find, collect and analyze economic data using advanced econometric techniques
E05.03	To conduct empirical analysis
General:	
GT02	To use new information technology to solve problems in the professional activity
GT03	To apply advanced techniques to investigate a specific issue
GT04	To form opinions and defend them dialectically
GT05	To show a positive an innovative attitude

Activities

Type	Hours
Directed	75
Supervised	25
Autonomous	150

Methodology

- Theory classes
- Practical classes
- Learning based on problem solving.
- Tutorials
- Personal study
- Study groups
- Textbooks reading
- Article reading

Evaluation

Final Exam	70%
Class attendance and active participation	10%

Problem sets and assignments	20%

Contents

1. Topics in labor economics
2. Finance
3. Applied public economics
4. Microeconometrics

Bibliography (textbooks)

- Cochrane, J., 2005, Asset Pricing, Princeton University Press.
- Pennachi, G, 2007, Theory of Asset Pricing, Pearson Publishing.
- Amemiya, T. (1985), Advanced Econometrics, Blackwell
- 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