

# **Research Techniques in Economics**

2016/2017

Code: 40170 ECTS Credits: 10

Degree	Туре	Year	Semester
4313805 Economic Analysis	ОТ	2	2

#### Contact

Name: Luca Gambetti

Email: Luca.Gambetti@uab.cat

#### **Teachers**

Jordi Brandts Bernad Albert Marcet Torrens Joan Llull Cabrer

#### **External teachers**

Abhay Abhyankar Ada Ferrer-i-Carbonell Hanner Mueller Raul Santaeulalia Timothy Kehoe

### **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. These techniques use Econometrics, Networks and Experimental Methods. The different methods presented are used and derived from their theoretical foundations and are applied to data.

#### Skills

- 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

## Use of languages

Principal working language: english (eng)

- 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. 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. Program microeconometric methodologies in different applied contexts
- 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 new technology for the collection and organisation of information to solve problems in professional activities

#### Content

- 1. Macroeconometrics
- 2. Microeconometrics
- 3. Dynamic models of optimal policy and expectations

- 4. Experimental economics
- 5. Networks
- 6. Development Economics
- 7. Applied Public Economics
- 8. Trade and International Finance
- 9. Empirical Finance

# 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, 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

## **Evaluation**

Final Exam	70%
Class attendance and active participation	10%

#### **Evaluation activities**

Title	Weighting	Hours	ECTS	Learning outcomes
Class Attendance and Problem sets and assignments	30%	0	0	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Final Exam	70%	0	0	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

## **Bibliography**

- Evans, G. and S. Honkapohja, 2001, Learning and Expectations in Macroeconomics, Princeton University Press.
- Sargent. T, 1993, Bounded Rationality in Macroeconomics, Oxford University Press.
- Ljungqvist, L. and T.J. Sargent (2004), Recursive Macroeconomic Theory, 2nd edition MIT Press.
- Lucas, R.E., and N. L. Stokey (1989); Recursive Methods in Economic Dynamics, Harvard University Press.
- Chari, V.V. and P. Kehoe (1999): "Optimal Fiscal and Monetary Policy" in, Handbook of Macroeconomics. Taylor and Mike Woodford, eds. (North Holland: Amsterdam).
- P. J. Brockwell, and R. A. Davis, (2009), Time Series: Theory and Methods, Springer--Verlag: Berlin.
- F. Canova (2007), Methods for Applied Macroeconomic Research, Princeton University Press: Princeton.
- J. D. Hamilton (1994), Time Series Analysis, Princeton University Press: Princeton.
- H. Lutkepohl (2005), New Introduction to Multiple Time Series, Springer--Verlag: Berlin.
- Galí, Jordi (2008), Monetary Policy, Inflation and the Business Cycle, Princeton University Press
- 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
- Brañas. P. (coordinador): Economía Experimental y del Comportamiento, Antoni Bosch editor 2011.
- Camerer, C.: Behavioral Game Theory: Experiments in Strategic Interaction, Princeton University Press 2003.
- Friedman, D., and S. Sunder: Experimental Methods: A Primer for Economists, Cambridge University Press 1994.
- Friedman, D. and A. Cassar, Economics Lab: An Intensive Course in Experimental Economics, Routledge 2004.

- Kagel, J.H., and A.E. Roth, Handbook of Experimental Economics, Princeton University Press 1995.
- Easley, David, and Jon Kleinberg. Networks, crowds, and markets. Vol. 8. Cambridge: Cambridge University Press, 2010.
- Goyal, Sanjeev. Connections: an introduction to the economics of networks. Princeton University Press, 2012
- Jackson, Matthew O. Social and economic networks. Princeton University Press, 2010.
- Newman, Mark. Networks: an introduction. Oxford University Press, 2009.
- Vega--Redondo, Fernando. Complex social networks. Vol. 44. Cambridge University Press, 2007.
- Wasserman, Stanley, and Katherine Faust. "Social network analysis: Methods and applications." New York: Cambridge University (1994).