

**Economics I**

Code: 40095  
ECTS Credits: 15

Degree	Type	Year	Semester
4313805 Economic Analysis	OB	1	1

**Contact**

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**Use of languages**

Principal working language: english (eng)

**Teachers**

Antonio Miralles Asensio  
Christopher Busch

**Prerequisites**

No specific prerequisites

**Objectives and Contextualisation**

This module covers the first part of the core in modern macroeconomics and microeconomics. This module introduces, in a formal and analytical way, the basic principles of macroeconomics and microeconomics. The student learns how to analyze economic problems and derive their implications using techniques and tools that are typical of mathematical sciences. Microeconomics focuses both on consumer and production decision theory. Macroeconomics focuses on advanced analytical tools that are necessary for the analysis of dynamic problems.

**Skills**

- Capacity to articulate basic economic theory, analytically deriving them from mathematical reasoning
- Conceptually analyse a specific economic problem using advanced analytical tools
- 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
- Student should possess the learning skills that enable them to continue studying in a way that is largely student led or independent
- 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

**Learning outcomes**

1. Analyse the advantages and disadvantages of neoclassical assumptions
2. Frame an economic decision-making question in a simple strategic context in a mathematical problem and derive the answer using mathematical logic
3. Interpret the modelling of a classical problem, the conclusion deriving from it and its limitations
4. Make independent judgements and defend them dialectically
5. 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
6. Propose a simple economic problem in an analytical manner
7. Student should possess the learning skills that enable them to continue studying in a way that is largely student led or independent
8. 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
9. Use new technology for the collection and organisation of information to solve problems in professional activities

## **Content**

### Microeconomics I

1. Rational Behavior and Choice
2. Market Demand
3. Production and Firm Behavior
4. Competitive Equilibrium
5. Market Failure

### Macroeconomics I

1. Deterministic neoclassical growth model
  - a. social planner, equilibrium concepts, solution methods, welfare theorems
  - b. Application: calibration of model
2. Dynamic programming
3. Stochastic models
  - a. Representation of risk
  - b. Time-0 trading and sequential trading equilibrium in endowment economy
  - c. Stochastic neoclassical growth model (RBC-model)
  - d. Application: discussion of model calibration ) and discussion of capital-skill complementarity

## **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
<b>Type: Directed</b>			
Personal study, study groups, textbook readings, article readings	187.5	7.5	1, 2, 3, 4, 5, 6, 7, 8, 9
Problems sets, tutorials	75	3	1, 2, 3, 4, 5, 6, 7, 8, 9
Theory classes	112.5	4.5	1, 2, 3, 4, 5, 6, 7, 8, 9

## Evaluation

Final Exams	80%
Class attendance and active participation	10%
Problem sets and assignments	10%

## Evaluation activities

Title	Weighting	Hours	ECTS	Learning outcomes
Class Attendance and Problem sets and assignments	20%	0	0	1, 2, 3, 4, 5, 6, 7, 8, 9
Final Exams	80%	0	0	1, 2, 3, 4, 5, 6, 7, 8, 9

## Bibliography

- Kreps, David M., «Microeconomic Foundations I: Choice and Competitive Markets», Princeton University Press, 2012.
- Mas-Colell, A., M. Whinston and J. Green, « Microeconomic Theory », Oxford University Press, 1995.
- Rubinstein, A., «Lecture Notes in Microeconomic Theory: The Economic Agent», Princeton University Press, 2012.
- Krueger, Dirk, Macroeconomic Theory, available online.
- Ljungqvist, Lars and Thomas J. Sargent, Recursive Macroeconomic Theory, The MIT Press (2000).

• Stokey, Nancy L., Robert E. Lucas, with Edward C. Prescott, Recursive Methods in Economic Dynamics, Harvard University Press (1989).