

**Economics I**

Code: 40095  
ECTS Credits: 15

Degree	Type	Year	Semester
4313805 Economic Analysis	OB	1	1

The proposed teaching and assessment methodology that appear in the guide may be subject to changes as a result of the restrictions to face-to-face class attendance imposed by the health authorities.

**Contact**

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**Use of Languages**

Principal working language: english (eng)

**Teachers**

Xavier Vilà Carnicero  
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**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.

**Competences**

- 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. Decisions under uncertainty

### Macroeconomics I

1. Deterministic neoclassical growth model (LS ch. 7; K ch. 3, 7):
  1. social planner, equilibrium concepts, solution methods, welfare theorems
  2. Application: calibration of model (CP sec. 4)
  3. Dynamic programming (K ch. 4-5, SL ch. 3-4, LS ch. 3)
  4. Stochastic models (K ch. 6, LS ch. 8)
    1. Representation of risk
    2. Time-0 trading and sequential trading equilibrium in endowment economy
    3. Stochastic neoclassical growth model (RBC-model)
    4. Application: discussion of model calibration (CP sec. 6-7; KPR) and discussion of capital-skill complementarity (KORV)
  5. Overlapping generation models (K ch. 8, LS ch. 9)
    1. Time-0 trading and sequential trading equilibrium in endowment economy
    2. (Possible) Pareto inefficiency of equilibria and positive value of outside money
    3. Pay-as-you-go pension systems
    4. Production economy

## 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	112.5	4.5	1, 4, 2, 3, 6, 8, 7, 5, 9
Type: Supervised			
Problems sets, tutorials	75	3	1, 4, 2, 3, 6, 8, 7, 5, 9
Type: Autonomous			
Personal study, study groups, textbook readings, article readings	187.5	7.5	1, 4, 2, 3, 6, 8, 7, 5, 9

## 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, presentations, etc.

## Assessment Activities

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

## Bibliography

- MAS-COLELL, A., M. WHINSTON and J. GREEN, Microeconomic Theory, Oxford University Press, 1995.
- JEHLE, G.A., P. J. RENY, Advanced Microeconomic Theory (Third Edition). Prentice hall. 2011.
- (K) Krueger, D., 2017: "Macroeconomic Theory", teaching manuscript.
- (LS) Ljungqvist, L. and T. Sargent, 2004: "Recursive Macroeconomic Theory", MIT Press.
- (SL) Stokey, N. L. and R. E. Lucas, Jr., 1989: "Recursive Methods in Economic Dynamics", Harvard University Press.(CP) Cooley, T. F. and E. C. Prescott, 1995: "Economic Growth and Business Cycles", in Cooley, T.F. (ed.): Frontiers of Business Cycle Research, Princeton University Press.

- (KPR) King, R. G., C. I. Plosser, and S. T. Rebelo, 1988: "Production Growth and Business Cycles. I. The Basic Neoclassical Growth Model", *Journal of Monetary Economics*, 21, pp. 195-232
- (KORV) Krusell, P., L. E. Ohanian, J.-V. Ríos-Russ, and G. L. Violante, 2000: "Capital-Skill Complementarity and Inequality: A Macroeconomic Analysis", *Econometrica*, 68 (5), pp. 1029-1053

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