



centro adscrito a:



UNIVERSITAT POLITÈCNICA  
DE CATALUNYA  
BARCELONATECH

**TEACHING GUIDE TO  
ANALYSIS OF THE  
ECONOMIC AND  
TECHNOLOGICAL  
ENVIRONMENT  
2025-26**

## GENERAL DATA

<b>Name:</b>	ANALYSIS OF THE ECONOMIC AND TECHNOLOGICAL ENVIRONMENT
<b>Code:</b>	801882
<b>Course:</b>	2025-26
<b>Titration:</b>	Master's Degree in Financial Innovation and Fintech
<b>Number of credits (ECTS):</b>	5
<b>Location in the curriculum:</b>	1st year 1st semester
<b>Department:</b>	Business Social Sciences
<b>Head of department:</b>	
<b>Date of last revision:</b>	March 2025
<b>Teaching staff:</b>	

## 1. OVERVIEW

---

This subject is designed to provide students with an in-depth understanding of the economic and technological dynamics that influence the financial and business sector. Throughout the programme, the main macroeconomic indicators, global trends in economics and technology, and the impact of digitalisation on different productive sectors will be analysed. In addition, the regulatory frameworks and public policies that condition the evolution of the technological and financial ecosystem will be explored.

The course will also address innovation and competitiveness strategies, providing tools to understand how companies can adapt and take advantage of the ever-changing technological environment. Finally, the ethical and social aspects of digital transformation will be discussed, with an emphasis on technological inclusion and sustainability.

This subject complements "Finance and the Financial System", offering a strategic and contextual perspective that is essential for decision-making in an increasingly digitized and globalized world.

## 2. OBJECTIVES

---

- Analyze the main macroeconomic indicators and their influence on the markets.
- Understand the digital economy and technological transformation in key sectors.
- Examine the regulatory framework and economic policies in the digital age.
- Evaluate innovation strategies and their impact on business competitiveness.
- Reflect on the ethical and social aspects of digitalization and the global economy.

### 3. LEARNING OUTCOMES

---

At the end of the subject the student will be able to:

K4.1: Recognize fundamental regulation in relation to the security and control of data and financial technology.

K4.2: Distinguish the key civil and commercial regulation in relation to the start-up of new businesses and the ethical and social responsibility framework for financial decision-making, especially in the financial technology sector.

S1.1: Communicate effectively orally, in writing and graphically with other people about learning, thinking and decision-making, and participate in debates, making use of interpersonal skills, such as active listening and empathy, which favour teamwork.

S2.1: Develop the capacity to contribute to innovation in new or existing business institutions and organizations, through participation in creative projects and have the ability to apply skills and knowledge on technology-based business sales, organization and development.

S3.1: Understand advanced digital technologies, so that they can be applied with a critical perspective, in diverse contexts, in academic, professional, social or personal situations.

S7.1: Validate compliance with ethical principles in finance and technology, including financial data privacy and corporate social responsibility.

S7.2: Validate compliance with relevant civil and commercial legal regulations in relation to technology and entrepreneurship.

C1.1: Integrate the values of sustainability, understanding the complexity of systems, in order to undertake or promote actions that restore and maintain the health of ecosystems and improve justice, generating diverse visions for sustainable futures.

C2.1: Identify and analyse problems that require autonomous, informed and reasoned decision-making, in order to act with social responsibility, in accordance with ethical values and principles.

C3.1: Develop the capacity to assess gender and gender inequalities and to design solutions.

C8.1: Interpret and apply the regulations in force in new business ventures.

C8.2: Interpret and apply current regulations relating to technology, data privacy and computer security.

We can highlight:

- Interpret macroeconomic indicators and their impact on the global economy.

- Analyze digital transformation in different sectors.
- Identify key regulations that affect the digital economy.
- Evaluate innovation and competitiveness strategies in a technological environment.
- Discuss ethical and inclusion issues related to technology and economics

## 4. CONTENTS

---

### TOPIC 1: FUNDAMENTALS OF THE ECONOMIC ENVIRONMENT

#### Specific learning outcomes:

- Analyze the relationship between the main macroeconomic indicators and their impact on economic growth and stability of a country.
- Explain the phases of the business cycle and assess how global trends influence periods of expansion and recession.
- Examine the effects of globalization on the economy and finance, considering its implications for international trade and financial markets.

#### Contents:

- 1.1. Key macroeconomic indicators.
- 1.2. Business cycles and global trends.
- 1.3. Economic and financial globalization.

### TOPIC 2: DIGITAL TRANSFORMATION AND DIGITAL ECONOMY

#### Specific learning outcomes:

- To analyse the main characteristics of the digital economy and the business models that have emerged from digitalisation.
- Evaluate the impact of digital transformation in strategic sectors, identifying opportunities and challenges in the adoption of new technologies.
- Identify and examine emerging technological trends and their influence on the evolution of the digital economy.

#### Contents:

- 2.1. Characteristics and models of the digital economy.
- 2.2. Digital transformation in key sectors.
- 2.3. Emerging technology trends.

## TOPIC 3: REGULATION AND ECONOMIC POLICY

### Specific learning outcomes:

- Analyze the regulatory framework that governs financial and technological markets, evaluating its impact on innovation and economic stability.
- Explain the role of monetary and fiscal policy in the digital economy, considering the challenges and opportunities presented by new technologies.
- Assess the importance of sustainability policies and ESG (environmental, social and governance) criteria in economic and business decision-making.

### Contents:

- 3.1. Financial and technological regulation.
- 3.2. Monetary and fiscal policy in the digital age.
- 3.3. Sustainability and ESG policies.

## TOPIC 4: INNOVATION AND COMPETITIVENESS

### Specific learning outcomes:

- Analyse the impact of innovation on business and technological development, identifying key factors for its success.
- Evaluate different innovation strategies and their application in competitive environments to foster growth and differentiation.
- Examine real cases of success and failure in innovation, identifying lessons learned and best practices for their implementation.

### Contents:

- 4.1. Business and technological innovation.
- 4.2. Innovation strategies.
- 4.3. Success and failure cases in innovation.

## TOPIC 5: ETHICS, INCLUSION AND THE DIGITAL DIVIDE

### Specific learning outcomes:

- Analyse the ethical and social responsibility principles in the implementation of new technologies, assessing their impact on society and digital rights.
- Identify the factors that contribute to the digital divide and propose strategies to promote digital inclusion in different sectors of the population.

- Evaluate the relationship between sustainability and digital transformation, considering the environmental and social impact of new technologies.

## Contents:

5.1 Ethics and responsibility in technological transformation.

5.2 Digital inclusion and the technological divide.

5.3 Sustainability and digital transformation.

## 5. TEACHING AND LEARNING METHODOLOGY

---

Teaching is carried out through a series of face-to-face sessions, whose spirit is to combine theory and practice in a balanced way, complemented by a series of didactic materials (manual and presentation), exercises and cases for their resolution, provided online and with *feedback*, also online, using the program's own platform as a digital support.

The face-to-face activities will be carried out through:

- Presentation by the teacher of the practical application of the theoretical contents of the different topics of the subject. It is essential that the student reads beforehand (by the student) the reference manual for each topic that is available in the virtual classroom.
- Discussion of content.
- Application of concepts and methodologies to examples/case studies and technology workshops.

Learning will be consolidated through the resolution of the exercises and/or cases that will be provided on the virtual campus of the subject and the group research work to be carried out, evaluating it and providing *feedback* to the student on its scope.

## 6. EVALUATION

---

In accordance with the Bologna Plan, the model rewards the constant and continuous effort of students. 60% of the grade is obtained from the continuous evaluation of the directed activities and the remaining 40% from the final face-to-face exam. The final exam has two sittings.

The final grade of the subject (NF) will be calculated based on the following formula:

- **NF = Final Exam Grade x 40% + Continuous Evaluation Grade x 60%**
- The minimum grade of the final exam to calculate the NF will be 40 points out of 100.
- The subject is approved with an NF equal to or greater than 50 points out of 100.

Type of activity	Description	% Continuous evaluation	
<b>Deliveries:</b>			<b>50%</b>
Case Study	Submission Topic 1-2	10%	
Case Study	Submission Topic 3-5	10%	
Research work	Delivery T.Investig.	30%	
<b>Questionnaires:</b>			<b>10%</b>
Questionnaire 1	Test Topic 1	2%	
Questionnaire 2	Test Topic 2	2%	
Questionnaire 3	Test Topic 3	2%	
Questionnaire 4	Test Topic 4	2%	
Questionnaire 5	Test Topic 5	2%	
<b>Final examination</b>			<b>40%</b>
	Final examination	100%	

## 7. BIBLIOGRAPHY

### 7.1. BASIC BIBLIOGRAPHY

Blanchard Olivier (2019), *Macroeconomics*, Pearson.

Coeckelbergh, M. (2020). *Ética de la inteligencia artificial*. Cambridge University Press.

Gauthier-Umaña, V., & Méndez-Romero, R. A. (Eds.). (2020). *Transformación digital en las organizaciones*. Pearson.

Krugman, Wells, Graddy (2013), *Essentials of Economics*, MacMillan.

Mankiw (2020), *Macroeconomics* (2012), Worth Publisher, 7th Edition.

Mochón F.(2009), *Introducción a la Macroeconomía*, IV edición, Mc Graw-Hill.

### 7.2. COMPLEMENTARY BIBLIOGRAPHY

Almirall, E. (2025). *Qué hacer cuando todo cambia*. Planeta

- Baig, M. A., & González, M. A. (2019). *Innovación y competitividad en la transformación digital*. Editora Artemis
- Brynjolfsson, E., & McAfee, A. (2017). *La segunda era de las máquinas*.
- Coeckelbergh, M. (2024). *La filosofía política de la inteligencia artificial*. Cátedra
- Floridi, L. (2018). *La cuarta revolución: Cómo la AI, el Big Data y la robótica están cambiando el mundo*. Editorial Taurus.
- OECD (2021). *Digital Economy Outlook*.
- Porter, M. E. (1990). *La ventaja competitiva de las naciones*. McGraw-Hill.
- Schwab, K. (2016). *La cuarta revolución industrial*.
- Westerman, G., Bonnet, D., & Ferraris, P. (2020). *Leading digital: Turning technology into business transformation*. Harvard Business Review Press.