



Course guide

240041 - 240041 - Economics and Business

Last modified: 15/09/2023

Unit in charge: Barcelona School of Industrial Engineering
Teaching unit: 732 - OE - Department of Management.

Degree: BACHELOR'S DEGREE IN INDUSTRIAL TECHNOLOGY ENGINEERING (Syllabus 2010). (Compulsory subject).
BACHELOR'S DEGREE IN AUTOMOTIVE ENGINEERING (Syllabus 2017). (Optional subject).

Academic year: 2023 **ECTS Credits:** 6.0 **Languages:** Catalan, Spanish

LECTURER

Coordinating lecturer: LUCAS PHILIPPE VAN WUNNIK

Others: Primer quadrimestre 2023-2024:
EDUARD BUSCA HERNANDEZ - Grup: 30
EDUARDO CHARLES ORMO - Grup: 40
RAQUEL PERALES MUÑOZ - Grup: 10
RAMON SALVADOR VALLES - Grup: 40
LUCAS PHILIPPE VAN WUNNIK - Grup: 20

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

1. Correct knowledge of the business/company concept, company's institutional and legal framework. Company organisation and management.

Transversal:

2. ENTREPRENEURSHIP AND INNOVATION: Knowing about and understanding how businesses are run and the sciences that govern their activity. Having the ability to understand labor laws and how planning, industrial and marketing strategies, quality and profits relate to each other.

3. SUSTAINABILITY AND SOCIAL COMMITMENT. Being aware of and understanding the complexity of social and economic phenomena that characterize the welfare society. Having the ability to relate welfare to globalization and sustainability. Being able to make a balanced use of techniques, technology, the economy and sustainability.

TEACHING METHODOLOGY

1. CLASSROOM TEACHING (60h)

· In each topic an economic tool is presented (concept, model) and analysed with present day facts or statistic data (applications). This way, it is intended that the student is able to perceive this tool's utility, understand it better and interpret reality and economic present day with the aid of this tool.

· Each one of these lessons has different parts:

(i) A theoretical exposition done by the professor (expositive lecture).

(ii) Exercises and problems (problems session).

(iii) Applying theory: comment/analyse of present day economics or economic data (expositive lecture with students' participation).

2. STUDENT'S NON-PRESENTIAL ACTIVITY (90h)

· Take part on a discussion about an economic topic.

· Creating a common project (deliverable).

· Study on contents related with what has been seen in lectures (studying exams, solving problems and exercises, reading complementary literature.).

LEARNING OBJECTIVES OF THE SUBJECT

The objective of this course is to provide the student with the basic analysing tools to understand possible influences of the economic environment on the company. This knowledge is important for the future engineer as an employee, employer and also as a citizen.

It is intended that by the end of the course, the student is able to:

Objective 1: To be able to describe different types of existing firms companies and their financing methods.

Objective 2: To possess a basic vocabulary of accounting (balance sheet, profit and loss account, assets, liabilities, net worth, profits, depreciation, etc.).

Objective 3: To identify environment variables which can influence the firm.

Objective 3: To possess a basic vocabulary of economy (opportunity cost, supply and demand, price-elasticity of demand, public deficit, public debt, GDP, economic growth, potential GDP, output gap, inflation, CPI, unemployment, NAIRU, productivity, etc.).

Objective 5: To solve problems and exercises of economic models (supply and demand, aggregate supply and aggregate demand, etc.).

Objective 6: To be able to analyse and interpret economic events and economic-policy proposals with the economic tools presented.

Objective 7: To know where to find and how to use economic information (non-specialised press, INE, Human Development Report, OCDE, EUROSTAT, World Bank, etc.).

Objective 8: To have the capacity to write and to argue with more criteria about economic topics.

STUDY LOAD

Type	Hours	Percentage
Hours large group	60,0	40.00
Self study	90,0	60.00

Total learning time: 150 h

CONTENTS

1. First economic models: the production possibilities frontier and comparative advantage

Description:

- The concept of scarcity and its implications (need to choose and opportunity cost)
- A tool to illustrate scarcity and efficiency: the production possibilities frontier
- To illustrate with the production possibility frontier a very simple case in which the advantages of specialisation and trade are demonstrated (principle of the comparative advantage)

Specific objectives:

3, 4, 5

Related competencies :

CE6. Correct knowledge of the business/company concept, company's institutional and legal framework. Company organisation and management.

02 SCS. SUSTAINABILITY AND SOCIAL COMMITMENT. Being aware of and understanding the complexity of social and economic phenomena that characterize the welfare society. Having the ability to relate welfare to globalization and sustainability. Being able to make a balanced use of techniques, technology, the economy and sustainability.

Full-or-part-time: 15h

Theory classes: 6h

Self study : 9h

2. Supply and demand

Description:

- Concept of market mechanism
- Concept of perfect competition
- Tool to illustrate the concept of market mechanism: the demand and supply curves
- Illustration with the supply and demand graph of the introduction of a maximum or minimum price in a competitive market
- Definition of price elasticity of demand
- Other elasticities of demand and price elasticity of supply
- The relationship between the price elasticity of demand and total revenue of producers
- Relationship between price elasticities of respectively the demand and supply curves and tax incidence

Specific objectives:

3, 4, 5

Related competencies :

CE6. Correct knowledge of the business/company concept, company's institutional and legal framework. Company organisation and management.

01 EIN. ENTREPRENEURSHIP AND INNOVATION: Knowing about and understanding how businesses are run and the sciences that govern their activity. Having the ability to understand labor laws and how planning, industrial and marketing strategies, quality and profits relate to each other.

Full-or-part-time: 20h

Theory classes: 8h

Self study : 12h

3. Virtues and limitations of the market

Description:

- The 3 functions of the price in a market economy
- The concept of the Invisible Hand
- Microeconomic market failures (imperfect competition, externalities, public goods, common resources)
- The 4 market structures: perfect competition, monopoly, oligopoly, monopolistic competition

Specific objectives:

3, 4, 5, 6

Related activities:

Practical project

Related competencies :

CE6. Correct knowledge of the business/company concept, company's institutional and legal framework. Company organisation and management.

01 EIN. ENTREPRENEURSHIP AND INNOVATION: Knowing about and understanding how businesses are run and the sciences that govern their activity. Having the ability to understand labor laws and how planning, industrial and marketing strategies, quality and profits relate to each other.

02 SCS. SUSTAINABILITY AND SOCIAL COMMITMENT. Being aware of and understanding the complexity of social and economic phenomena that characterize the welfare society. Having the ability to relate welfare to globalization and sustainability. Being able to make a balanced use of techniques, technology, the economy and sustainability.

Full-or-part-time: 15h

Theory classes: 6h

Self study : 9h

4. The firm: concept and types of firms

Description:

- The nature of the firm
- Types and legal forms of the firm
- Forms of business financing
- Areas of the firm
- Annual accounts (principles)

Specific objectives:

1, 2, 4

Related competencies :

CE6. Correct knowledge of the business/company concept, company's institutional and legal framework. Company organisation and management.

O2 SCS. SUSTAINABILITY AND SOCIAL COMMITMENT. Being aware of and understanding the complexity of social and economic phenomena that characterize the welfare society. Having the ability to relate welfare to globalization and sustainability. Being able to make a balanced use of techniques, technology, the economy and sustainability.

Full-or-part-time: 20h

Theory classes: 8h

Self study : 12h

5. The government budget

Description:

- Acquire knowledge of vocabulary relating to tax matters (what it is and how it is calculated).
- Classification of taxes (direct taxes vs. indirect taxes, progressive taxes, proportional and regressive)
- Government budget balance (budget deficit, budget surplus)
- Public Debt

Specific objectives:

3, 4, 5, 6, 7, 8

Full-or-part-time: 10h

Theory classes: 4h

Self study : 6h

6. Macroeconomic indicators I: GDP

Description:

- Gain understanding of the vocabulary related to macroeconomic aggregates I: GDP and its uses (what it is and how it is calculated)
- Two ways to calculate GDP
- GDP and its components
- Circular flow of income
- Disposable income
- Real GDP vs. nominal GDP
- Economic Growth
- GDP Deflator
- Is GDP per capita is a good indicator of well-being?

Specific objectives:

3, 4, 5, 6, 7, 8

Full-or-part-time: 15h

Theory classes: 6h

Self study : 9h



7. Macroeconomic indicators II: unemployment rate and inflation rate (with CPI)

Description:

- Gain understanding of the vocabulary concerning the macroeconomic aggregates II: the unemployment rate and the inflation rate (the CPI) (what it is and how it is calculated)
- Unemployment rate
- Labour force participation rate
- CPI
- Inflation rate (with the CPI)
- Core Inflation

Specific objectives:

3, 4, 6, 7, 8

Full-or-part-time: 5h

Theory classes: 2h

Self study : 3h

8. Aggregate supply and aggregate demand

Description:

- Two sides of the economy (aggregate supply and aggregate demand) and two time horizons (short run and long run)
- Two schools: Classics Vs. Keynesians
- Concepts of potential GDP, output gap, NAIRU, cyclical unemployment and structural unemployment.
- Aggregate demand curve
- Aggregate supply curve in the short run
- Aggregate supply curve in the long run
- To study the determinants of aggregate supply in the long term (which determines the capacity of a country)
- Productivity determinants
- Role of entrepreneurship and innovation
- Fiscal policy and how government can influence aggregate demand with fiscal instruments (taxes and government spending)
- Discretionary fiscal policy and its disadvantages
- Automatic stabilizers
- Cyclical and structural budget balance

Specific objectives:

3, 4, 5, 6, 8

Full-or-part-time: 20h

Theory classes: 8h

Self study : 12h

9. Money and commercial banks

Description:

- Definition of money and monetary aggregates (M0, M1, M2)
- Money creation by the commercial bank (money multiplier)

Specific objectives:

3, 4, 5, 6, 8

Full-or-part-time: 10h

Theory classes: 4h

Self study : 6h

10. Central bank and monetary policy

Description:

- How the central bank can influence the quantity of money circulating in the economy and thus aggregate demand
- The instruments of monetary policy of the central bank
- The monetary transmission mechanism (how a change in the quantity of money affects aggregate demand)

Specific objectives:

3, 4, 5, 6, 8

Full-or-part-time: 10h

Theory classes: 4h

Self study : 6h

11. The environment of the firm: macro-environment and industry/market environment

Description:

- Distinguish two dimensions of the firm's environment: macro-environment (political-legal, economic, social, technological) and industry/market
- PEST analysis (principles)
- Analysis of the 5 forces Porter (principles)
- Application to business cases

Specific objectives:

6

Full-or-part-time: 10h

Theory classes: 4h

Self study : 6h

ACTIVITIES

CLASSROOM ACTIVITIES

1. CLASS (THEORY, PROBLEMS AND APPLICATIONS)

Description:

Explanation of the contents (theory and applications of economic theory to real cases) by the professor. Solving exercises and problems by the professor in collaboration with the students.

Specific objectives:

1, 2, 3, 4, 5, 6

Material:

- Chapters of economics textbook used (see basic bibliography).
- Explanation of the various economic tools in the "guai de trabajo" (available at the copy shop or Atenea).
- Applications in the "guia de trabajo" (available at the copy shop or Athena).
- Slides used by professor (available in Atenea).
- Texts (e.g. press articles) to comment in class (available at the Atenea).
- Photocopies (available in Athena).
- Short questions, problems and exercises working guide (available at the copy shop or Atenea).

Full-or-part-time: 60h

Theory classes: 60h



2. EVALUATION ACTIVITIES

Description:

Set of written exams (partial and final exam) that the student has to perform (theory, concepts, exercises, text comments).

Specific objectives:

1, 2, 3, 4, 5, 6, 8

Material:

The student will be informed about which part of each exam can be carried out with support material for single use (calculator, book, guide work, notes, etc.) and which part without supporting material.

Delivery:

Solved written exam.

Full-or-part-time: 4h

Theory classes: 4h

SELF STUDY

1. ASSIGNMENTS

Description:

Participating in a debate on an economic issue and delivering assignment.

Specific objectives:

7, 8

Material:

- Statement of the economic issue to study.
- Text(s) to criticize.
- Links to economic data (INE, Human Development Report, OECD, Eurostat, World Bank, IMF, etc.).
- Notes, working guide, book of the bibliography.

Delivery:

- Individual interventions in the debate.
- Work delivered.

Full-or-part-time: 30h

Self study: 30h



3. PREPARATION OF THE WRITTEN EXAMS

Description:

Study related to the contents taught in the classes.

Specific objectives:

1, 2, 3, 4, 5, 6, 8

Material:

- Chapters of the economics textbook used (see basic bibliography).
- Explanation of the different economic tools in the course guide (available at the copy shop or in Atenea) chips.
- Solved problems and exercises and applications in the course guide (available at the copy shop or in Atenea).
- Solved exams of previous semesters (available in Atenea).
- Photocopies (available in Atenea).
- Slides used by the teacher (available in Atenea).
- Support reading (newspaper articles...) (available in Atenea).

Full-or-part-time: 60h

Self study: 60h

GRADING SYSTEM

The evaluation of the student will be based on his evolution during the course and will take into account the marks obtained in:

- The midterm exam (40%), there will be a theoretical and a practical part (problems, exercises, text commentaries...)
- The final exam (final part (45%) and/or retake of the midterm exam (40%)). Each of these exams will also have a theoretical part and a practical part.
- Practices (15%), obtained by carrying out and submitting, at the scheduled dates, the tasks (assignments) proposed by the teacher.

The intention is that with the midterm exam (40%), the student can free a part of the content of the course (see the rules of the exams settings).

The final exam will therefore consist of two parts: a retake part of the midterm exam (40%) and another part of the rest of the course not yet evaluated (45%).

The final mark will be, according to what has been described, one of the following two marks:

For the student who does not do the retake of the midterm exam in January/June:

$$N_{\text{final 1}} = 0.40 N_{\text{pp}} + 0.45 N_{\text{ef}} + 0.15 N_{\text{practic}}$$

For the student who does the retake of the midterm exam in January/June:

$$N_{\text{final 2}} = (0.40 + 0.45) N_{\text{ef}} + 0.15 N_{\text{practic}}$$

N_{final} : Final mark

N_{ef} : Final exam mark

N_{pp} : Midterm exam mark

$N_{\text{práct}}$: Mark of the assignments

Re-evaluation

The student's re-evaluation will take place in July. All the material seen during the course will enter in the re-evaluation exam (the contents of the midterm exam and the contents of the exam of the final part).

The final mark after re-evaluation will be as follows:

$$N_{\text{final reeval}} = 0.85 N_{\text{eFr}} + 0.15 N_{\text{práct}}$$

$N_{\text{final reeval}}$: Final mark after the re-evaluation exam

N_{eFr} : Mark of the re-evaluation exam

$N_{\text{práct}}$: Mark of the assignments

EXAMINATION RULES.

The midterm exam (40%) will last a maximum time set by the School.

The final exam will consist of two parts:

- One part (the exam of the final part) (45%) compulsory for all the students, which will include the part of the course not included in the midterm exam.
- One part (the retake of the midterm) (40%), for students who want to improve the grade of the midterm exam of October/April. The mark obtained in the final exam (the retake of the midterm exam) will always be taken into account, whether it is lower or higher than that of the midterm exam.

All the exams include a theoretical part and a practical part (problems, exercises, text analysis ...).



BIBLIOGRAPHY

Basic:

- Mankiw, N. Gregory. Principios de economía. 7ª ed. México: Cengage Learning, 2017. ISBN 9786075262154.
- Charles, Eduard ; Castro, Mauro ; Gómez, Jordi ; Raquel Perales ; Lucas Van Wunnik. Economía & empresa: programa, fitxes, exercicis i aplicacions. 2014. Barcelona: Imatge. Serveis Gràfics de Copisteria, 2014.
- Krugman, Paul R; Wells, Robin; Graddy, Kathryn Jo. Fundamentos de economía. 3a ed. Barcelona [etc.]: Reverté, cop. 2015. ISBN 9788429126464.

Complementary:

- Johnson, Gerry. Dirección estratégica [on line]. 7a ed. Madrid: Prentice Hall, 2006 [Consultation: 08/09/2020]. Available on: http://www.ingebook.com/ib/NPcd/IB_BooksVis?cod_primaria=1000187&codigo_libro=5955. ISBN 9788420546186.

RESOURCES

Other resources:

- Slides, presentations, photocopies, etc. used by the professor during each session will be available for students in the ATENEA platform.
- Wordings of projects and text reviews will be available for students in the ATENEA platform.