

Academic
Year
2026/2027

Course Guide:

INDUSTRIAL ORGANIZATION



FACULTAD DE
CIENCIAS QUÍMICAS

1. IDENTIFICATION

Degree	Bachelor's Degree in Chemical Engineering			Code	801534
Course unit	Industrial Organization			ECTS	6
Subject area	Business Administration				
Module	Basic				
Type	Core	Year Course	First	Semester	Second
Responsible department	Business Organization (Faculty of Economic and Business Sciences)				

Lecturers responsible

Group A

Activity	Lecturer	Email	Office
Tª/S/Tut.	Mª SOL QUESADA BLASCO	mariasqu@ucm.es	

Group B

Activity	Lecturer	Email	Office
Tª/S/Tut.	ANTONIO MANUEL GARCÍA MARTÍN	antoniomanuel.garcia@ccee.ucm.es	

2. OBJECTIVES

General Objective

To enable students to acquire the basic knowledge of Business Management and Business Organization, especially with regard to industrial companies, so that they become familiar with the decisions that must be made in order to compete in a globalized environment.

Specific Objectives

- Identify the key factors of business organization.
- Intervene to achieve maximum efficiency and effectiveness in the organization.
- Understand the nature of the company and of the entrepreneur.
- Make sound strategic decisions and apply them in a competitive environment.
- Manage the different processes and operations of a company in its commercial activity.
- Understand and implement the different functional areas of the company.

3. PREVIOUS KNOWLEDGE AND RECOMMENDATIONS

Recommendations

It is recommended that students have a basic level of English that enables them to use bibliography in English, search for information, and communicate in writing and orally in that language.

4. CONTENTS

Brief description of contents

The company. Economic analysis of the company. Types of companies. Business objectives. Management function. Business organization. Company planning and control function. Information function.

Syllabus

CHAPTER 1. THE COMPANY

- 1.1. The nature of the company
- 1.2. Types of companies
- 1.3. Company objectives
- 1.4. The company environment

CHAPTER 2. THE ENTREPRENEUR AND BUSINESS MANAGEMENT

- 2.1. Ownership and management in the company
- 2.2. The entrepreneur and the creation of companies
- 2.3. The management function
- 2.4. Knowledge and information technologies in business management
- 2.5. Cybersecurity

CHAPTER 3. BUSINESS STRATEGY

- 3.1. Business strategy
- 3.2. Competitive positioning
- 3.3. Company scope
- 3.4. Forms of business growth

CHAPTER 4. BUSINESS ORGANIZATION

- 4.1. Organizational structure
- 4.2. Organizational design parameters
- 4.3. Contingency factors in organizational design
- 4.4. Organizational structure models

CHAPTER 5. HUMAN RESOURCE MANAGEMENT

- 5.1. Motivation and leadership in the company
- 5.2. Recruitment and selection
- 5.3. Staff training and development
- 5.4. Evaluation and compensation systems
- 5.5. Occupational risk prevention and health

CHAPTER 6. OPERATIONS MANAGEMENT

- 6.1. The operations function
- 6.2. Operations design: product and production-process decisions
- 6.3. Operations design: capacity decisions, production location and plant layout
- 6.4. Operations planning and control

CHAPTER 7. MARKETING MANAGEMENT

- 7.1. The marketing function
- 7.2. Market research and consumer segmentation
- 7.3. Product and price decisions
- 7.4. Distribution and marketing communication decisions

CHAPTER 8. FINANCIAL MANAGEMENT

- 8.1. The financial function
- 8.2. The financial environment
- 8.3. Investment decisions
- 8.4. Financing decisions

5. COMPETENCES

General

CG1	Use concepts from basic and technological subjects that enable autonomous learning of new methods and theories and the ability to address new situations.
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Specifics

CE6-01	Describe the company as an open system.
CE6-02	Analyse the most relevant decisions related to the different business subsystems and apply different methods and techniques to support such decisions.
CE6-03	Develop a set of basic knowledge related to business management and the different business subsystems, with particular attention to the production subsystem.

Transversals

CT3	Demonstrate organisational and planning ability.
CT7	Work in a team, demonstrating interpersonal skills.

6. WORKLOAD AND DISTRIBUTION BY ACTIVITY.

Activity	Face to Face (hours)	Independent work (hours)	Credits
Lectures	30	65	3,8
Seminars	15	20	1,4
Tutorials/Supervised works	4	6	0,4
Preparation of assignments	3	7	0,4
Total	52	98	6

7. METHODOLOGY

Attendance and active participation in class

- Lectures or interactive lectures delivered by the lecturer on the topics included in the course syllabus.
- Study and analysis of cases related to business activity.
- Oral presentations by students on the cases studied, enabling information to be shared with classmates and the contents and conclusions reached to be discussed.
- Self-assessment exercises, through which students will be able to check for themselves the progress of their learning in business administration.

Guided work

- Individual or group tutorials.
- Consultation sessions.
- Learning follow-up sessions.

Examinations and supervised assignments

- Preparation of written assignments and reports on business activity and business administration.
- Comprehensive study of the information collected.
- Taking examinations.

The UCM Virtual Campus will be used as support for these training activities.

Part of the recommended bibliography and support material deposited on the Virtual Campus for the development of the teaching activities of this course unit will be in English.

8. BIBLIOGRAPHY

Core

- MARTÍN, G.; MONTORO, M.A.; DíEZ, E.: *“Fundamentos de administración de empresas”*, Editorial Aranzadi, Madrid, 2020, Cuarta Edición.
- MARTÍN, G.; MONTORO, M.A.; DíEZ, E.: *“Introduction to Business Management”*, Thomson Civitas, Madrid, 2020, Third edition.

Supplementary

- CUERVO, A.: *“Introducción a la Administración de Empresas”*, Sexta Edición, Editorial Thomson Civitas, 2008.
- ALDAS, J.; DASÍ, A.; DOLZ, C.; FERRER, C.; GONZÁLEZ, T.; IBORRA, M.; PUIG, V.: *“Fundamentos de Dirección de Empresas. Conceptos y Habilidades Directivas”*, Editorial Paraninfo, 2014, Segunda Edición.

Part of the recommended bibliography and part of the support material deposited on the Virtual Campus for the development of the teaching activities of this course unit will be in English.

9. ASSESSMENT

Assessment will be continuous and formative and may be carried out both individually and in groups, in line with the nature of the training activities proposed. The assessment criteria (formulation and weightings) will be established and made known to students in due time before the teaching of the subject begins.

Grades will be based on an absolute score out of 10 points and in accordance with the scale established in Royal Decree 1125/2003.

❖ WRITTEN EXAMINATIONS: 60%

The knowledge acquired and the competence-related abilities (CG1, CE6, CT3) to analyse problems will be assessed through two mid-term examinations and one final examination. The first mid-term examination will assess the material from Chapters 1 to 3, and the second the material from Chapters 4 to 6. Chapters 7 and 8 will be assessed in the final examination, in which students will also sit the mid-term examinations that they have not previously passed.

The theoretical part of the examinations carries a weight of 60% of the total examination grade and the practical part 40%.

It is essential to obtain a minimum grade of 5 out of 10 in both the theoretical and practical parts of the mid-term examinations or the final examination.

Extraordinary examination sessions for students will be assessed in the same way as ordinary sessions. This examination will assess the general competence CG1, the specific competences CE6 and the transversal competence CT3.

In order to encourage students in the practical use of technology, all examinations will be online, but they will be held in person in the classroom. Students will access the questionnaire area of the Virtual Campus to take the corresponding examination, both in the theoretical and practical parts. Exceptionally, if the lecturer considers it appropriate, one of the examinations or one of its parts may be conducted in written form.

❖ **INDIVIDUAL WORK: 10%**

Assessment of the individual learning work carried out by the student will take into account the following factors:

- The student's skill in solving the problems and/or questionnaires provided by the lecturer throughout the course.
- Assessment of the student's individual contribution to group assignments.

The assessment of these aspects will make it possible to determine the degree of achievement of the general competence CG1, the specific competences CE6 and the transversal competences CT3 and CT7.

❖ **SUPERVISED ACTIVITIES (ASSIGNMENTS): 25%**

Students, organized into working groups, will carry out, throughout the course and during the scheduled tutorials, a practical case study of a real company to which they will apply the theoretical concepts included in the course material. To assess this activity, the lecturer will take into account:

- The quality of the presentation in terms of the correct application of theoretical concepts.
- Clarity in the presentation and correctness in the answers to questions raised by the lecturer and/or classmates.
- The quality of the written report, in terms of content and presentation.

The assessment of these aspects will make it possible to determine the degree of achievement of the general competence CG1, the specific competences CE6 and the transversal competences CT3 and CT7.

❖ **ATTENDANCE AND ACTIVE PARTICIPATION IN CLASSES: 5%**

Students are required to participate in at least 70% of the face-to-face activities in which the lecturer has monitored attendance. Supervised tutorials are compulsory. If a student does not attend at least 70% of the face-to-face activities, he or she may not follow the continuous-assessment system; the activities and assignments completed during the course will be invalidated and the corresponding grades annulled.

For all purposes, these last three activities, INDIVIDUAL WORK, SUPERVISED ACTIVITIES (ASSIGNMENTS) AND ATTENDANCE AND ACTIVE PARTICIPATION IN CLASS, constitute continuous assessment, which carries a weight of 40% of the overall grade for the course unit. A grade of 5 out of 10 is required.



The final grade will be obtained from the weighted average of the assessable activities. However, in order to pass the course unit, students must achieve the minimum grade established in each of them. If this requirement is not met, the final grade will be the weighted average obtained, with a maximum of 4.5 out of 10.

The grades for the activities planned for the assessment of the course unit (mid-term examinations, tutorials, submission of problems, etc.) will be communicated to students sufficiently in advance of the final examination so that they can adequately plan their study of this or other course units.

In all cases, the minimum period of seven days between the publication of grades and the date of the final examination for the course unit will be respected.

ACTIVITY PLANNING – SCHEDULE

WEEK	CLASS	SEMINAR
Week 1	- General rules, assessment method, course contents - Chapter 1. The company. - Theory presentation. - Applications.	Creation of groups and assignment of cases. Guidelines for searching for information on the Internet, case structure and presentation format
Week 2	- Chapter 1. The company. - Theory presentation. - Applications. - Individual activities.	
Week 3	- Chapter 2. The entrepreneur and business management. - Theory presentation. - Applications. - Individual activities.	Case Reflection and debate activities.
Week 4	- Chapter 2. The entrepreneur and business management. - Theory presentation. - Applications. - Individual activities.	
Week 5	- Chapter 3. Business strategy. - Theory presentation. - Applications. - Individual activities.	Case Reflection and debate activities.
Week 6	- Chapter 3. Business strategy. - Theory presentation. - Applications. - Individual activities.	

WEEK	CLASS	SEMINAR
Week 7	- Test on Chapters 1 to 3 - Chapter 4. Business organization. - Theory presentation. - Applications. - Individual activities.	Case Reflection and debate activities.
Week 8	- Chapter 4. Business organization. - Theory presentation. - Applications. - Individual activities.	
Week 9	- Chapter 5. Human resource management. - Theory presentation. - Applications. - Individual activities.	Case Reflection and debate activities.
Week 10	- Chapter 5. Human resource management. - Theory presentation. - Applications. - Individual activities.	
Week 11	- Chapter 6. Operations management. - Theory presentation. - Applications. - Individual activities.	Case Reflection and debate activities.
Week 12	- Chapter 6. Operations management. - Theory presentation. - Applications. - Individual activities.	

WEEK	CLASS	SEMINAR
Semana 13^a	- Chapter 6. Operations management. - Theory presentation. - Applications. - Individual activities.	Case Reflection and debate activities.
Semana 14^a	- Test on Chapters 3–6 - Chapter 7. Marketing management. - Theory presentation. - Applications. - Individual activities	Case Reflection and debate activities.
Semana 15^a	- Chapter 7. Marketing management. - Theory presentation. - Applications. - Individual activities	Case Reflection and debate activities.
Semana 16^a	- Chapter 8. Financial management. - Theory presentation. - Applications. - Individual activities.	Case Reflection and debate activities.

NOTE: This calendar is indicative, since public holidays affect the different groups in different ways and this may alter the development of the topics, as well as the dates and number of tests.

SUMMARY OF ACTIVITIES

TEACHING ACTIVITY	ASSOCIATED COMPETENCES	LECTURER ACTIVITY	STUDENT ACTIVITY	ASSESSMENT PROCEDURE	P	NP	TOTAL	C
Theory Classes	CG1, CE6, CT3, CT7	Presentation of theoretical concepts. • Raising questions and new proposals.	Taking notes. Solving questions. Developing new proposals. • Formulating questions and doubts.	Grading of written answers to questions related to the theoretical concepts explained	30	65	95	40%
Seminars	CG1, CE6, CT3, CT7	Application of theory to the solution of exercises and problems. Raising new questions.	Taking notes. Completing exercises. Formulating questions and doubts.	Grading of written answers (approach and result) for the solution of practical exercises and numerical problems. Assessment of the work.	15	20	35	
Tutorials	CG1, CE6, CT3, CT7	Helping students to guide their study with explanations and bibliographic recommendations. Raising questions.	Consultation with the lecturer regarding conceptual and methodological difficulties encountered when studying the subject. Resolution of the questions raised.		4		4	
Supervised activities	CG1, CE6, CT3, CT7	Preparation and proposal of assignments.	Written preparation of individual assignments.			6	6	
Examinations	CG1, CE6, CT3	Preparation, invigilation and correction of the examination. Student grading.	Preparation for and sitting of examinations.	Correction and assessment of examinations.	3	7	10	60%

P: Face-to-face activities**NP: Non-face-to-face activities (independent work)****C: Grade**