COURSE DATA

DATA SUBJECT

Code: 46552
Name: Business administration and management
Cycle: Master's Degree
ECTS Credits: 4.5
Academic year: 2026-27

STUDY (S)

Degree	Center	Acad. year	Period
2261 - Master's Degree in Chemical Engineering	Escola Tècnica Superior d'Enginyeria	1	First quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
2261 - Master's Degree in Chemical Engineering	Business administration and management	COMPULSORY

COORDINATION

ALEGRE VIDAL JOAQUIN

SUMMARY

Subject Business Management and Organization is part of the Administration module and Optimization of Production and Sustainability. This course, which is taught in Spanish, is a compulsory subject of the first semester of the Master Degree in Chemical Engineering. In the curriculum consists of a total of 4.5 ECTS credits.

This course aims to address aspects of business management in different environments and knowledge of their duties, with special attention to the management of human resources, financing from cost accounting, advanced organization and management production and management of information

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS

Given the general nature and finalist of the subject, to successfully address the subject it is necessary that the student possesses prior knowledge obtained in the courses taken in grades that give access to the Master of Chemical Engineering, especially in matters relating Organization and Production Management and Project Development.

COMPETENCES / LEARNING OUTCOMES

2261 - Master's Degree in Chemical Engineering

Adapt to changes and be able to apply new and advanced technologies and other relevant developments with initiative and entrepreneurship.

Be able to access information tools in different areas of knowledge and use them properly.

Be able to analyse and synthesise for the continued progress of products, processes, systems and services while applying criteria of safety, affordability, quality and environmental management.

Be able to defend criteria with rigor and arguments and to present them properly and accurately.

Be able to take responsibility for their own professional development and specialisation in one or more fields of study.

Lead and manage, both technically and economically, projects, facilities, plants, companies and technological centres in the field of chemical engineering and related industrial sectors.

Lead and manage the organisation of work and human resources by applying criteria of industrial safety, quality management, risk prevention, sustainability and environmental management.

Lead and organise companies and production and service systems by applying knowledge and skills of industrial organisation, business strategy, planning and logistics, mercantile and labour regulations, and financial and cost accounting.

Students should apply acquired knowledge to solve problems in unfamiliar contexts within their field of study, including multidisciplinary scenarios.

Students should be able to integrate knowledge and address the complexity of making informed judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities associated with the application of their knowledge and judgments.

Students should communicate conclusions and underlying knowledge clearly and unambiguously to both specialized and non-specialized audiences.

Students should demonstrate self-directed learning skills for continued academic growth.

DESCRIPTION OF CONTENTS

1. Company Management: Strategic Management and Human Resources

The classic functions of the company to strategic management: personnel management to strategic management of human resources from the Resource Based approaches and Dynamic Capabilities

2. Development of Management Skills

Leadership requirements; the addition of tasks and sequence of workshops to teamwork; pyramidal structures to networking (processes, involvement and negotiation).

3. The Financial Company: Funding sources and Cost Accounting

The financial structure of the company and management: The consequences of competitiveness strategies and finding new sources of business financing. International Standards and questioning Accounting Principles: Management Accounting

4. Management of production

Management and Advanced Programming: covering systems programming and organization of production, from resource allocation to machines, sequencing of jobs, balanced lines and programming environments Just in Time.

5. Information Systems

The information flux in organizations. The integration of business processes with ERP systems management (Enterprise Resource Planning). Market evolution and ERPs. Examples.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Tutorials	2,00
Theory	29,00
Seminar	3,00
Classroom practices	11,00
Total hours	**45,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00

Individual or group project	20,00
Independent study and work	34,00
Preparation of lessons	0,00
Preparation for assessment activities	10,00
Resolution of case studies	4,00
Total hours	**68,00**

TEACHING METHODOLOGY

The development of the course is structured around the theory classes and problems developed seminars and the realization of works.

In the theory classes, lecture model is used. The teacher will present on presentation and / or explanation of the contents of each issue to highlight those key aspects of comprehension.

Practical classes of problems will be developed following two models. In some of the classes will be the teacher who solves a series of problems such that students learn to identify the essential elements of the approach and problem resolution. In other kinds of problems will be students, individually or divided into groups, which must solve similar problems under the supervision of the teacher. Once the work is completed, the problems will be collected, analyzed and corrected by the teacher or by the students themselves.

The student's proposed work will relate to the subjects, consistent units in the realization of problems and practical cases of application. Some of these activities will be held in class, and the rest will have a timetable for completion and delivery by the students. After correction, the students will be informed of the results and a summary of the most established areas and the most frequent failures.

EVALUATION

Independently of the round, the assessment of student learning will take place, proposing two types of assessment:

A) This mode is only applicable to students who have attended more than 80% of the classes. 10% of the mark corresponds to the valuation of the assistance and student participation. 30% of the mark corresponds to the evaluation of the work or (individual or group) problems. The remaining 60% will correspond to the qualification of an examination, which will consist of theoretical and practical part. It will be a minimum requirement to pass the subject more of a 5.0 on the overall exam and more than 3.5 in each of the parts of the exam.

B) The maximum score that can be obtained in this mode is 9.0. The rating will be obtained from a test note (70%), consisting of theory and practice and to be held in the official date and the grade obtained in the work (20%). It will be a minimum requirement to pass the subject more of a 5.0 on the overall exam and more than 3.5 in each of the parts of the exam.

REFERENCES

Basic:

Amat, O. (2008): Contabilidad y Finanzas para no financieros, (2ª edición). Ed. Deusto. Bilbao.
Dolan, S.L., Valle Cabrera, R., y López Cabrales, Á. (2022). La gestión de personas y del talento: la gestión de los recursos humanos en el siglo XXI. McGraw-Hill. Madrid.
Guerras, L.A. y Navas, J.E. (2022): La Dirección Estratégica de la Empresa. Teoría y Aplicaciones, Thompson Reuters-Cívitas, Cizur Menor, 6ª edición.
Heizer, J. y Render, B. (2015): Dirección de la Producción y de Operaciones. Decisiones Estratégicas, 11 edición, Pearson, Madrid.
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Laudon, K.C. y Laudon, J.P. (2016): Sistemas de información gerencial. 14ª edición. Pearson Education, México D.F.

Additional:

Fernández Guerrero R. (1998). Organización y Métodos de Trabajo: Dirección de la Producción y Recursos Humanos, CIVITAS, Madrid.
Herrera, J. (coord.) (2004): Conceptos básicos y casos para discusión de dirección y gestión de recursos humanos. Promolibro, Valencia.
Ripoll, V. (Coordinador) (1995): Contabilidad de gestión avanzada: planificación, control y experiencias prácticas McGraw-Hill, Madrid
Whetten, D. y Cameron, K (2016): Desarrollo de Habilidades Directivas. Ed. Pearson, México D.F.