Business Economics and Administration

Code: 102500
ECTS Credits: 6

2025/2026

Degree	Type	Year
Chemistry	OT	4

Contact

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Teachers

Javier Garriga Fortuño

Teaching groups languages

You can view this information at the end of this document.

Prerequisites

Basic knowledge of calculus, algebra and functions.

Objectives and Contextualisation

The course aims to provide a series of knowledge in relation to the conceptual framework of the company and the economic system in which it operates, as well as the analysis and approach of microeconomic and management techniques and models, making special emphasis on those areas linked to technology-based companies. It will seek to provide a theoretical-practical vision that students can relate to current challenges and situations in the academic and sectoral field of their studies.

Competences

- Adapt to new situations.
- Apply knowledge of chemistry to problem solving of a quantitative or qualitative nature in familiar and professional fields.
- Be ethically committed.
- Lead and coordinate work groups.

- Learn autonomously.
- Propose creative ideas and solutions.
- Reason in a critical manner
- Show an understanding of the basic concepts, principles, theories and facts of the different areas of chemistry.
- Show initiative and an enterprising spirit.
- Work in a team and show concern for interpersonal relations at work.

Learning Outcomes

1. Adapt to new situations.
2. Be ethically committed.
3. Identify and analyze the main elements of the company concept in relation to the economic system in which it operates.
4. Identify, pose and resolve problems in the different functional areas of a company, production, costs, investment, funding and marketing, using suitable business management techniques
5. Identify problems and design solutions in the field of organisation, paying special attention to the activities of administrative management, human resources, organisational design, strategies and project planning.
6. Lead and coordinate work groups.
7. Learn autonomously.
8. Propose creative ideas and solutions.
9. Reason in a critical manner
10. Show initiative and an enterprising spirit.
11. Work in a team and show concern for interpersonal relations at work.

Content

Chapter 1: the conceptual framework of the company and the economic system in which it operates is examined. In this sense, the nature of the company, the business function and the forms of companies are analyzed from a legal, institutional and socioeconomic perspective, dealing in the latter case, with special emphasis, the problem related to the size of the company. Next, we analyze the impact that the economic system has on the activity of the company and its repercussions on the system (social responsibility), ending with the problems of agency (ownership and control) and its impact on the objectives of the company.

Chapter 2: the functional area of production in the company is studied. First, we refer to the classical approach to production in which we examine the functions of production and costs, and then move on to the process of profit optimization, under two scenarios: perfect competition and monopoly. We then continue with the analysis of the price variation and some extensions of the optimization process in the multi-production company. Secondly, we refer to the management approach according to which revenues, costs and profits are linear, calculating the break-even point in the single-producer and multi-production company, completing the analysis with the introduction of constraints which will lead us to formulate linear programming to the company; introducing the graphical and *Simplex* algorithms for the resolution of specific problems.

Chapter 3: the functional area of investment and financing of the company is studied. The appropriate concepts and techniques to deal with the problem of investment on the basis of the NPV and IRR criteria are introduced, including an extensive reference to the different investment cases. The above analysis is completed with a series of aspects related to the type of amortization of the initial investment, the hypothesis of reinvestment of cash flows and its impact on acceptance-rejection decisions and investment hierarchy. We then analyse the existing financing project for all investments, determining their cash flows and their cost of capital, integrating the investment, financing and aggregate projects. Finally, the problems of other sources of short-term financing and the average cost of capital are studied.

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Pràctiques	15	0.6	1, 3, 4, 5, 6, 8, 9, 11
Seminars	5	0.2	1, 10, 3, 4, 5, 2, 8, 9
Theory	30	1.2	1, 10, 3, 4, 5, 8, 9
Type: Supervised			
Office hours	6	0.24	1, 10, 3, 4, 5, 6, 2, 8, 9, 11
Type: Autonomous			
Personal work	58.5	2.34	10, 3, 4, 5
Studying for exams	27	1.08	1, 7, 10, 3, 4, 5, 6, 2, 8, 9, 11

Although the teacher will use the master class to transmit knowledge of the core aspects of each topic, the student must be an active part of the learning process (interactive master class). In this sense, initiatives will be promoted on inquiry, motivation and the process of knowledge of things, with the student having to create them and adapt them to their own learning process. The teacher will carry out tasks of orientation, guidance and reinforcement of those aspects that present more difficulty. Abundant bibliographic material will be made available to the students, including theoretical content and also exercises. To encourage critical reasoning, discussion and reflection on the part of the student, work groups will be set up in problem classes and seminars in order to complete the learning process through group discussion.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Assessment

Continous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Applied activities to be solved and submitted	40	3	0.12	1, 7, 3, 4, 5, 2, 8, 9
Final exam	5	3	0.12	1, 3, 4, 5, 2, 8, 9
Seminars: disucssion	10	2.5	0.1	1, 7, 10, 3, 4, 5, 6, 2, 8, 9, 11

Continuous evaluation system

Individual written tests: at the end of the second chapter, an individual written test will be carried out on chapters 1 and 2; this test will have a weight of 30% in the final grade. Also, at the end of the fourth chapter, an individual written test will be carried out on chapters 3 and 4; Likewise, this test will have a weight of 30% in the final grade.

Delivery of exercise blocks: Throughout the course, the student must submit a series of proposed exercise blocks on homogeneous parts of the subject. The blocks of exercises will be carried out by groups of between 3 and 4 students. The weight of these blocks of exercises is 20% of the final grade.

Participation: the student's participation will be assessed through a series of controls in class and the completion of the corresponding seminars. Class attendance and tutorials will also be taken into account. The weight of participation is 20% of the final grade.

Individual written tests, the delivery of exercises and participation make up the continuous assessment system. For the calculation of the final grade of continuous assessment, a minimum grade of 3 will be required for individual tests.

In the event that a student, through this continuous assessment system, obtains a grade equal to or higher than 5, but without reaching the minimum grade of 3 in any of the midterms, and does not present himself for the recovery, the final grade will be 4.5.

Recovery

Those students who have not passed the subject through continuous assessment will have a final test consisting of a retake exam for the entire subject and in some specific cases for one of the two parts (those who have a grade equal to or greater than 5 in one of the tests).

In these cases, the continuous assessment system will no longer be taken into account (the marks of the exercise blocks and the participation mark will not be taken into account). When the exam is for the entire subject, the student will have to get a 5 to pass. When the exam is for one part, the final grade will be the average mark between the mark obtained in the retake exam and the mark of the individual test already passed.

In order to participate in the recovery, the student must have previously evaluated activities that account for a minimum of 2/3 of the final grade of the subject.

To obtain honors, in addition to obtaining a minimum grade of 9, the student must have satisfactorily participated in the continuous assessment system.

A student will be considered as non-assessable if they do not appear for any of the individual tests.

Each student must go to the evaluation test scheduled by their group. In the event of not being able to attend, for whatever reason, any of the partial tests, their recovery will only be made on the day of the recovery test. No extraordinary tests will be scheduled.

Once the final grades have been presented on the Virtual Campus, a period of grade review will be opened.

Second-enrollment students must go through the same evaluation process as first-enrollment students.

Without prejudice to other disciplinary measures that are deemed appropriate, and in accordance with current academic regulations, irregularities committed by a student that may lead to a variation in the grade will be graded with a zero (0). For example, plagiarizing, copying, allowing copying, ..., an evaluation activity, will imply suspending this evaluation activity with a zero (0). Assessment activities graded in this way and by this procedure will not be recoverable. If it is necessary to pass any of these assessment activities to pass the subject, this subject will be directly suspended, with no opportunity to make it up in the same year.

The dates of continuous evaluation and submission of works will be published on the virtual campus and may be subject to changes in programming for reasons of adaptation to possible incidents. The virtual campus will always be informed about these changes as it is understood that this is the usual platform for the exchange of information between professors and students.

Unique Evaluation System

Students opting for the unique evaluation will have a first exam covering the entire subject on the day of the second partial exam for continuous evaluation students. To pass, a minimum score of 5 will be required.

Recovery for Unique Evaluation

Students who do not pass the first exam will be able to take a recovery exam, also covering the entire subject, on the final exam dates scheduled for continuous evaluation students. The passing score will also be a 5.

Bibliography

9.1 Basic bibliography

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9.2 Additional bibliography

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Bueno, E. (2002). "Economía de la Empresa: Análisis de las Decisiones Empresariales". Pirámide: Madrid.

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Cruz, I. (1990). "Fundamentos de Marketing". Ariel: Barcelona.

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Serra, A. (1986). "Sistema Económico y Empresa". Ariel Economía: Barcelona.

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Software

N/A

Groups and Languages

Please note that this information is provisional until 30 November 2025. You can check it through this link. To consult the language you will need to enter the CODE of the subject.

Name	Group	Language	Semester	Turn
(PAUL) Classroom practices	211	Catalan	second semester	morning-mixed
(PAUL) Classroom practices	212	Catalan	second semester	morning-mixed
(SEM) Seminars	211	Catalan	second semester	morning-mixed
(SEM) Seminars	212	Catalan	second semester	morning-mixed
(TE) Theory	21	Catalan	second semester	morning-mixed