

Degree	Type	Year
Biotechnology	OB	2

Contact

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Teachers

José Luis Masson Guerra

Teaching groups languages

You can view this information at the [end](#) of this document.

Prerequisites

This is a basic course in Economics and Management. Therefore, there is no prerequisite of previous knowledge.

Objectives and Contextualisation

The main objective of this course is to familiarize Biotechnology students with the tools of economic analysis and the world of business, a context where future graduates will develop their professional lives. What determines the existence of firms? How are they organized and provide incentives? How does a monopoly company behave? And a firm under perfect competition? What does value creation mean or how can you choose between different business projects or financing sources ?

The creation of value, as a socially desirable objective of firms, is a key element of the course. Thus, the first chapters emphasize the role of transactions as the main way of creating value. SEveral chapters are dedicated to define value creation and the relationit with other objectives traditionally considered by firms, such as their own benefits. Later in the course, the creation of value and its management in the different activities of the firm, especially in the topics of production, financial transactions and the internal organization of the firm.

Learning Outcomes

1. CM28 (Competence) Work collaboratively in teams to solve problems associated with biotechnology in the field of economics.

2. KM29 (Knowledge) Explain the principles of economic analysis in the production and marketing of biotechnological products.
3. SM27 (Skill) Apply the principles of organisation and management of the different functional areas of a biotechnological product company.

Content

PART 1: THE NATURE OF THE FIRM AND ITS ORGANIZATION

Topic 1. The Firm

1. The problem of the Organization and the creation of value
2. Example of the tribe
3. Company versus Market
4. Intermediate solutions
5. The entrepreneur

Topic 2. Perfect competition and monopoly

1. Perfect competition solution and the creation of Value
2. Perfect competition conditions
3. Monopoly solution and value
4. Consumer surplus, price discrimination and Anti-Trust

Topic 3. Firm Types

1. Firms from a legal perspective: the corporation
2. The responsibility of the partners, firm financing and the losses
3. The creation of value and the legal form
4. New forms of organizations
5. Company forms in the Spanish context

PART II. ACTIVITIES OF THE FIRM

Topic 4. The production activity of the firm

1. The firm as a productive unit
2. The firm as a production function
3. The costs
4. Maximize production, minimize costs
5. The relationship between costs, the volume of activity and the profits
6. Economies of scale, scope and experience

7. Innovation, Value and New Technologies

Topic 5. The investments and the financial activity of the firm

1. The price in financial transactions, interest rates
2. Capitalization and update operations
3. The choice of investments or financing: interest rates
4. The creation of wealth in financial transactions
5. The selection of investments (or financing): NPV
6. The price in operations with more than one time period
7. The compound interest rate and the simple interest rate

PART III. ORGANIZATIONAL DESIGN

Topic 6. Organizational design and the creation of value

1. The relevance of organizational design
2. Market failures and organizational solutions
3. The Agency problem and the problem with Teams
4. Moral Hazard and incentive contracts
5. Adverse selection, self-selection and signals
6. Examples of organizational solutions

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Case discussion and problem solving	3.5	0.14	
Master classes	3.5	0.14	
Study the course subjects, solving the cases, exercises and questions proposed in the course	14	0.56	
Type: Supervised			
Individual tutorials at the professor's office	3	0.12	
Type: Autonomous			
Study the course subjects, solving the cases, exercises and questions proposed in the course	48	1.92	

During the course the different sections of the program will be developed. Course materials, lecture notes, exercises and activities can be found in Campus Virtual. The student is expected to work on them before the class. These materials will be used to motivate and improve the understanding of the topics. For each subject, a series of exercises and activities will be proposed to reinforce these contents. There will be a few hours each week (tutorials) to meet students individually and solve any doubts they may have.

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

Continuous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Exam	35%	2	0.08	CM28, KM29, SM27
Exercises	15%	0	0	CM28, KM29, SM27
Group evaluation	15%	0	0	CM28, KM29, SM27
Midterm exam	35%	1	0.04	CM28, KM29, SM27

1) A continuous assessment of the activities suggested during the course. This ongoing evaluation will include a midterm exam (with a weight of 35%), problems sets, and an active participation in class discussions (presentations) of the cases (15%), small tests, news and exercises with a weight of (15%). Regular attendance and completion of class exercises and activities scheduled during the course are required activities. 2) A final examination (individual assessment and 35% of grade). This exam will have both a practical part (problems) and a theoretical part. This subject does not provide for a single assessment system.

Bibliography

PINDYCK, Robert y RUBINFELD, Daniel (2013): Microeconomía, 8ª edición, ed. Prentice Hall

SERRA, Antoni (2003): Mercado, contratos y empresa. 2ª edición. Manuals de la UAB, Labor.

Software

In this subject the use of specific software is not foreseen.

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
(TE) Theory	42	Catalan	first semester	afternoon