

## **IDENTIFICATION DETAILS**

Degree:	Biotechnology			
Scope	Biology and Genetics			
Faculty/School:	Experimental Sciences			
Course:	BIOTECHNOLOGY BUSINESS ACTIVITY			
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Туре:	Compulsory		ECTS credits:	6
		-		
Year:	4		Code:	2038
		-		
Teaching period:	Seventh semester			
Subject:	Company			
Module:	Social, Historical and Economic Aspects of Biotechnology			
Teaching type:	Classroom-based			
Language:	Spanish			
Total number of student study hours:	150			

## SUBJECT DESCRIPTION

The general objective of this course is to provide students with basic financial training, which allows them to acquire a general economic-financial and business culture, based on the knowledge of the financial principles and variables commonly used in the business and business world.

The objective is for the student to obtain an economic and financial varnish that allows them to understand and manage the different financial concepts with some ease when they go to the labor market.

## GOAL

During their professional life, the student will be immersed in the environment of a biotechnology company or a similar organization. The objective of the course is to enable you to understand its operation, its objectives, its organization and how to contribute to the success of the company.

The specific aims of the subject are:

Be able to analyze and understand the external (PEST analysis) and internal environment of a company.

Be able to identify each of the functional areas of an organization, with their work bases and knowledge how to relate them to each other.

Learn more specifically how companies operating in the biotechnology sector operate and function, as well as their specific characteristics for the sector to which they belong.

Understand the decision-making systems in an organization.

That the student is able to transfer an idea to a business opportunity, with a basic knowledge of what a Business Plan is like.

## PRIOR KNOWLEDGE

Prior knowledge in business matters is not necessary.

### **COURSE SYLLABUS**

TOPIC 1: COMPANY CONCEPT.

- What is a company?
- How and for what purpose is a company created? Objectives and Expectations.
- -Mission, Vision and Values.
- -The company's stakeholders or interest groups.

-Phases in the life of a company.

TOPIC 2: THE ORGANIZATION OF THE COMPANY.

- -External environment and competitiveness.
- -The functional areas.
- -Difference between ownership and control of the company.
- -Forms and classes of companies.
- -Change Management.
- TOPIC 3: THE MANAGEMENT OF HUMAN RESOURCES.
- -Organizational Culture and Climate.
- -The organization chart. -Selection and Training.
- -Career plans and evaluation.
- Leadership
- TOPIC 4: THE FINANCIAL AREA OF THE COMPANY
- Functions of the area.

-The company's	Financial	Information.
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-Analysis of assets: the Profit and Loss Account and the Balance Sheet.

-Fixed and Variable Costs.

-The budget as a tool and element of control.

TOPIC 5: THE MARKETING AND SALES AREA.

-Definition of the Target Audience.

-Customer characteristics.

-Strategic and Operational Marketing.

-Sales Forecast.

-Scorecard and budget.

TOPIC 6: THE PRODUCTION AREA: OPERATIONS.

-The Production function.

-Features of the offer.

-Production systems.

-Purchasing, logistics and distribution.

TOPIC 7: THE BIOTECHNOLOGY COMPANY SECTOR.

-Analysis of the sector in Spain and internationally.

-The structure of the company in the Biotechnology sector.

-Business Plan of a company in the Biotechnology sector.

-Main characteristics of a company in the Biotechnology sector.

THEME 8: STRATEGIC DIRECTION.

-Strategy concept.

-Internal environment.

-The creation of Value and the Value Chain.

-Strategic objectives.

-Resources and Capabilities.

-Corporate Social Responsibility.

### **EDUCATION ACTIVITIES**

The classes apply the theoretical-practical concept, in which learning about theoretical concepts is based on the practical activities carried out by students, both individually and in teamwork groups.

Student learning is aimed at receiving comprehensive training in all areas of business reality, in which the following stand out:

- Training in business management techniques and tools.

- Training in the knowledge of what a business organization is, its areas, the interdependencies between these areas, their functions and responsibilities, with a special focus on what a company in the biotechnology sector is.

- Training to promote teamwork, understood as a group of people who share an organization, a mission, a history, a set of objectives and expectations in common.

- Training for individual and professional development of the individual within the framework of a business organization.

The following methodologies will be developed in the course:

FLIPPED CLASSROOM: also called "inverted class", which improves learning in the teacher-student relationship and uses class time for better professional interaction of the theoretical contents that students have previously

worked on (which can be readings, videos, etc.), adapting to the different learning rhythms of each student. PARTICIPATORY EXHIBITION CLASSES

COOPERATIVE LEARNING: where students will work together to achieve common objectives and maximize their learning.

PROBLEM-BASED LEARNING: It actively involves students by learning knowledge and skills through the approach of a contextualized problem or complex situation that reflects reality as best as possible.

Realization of bibliographic WORKS of an individual/group nature.

PRACTICAL CLASSES: exercises, case studies.

TUTORING.

AUTONOMOUS STUDY: theoretical study and preparation of face-to-face activities.

VIRTUAL NETWORK WORK.

## DISTRIBUTION OF WORK TIME

TEACHER-LED TRAINING ACTIVITIES	INDIVIDUAL WORK
60 Horas	90 Horas

## SKILLS

### **Basic Skills**

Students must have demonstrated knowledge and understanding in an area of study that is founded on general secondary education. Moreover, the area of study is typically at a level that includes certain aspects implying knowledge at the forefront of its field of study, albeit supported by advanced textbooks

Students must be able to apply their knowledge to their work or vocation in a professional manner and possess skills that can typically be demonstrated by coming up with and sustaining arguments and solving problems within their field of study.

Students must have the ability to gather and interpret relevant data (usually within their field of study) in order to make judgments that include reflections on pertinent social, scientific or ethical issues

Students must be able to convey information, ideas, problems and solutions to both an expert and non-expert audience

Students must have developed the learning skills needed to undertake further study with a high degree of independence

To be aware of the theoretical and practical foundations underpinning the conception of enterprise, its organization, its operation, the obtainment of returns and organisational structure.

To understand the social, economic and environmental implications of professional activity.

To understand the ethical implications of professional and personal activity.

Capacity for teamwork and group management.

To have acquired the ability for analytical, synthetic, reflective, critical, theoretical and practical thought.

Capacity for problem-solving and decision-making.

To be able to plan time effectively.

To foster a concern for knowledge as a key tool in the personal and professional growth process of a student.

To develop capacity for and a commitment to learning and personal development.

To develop an ability to search for, take in, analyze, sum up and relate information.

To develop oral and written communication skills.

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#### Specific skills

Explain economic activity and the market in which biotechnological activity is carried out.

Describe the fundamentals needed to interpret the information provided by financial accounting.

Identify the unique characteristics of the biotechnology company in common topics such as Finance, HR, Costs, Quality, Communication.

Cultivate attitudes of leadership and social responsibility in personal and professional performance.

Know how to work as a team in an effective and coordinated way.

Cultivate an attitude of intellectual concern and search for truth in all areas of life.

## LEARNING RESULTS

Understand economic activity and the market in the light of biotechnological activity.

Develop problem-solving and decision-making skills both in the professional and personal spheres.

Identify the most unique aspects of the biotechnology company.

Be able to place an R+D+i project in a company, knowing what areas it relates to and being able to measure the investment/results ratio

Apply the basic concepts of economics, business and accounting.

Interpret the company, not only as an economic agent, but as a human activity. It identifies the company's assets as a source of global wealth.

## LEARNING APPRAISAL SYSTEM

Three evaluation systems will be established:

Case 1: students who attend classes regularly. To qualify for this evaluation system, students must attend at least 80% of classes (in person or synchronously remotely).

Case 2: other cases: students attending less than 80%, with academic exemption or who are in second or

successive enrollment in the subject. Case 3: extraordinary call.

Breakdown of each case:

Case 1. Evaluation criteria for students who attend at least 80% of classes are:

-Final exam: 50% (with a minimum score of 5 out of 10 to pass)

-Individual or group work: 40%

-Participation and attitude in class: 10%

Case 2. Evaluation criteria for other students:

-Final exam: 65% (with a minimum score of 5 out of 10 to pass)

-Individual or group work: 35%

During the course, these students must submit the same work (individual and team) as the students in case 1 (who, as mentioned above, attend at least 80% of the classes).

Case 3. Evaluation criteria for extraordinary calls:

-Final exam: 65% (with a minimum score of 5 out of 10 to pass)

-Individual or group work: 35%

In the event that the student who applies for the extraordinary call has not done all the work, he must contact the teacher and he will indicate the works to be submitted and the date of submission of the same.

All students of the degree will be subject to the University's rules of coexistence.

Plagiarism, as well as the use of illegitimate means in evaluation tests, will be sanctioned in accordance with those established in the Evaluation Regulations and the University's Coexistence Regulations.

# ETHICAL AND RESPONSIBLE USE OF ARTIFICIAL INTELLIGENCE

1.- The use of any Artificial Intelligence (AI) system or service shall be determined by the lecturer, and may only be used in the manner and under the conditions indicated by them. In all cases, its use must comply with the following principles:

a) The use of AI systems or services must be accompanied by critical reflection on the part of the student regarding their impact and/or limitations in the development of the assigned task or project.

b) The selection of AI systems or services must be justified, explaining their advantages over other tools or methods of obtaining information. The chosen model and the version of AI used must be described in as much detail as possible.

c) The student must appropriately cite the use of AI systems or services, specifying the parts of the work where they were used and describing the creative process followed. The use of citation formats and usage examples may be consulted on the Library website(<u>https://www.ufv.es/gestion-de-la-informacion\_biblioteca/</u>).

d) The results obtained through AI systems or services must always be verified. As the author, the student is responsible for their work and for the legitimacy of the sources used.

2.- In all cases, the use of AI systems or services must always respect the principles of responsible and ethical use upheld by the university, as outlined in the <u>Guide for the Responsible Use of Artificial Intelligence in Studies at UFV</u>. Additionally, the lecturer may request other types of individual commitments from the student when deemed necessary.

3.- Without prejudice to the above, in cases of doubt regarding the ethical and responsible use of any AI system or service, the lecturer may require an oral presentation of any assignment or partial submission. This oral evaluation shall take precedence over any other form of assessment outlined in the Teaching Guide. In this oral defense, the student must demonstrate knowledge of the subject, justify their decisions, and explain the development of their work.

## **BIBLIOGRAPHY AND OTHER RESOURCES**

### Basic

Andres S. Suarez Suarez. Optimal investment and financing decisions in the company/18th ed., reimp. Madrid: Pyramid, 1998.

Robert S. Kaplan, David P. Norton. The Balanced Scorecard: The Balanced Scorecard/3rd ed. rev. Barcelona:Management 2000,2011.

W. Chan Kim, Renee Mauborgne. The blue ocean strategy: how to create uncontested spaces in the market

where competition is irrelevant/Barcelona:Granica,2005.

Pablo Cardona, Pilar García-Lombardia. How to Develop Leadership Competencies [electronic resource] 3rd ed. Pamplona: EUNSA, 2007.

Michael E. Porter. Competitive strategy: techniques for the analysis of industrial sectors and competition/Second reformed edition. Mexico City: Grupo Editorial Patria, [2015]

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Julián Villanueva, Juan Manuel de Toro. Strategic Marketing/Pamplona: EUNSA, 2017.

Friedman, Yali. Building Biotechnology: Starting, Managing, and Understanding Biotechnology Companies/2nd ed. Washington: Thinkbiotech, 2006.

### Additional

Dorothy Leonard. Business capacities for innovation: its management/Madrid:Cotec Foundation for Technological Innovation, 2005.

Biotechnology in the medicine of the future. Madrid: Cotec Foundation for Technological Innovation, 2006.