



Universitat de Lleida

DEGREE CURRICULUM **ECONOMY FOR BIOCOMPANIES**

Coordination: VILADRICH GRAU, MONTSERRAT

Academic year 2023-24

Subject's general information

Subject name	ECONOMY FOR BIOCOMPANIES			
Code	101637			
Semester	2nd Q(SEMESTER) CONTINUED EVALUATION			
Typology	Degree	Course	Character	Modality
	Bachelor's Degree in Biotechnology	4	OPTIONAL	Attendance-based
Course number of credits (ECTS)	6			
Type of activity, credits, and groups	Activity type	TEORIA		
	Number of credits	6		
	Number of groups	1		
Coordination	VILADRICH GRAU, MONTSERRAT			
Department	ECONOMICS AND BUSINESS			
Teaching load distribution between lectures and independent student work	Number of classroom hours: 60 Number of hours of student autonomous work:90			
Important information on data processing	Consult this link for more information.			
Language	Catalan 70% Spanish 30%			

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
CLOP GALLART, MARIA MERCE	mariamerce.clop@udl.cat	2	By appointment
ESTRUCH BOSCH, ESTHER	esther.estruch@udl.cat	2	
VILADRICH GRAU, MONTSE	montse.viladrich@udl.cat	2	

Learning objectives

Students who pass the subject must: (Knowledge objectives)

1. To know the main tools and concepts that allow the understanding of the functioning of the economy.
2. Know and interpret the structure of the sector and the market of biotechnology and pharmaceutical companies.
3. To become familiar with the basic principles of business administration and management of productive activities organized as projects.

The student who passes the subject must be able to: (Capacity objectives)

1. Organize and direct productive activities organized as projects
2. Administer or direct technical departments in biotechnology companies.

Competences

CG1 Be able to selectively search and use sources of information necessary to achieve the training objectives.

CG2 Interpret scientific-technical information with a critical sense, and be able to make presentations based on this information.

CG3 Work as a team, with a multidisciplinary vision and with the ability to make a rational and efficient distribution of tasks among team members.

CG4 Know and properly use the scientific and technical vocabulary of the different areas of Biotechnology.

CG10 Transmitting strategies and technological applications to the company, based on the general foundations of business economics.

CE34 Being able to design the protocol of a specific biotechnological process with the practical requirements necessary to carry it out and its evaluation parameters.

CE36 Have an integrated vision of the development process of a biotechnological product or application, which incorporates the socio-economic and market aspects of the process.

CE37 Know and know how to use production management, quality management and project management in a biotechnology company

CE41 Know how to design a prospective market research for a certain biotechnological product. CE42 Know the mechanisms and particularities of the creation of bio-companies

CE42 Know the mechanisms and peculiarities of the creation of bio-companies

CE44 Know the main fields of application of Biotechnology and acquire basic training in some of them

Subject contents

Economics of the Biotechnological Firm

Degree in Biotechnology

Course 2023-24

1. Biotechnology companies and various types of markets.

1.1. Perfect competition. The characteristics and behavior of competitive companies in the market.

1.2. The maximization of benefits.

1.3. Characteristics of competitive industries.

2. Market power.

2.1. The monopoly Characteristics of a monopoly market.

2.1.1 Why do monopolies appear? Patents

2.2. The strategic behavior and the oligopolistic market. Tho oligopolies in the pharmaceutical sector.

2.2.1. The different concepts of strategy.

2.2.2. The Nash Equilibrium..

2.2.3. Games and strategies: The prisoner's dilemma. In economics and in biology.

2.3 What is the market structure of the biotechnology sector?

2.3.1 Monopoly competition

2.3.2 Features of monopolistic competition.

2.3.3 Product differentiation.

3. Biotechnology companies: Sources of funding, externalities and risk.

3.1. Sources of financing for biotechnology companies. The capital market.

3.2. Financing fund for innovative companies.

3.3. Biotechnology companies and regional innovation systems.

3.4. The externalities of "knowledge".

3.5. Uncertainty, risk and private information.

3.6. The situation of companies and the biotechnology industry in Catalonia, Spain and the World.

4. Introduction to Business Administration and Management.

4.1. Productive processes.

4.2. Administration. Administrative functions and administrative skills.

4.3. Value chain and competitive advantage.

4.4. Strategy.

4.5. Henry Fayol's principles.

5. Business planning.

5.1. Nature of planning and goals.

5.2. Strategies, policies and premises of the planning.

5.3. Decision making.

6. Direction.

6.1. Human factors and motivation.

6.2. Leadership.

6.3. Committees, teams and group decision-making.

6.4. Communication.

7. The assets of a company.

7.1. Concepts and patrimonial elements. The patrimonial masses.

7.2. The balance: Basic concepts.

7.3 The inventory, concept and structure.

7.4 The income statement

7.5 Profit and profitability.

8. The decision to invest in the company

8.1. The concept of investing. Investment types.

8.2. The value of money in the temps.

8.3. Fundamental variables of investment.

8.4. Analysis and evaluation of investments

8.4.1. The net actual value

8.4.2. The term of recovery of investments.

8.4.3. Internal revenue taxa.

8.5 The business decision making, risk and uncertainty.

9. Project planning.

9.1. Initial coordination of the project.

9.2. Projects in organizations.

9.3 Project management and project director

9.4. Negotiation and resolution of conflicts.

9.5. Scheduling.

9.6. Resources assignation

9.7 Budget and control of costs.

9.8 Project control.

9.9 Selection of projects.

9.10 Project completion.

Methodology

To facilitate the students' learning process we will apply the following methodologies:

1. An expository methodology through the master class lesson.
2. An interrogative methodology encouraging the students to ask questions to the teacher and vice versa by asking questions from the teacher to the students through classroom exercises and practices.
3. A methodology aimed at the application of the knowledge treated in class through the realization of reports by the student. Reports that will be directed by the teacher.

Evaluation

The evaluation will be continuous. "According to the Regulation of the evaluation and the qualification of students in the undergraduated and masters degrees in the UdL, of February of 2014.

Therefore, if the final grade of the subject obtained by continuous evaluation is suspended, the student will NOT be able to take a final recovery exam.

This subject consists of three parts, each of these parts will be independently evaluated.

Part 1

Part 1 represents 34% of the final grade. The of Part 1 will be calculated as follows:

- Written evaluation that will represent 24% of the final grade or what is the same 70.5 of the final grade of Part 1.
- Problem list solution 10% of the final grade or what matiex is 29.5% of the grade of Part 1.

Part 2

Part 2 of the subject represents 33% of the final grade. The final grade will be calculated as follows: His improvement includes:

- Daily brief controls, which represent 23% of the final grade or what is the same 69.7% of the grade of Part 2.
- Completion of proposed activities and class attendance, which represents 10% of the final grade or what is the same 30.3% of the grade of Part 2.

Part 3

Part 3 of the subject represents 33% of the final grade. Evaluation to be announced by the corresponding professor.

Bibliography

Basic References

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- Breadley, R; Myers, S.; Allen F. (2006). Principios de Finanzas corporativas. McGrawHill
- Clop, M.M.; Juárez, F. (2003). Programació lineal per a l'enginyeria agrària. Casos pràctics. Edicions de la Universitat de Lleida. Altres referencies Temes 6 i 7:
- Dawkins, R (1976) The Selfish Gene. Oxford Univeristy Press, Oxford
- DuBrin, A. (2009), Essentials of Management. South Western, Canada.
- González J.D. i F.J. Ganaza (2017). Fundamentos de economía de la empresa. Ed. Pirámide, Madrid.
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- Krugman, P. I Wells, R (2007). Introducción a la Economía. Microeconomía, Ed. Reverté.
- Meredith, J.R.; Mantel, S.J. (2012) Project Management. A Managerial Approach. Johnn Wiley and Sons, New York.
- Pérez Gorostegui, E. (2006). Introducción a la Economia de la Empresa, Editorial Centro de Estudios Ramón Areces, Madrid.

Additional References

-Carlton D.W. and Perloff, J.M. (2005). *Modern industrial organization*, 4th edition, Pearson, Boston, Massachusetts.

-Ernst & Young (2011). Catalonia Life Sciences Report 2011.

-Genoma España (2011). La relevancia de la biotecnología en España.

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