



## Information about the subject

**Degree:** Bachelor of Science Degree in Biotechnology

**Faculty:** Faculty of Veterinary Medicine and Experimental Sciences

**Code:** 1100401 **Name:** Legal and Economic Aspects of Biotechnology

**Credits:** 6,00 **ECTS Year:** 4 **Semester:** 2

**Module:** Social and Economic Aspects of Molecular Biosciences and Biotechnology

**Subject Matter:** Legal and Economical aspects in Biotechnology **Type:** Compulsory

**Field of knowledge:** Artes y Humanidades

**Department:** Basic and Cross-disciplinary Sciences

**Type of learning:** Classroom-based learning

**Languages in which it is taught:** Spanish

### Lecturer/-s:

1104 Borja Sánchez Barroso (**Responsible Lecturer**)

[borja.sanchez@ucv.es](mailto:borja.sanchez@ucv.es)

Oscar David Sánchez Jiménez

[od.sanchez@ucv.es](mailto:od.sanchez@ucv.es)



## Module organization

### Social and Economic Aspects of Molecular Biosciences and Biotechnology

Subject Matter	ECTS	Subject	ECTS	Year/semester
Anthropology	6,00	Anthropology	6,00	1/2
Social Doctrine of the Catholic Church	6,00	Science, Reason and Faith	6,00	2/2
Legal and Economical aspects in Biotechnology	6,00	Legal and Economic Aspects of Biotechnology	6,00	4/2
Ethics and Professional Deontology	6,00	Social Morality, Ethics and Deontology	6,00	4/2
English	6,00	English	6,00	1/2

## Recommended knowledge

No required knowledge.



## Learning outcomes

At the end of the course, the student must be able to prove that he/she has acquired the following learning outcomes:

- R1 The student has understood and assimilated the contents of the subject.
- R2 The student is able to solve problems or case studies related to the subject contents, by using different resources (bibliographic, IT, etc.)
- R3 The student is able to write an intelligible and organized text on different aspects of the subject.
- R4 The student is able to present and defend his/her work adequately.
- R5 The student seeks bibliographic information from different sources and can analyze it with a critical and constructive spirit.
- R6 The student collaborates with the teacher and his/her peers throughout the learning process; he/she works in a team; treats everyone with respects, is proactive and fulfills the organization rules of the course.



## Competencies

Depending on the learning outcomes, the competencies to which the subject contributes are (please score from 1 to 4, being 4 the highest score):

BASIC		Weighting			
		1	2	3	4
CB1	Students acquire and understand knowledge in their field of study based on general secondary education but usually reaching a level that, although supported on advanced text books, also includes aspects involving state-of-the-art knowledge specific to their area.				X
CB2	Students are able to apply knowledge to their work in a professional way and have the competences enabling them to state and defend views and opinions as well as perform problem-solving tasks in their field of study.			X	
CB3	Students are able to collect and interpret relevant data (generally in their field of study) and give opinions that involve reflection on relevant social, scientific or ethical issues.			X	
CB4	Students can communicate information, ideas, problems and solutions to a specialized or non-specialized audience.				X
CB5	Students develop the necessary learning skills to undertake further studies with a high level of autonomy.				X

GENERAL		Weighting			
		1	2	3	4
CG01	Capacity to analyze and synthesize.				X

SPECIFIC		Weighting			
		1	2	3	4
CE22	Knowing and understanding contents, principles and theories related to biotechnology.				X



CE33	Knowing and complying with legislation and ethics of biotechnological processes and applications.	X			
CE34	Knowing main characteristics of Molecular biosciences and biotechnology communication.				X

TRANSVERSAL	Weighting				
		1	2	3	4
CT02	Capacity to organize and plan.				X
CT03	Mastering Spanish oral and written communication.			X	
CT05	Knowing and applying Basic ITC skills related to Biotechnology.				X
CT06	Capacity to manage information (capacity to look for and analyze information coming from different types of sources).				X
CT07	Problem solving.				X
CT09	Capacity to work in interdisciplinary and multidisciplinary team.			X	
CT10	Interpersonal skills.	X			
CT11	Understanding multicultural and diverse environment			X	
CT12	Critical and self-critical capacity.			X	
CT13	Ethics.			X	
CT14	Capacity to learn				X
CT16	Capacity to produce new ideas (creativity)			X	
CT19	Capacity to apply theoretical knowledge	X			
CT20	Research skills			X	
CT21	Sensitivity to environmental issues				X



## Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
	60,00%	Written test
	40,00%	Submission of papers

### Observations

According to the general evaluation and qualification regulations, the preferred evaluation system will be by means of continuous evaluation. Continuous assessment will follow different modalities depending on the part of the course (practical aspects of biotechnology, legal, or economic). In the practical aspects part, continuous assessment will be implemented through successive practical cases and projects related to the syllabus. In the legal part, it will be implemented through group presentations on the legal framework applicable to different areas of biotechnology. In the economic part, it will be implemented through tests and practical cases.

Finally, according to article 10 of the current assessment regulations, in the event that it is impossible for students enrolled in a face-to-face degree to attend, they may opt for 'single assessment'. This is an extraordinary and exceptional assessment system available to those students who, in a justified and accredited manner, are unable to undergo the continuous assessment system and request it within the first month of each semester, by the means provided for this purpose. The Dean of the Faculty shall decide on the admission of the student's request for a single assessment.



## MENTION OF DISTINCTION:

In accordance with the regulations governing the assessment and grading of subjects in force at UCV, the distinction of "Matrícula de Honor" (Honours with Distinction) may be awarded to students who have achieved a grade of 9.0 or higher. The number of "Matrículas de Honor" (Honours with Distinction) may not exceed five percent of the students enrolled in the group for the corresponding academic year, unless the number of enrolled students is fewer than 20, in which case a single "Matrícula de Honor" (Honours with 9 Distinction) may be awarded. Exceptionally, these distinctions may be assigned globally across different groups of the same subject. Nevertheless, the total number of distinctions awarded will be the same as if they were assigned by group, but they may be distributed among all students based on a common criterion, regardless of the group to which they belong. The criteria for awarding "Matrícula de Honor" (Honours with Distinction) will be determined according to the guidelines stipulated by the professor responsible for the course, as detailed in the "Observations" section of the evaluation system in the course guide.

## Learning activities

The following methodologies will be used so that the students can achieve the learning outcomes of the subject:

- M1 Teacher presentation of contents, analysis of competences, explanation and in-class display of skills, abilities and knowledge.
- M2 Group work sessions supervised by the professor. Case studies, diagnostic tests, problems, field work, computer room, visits, data search, libraries, on-line, Internet, etc. Meaningful construction of knowledge through interaction and student activity.
- M4 Supervised monographic sessions with shared participation..
- M5 Application of multidisciplinary knowledge.
- M6 Personalized and small group attention. Period of instruction and/or guidance carried out by a tutor to review and discuss materials and topics presented in classes, seminars, readings, papers, etc.
- M7 Set of oral and/or written tests used in initial, formative or additive assessment of the student
- M8 Group preparation of readings, essays, problem-solving, seminars, papers, reports, etc. to be presented or submitted in theoretical, practical and/or small-group tutoring sessions. Work done on the university e-learning.



- M9 Student's study: Individual preparation of readings, essays, problem-solving, seminars, papers, reports, etc. to be presented or submitted in theoretical, practical and/or small-group tutoring sessions. Work done on the university e-learning platform.

## IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
ON-CAMPUS CLASS M1	R1, R4, R6	28,00	1,12
PRACTICAL CLASSES M2	R1, R2, R3, R4, R5, R6	26,00	1,04
SEMINAR M4	R1, R4, R5, R6	0,60	0,02
GROUP PRESENTATION OF ASSIGNMENTS M5	R1, R2, R4, R6	0,60	0,02
TUTORIAL M6	R1, R4, R6	4,40	0,18
ASSESSMENT M7	R1, R2, R3, R4, R5, R6	2,40	0,10
<b>TOTAL</b>		<b>62,00</b>	<b>2,48</b>

## LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
AUTONOMOUS GROUP WORK M8	R1, R2, R3, R4, R5, R6	24,00	0,96
AUTONOMOUS INDIVIDUAL WORK M9	R1, R2, R3, R4, R5	64,00	2,56
<b>TOTAL</b>		<b>88,00</b>	<b>3,52</b>





## Description of the contents

Description of the necessary contents to acquire the learning outcomes.

Theoretical contents:

Content block	Contents
ECONOMY	<p>Topic 1. The Economy and the company</p> <p>Topic 2. The Business Environment</p> <p>Topic 3. The Strategic Process</p> <p>Topic 4. Marketing</p> <p>Topic 5. Human Resources Management</p> <p>Topic 6. Finance</p>
Practical activities for the Economy and Management part	Practical activities for each topic of the subject.
LEGAL ASPECTS	<p>UNIT 1.- THE SPANISH LEGAL ORDER</p> <p>UNIT 2.- BIOTECHNOLOGY, FUNDAMENTAL RIGHTS AND OTHER TUTORED LEGAL ASSETS.</p> <p>UNIT 3.- ANIMAL BIOJURISTICS</p> <p>UNIT 4.- VEGETABLE BIOJURISTICS</p>
Practical activities for the Legal part	Practical activities for each topic of the subject.

Organization of the practical activities:

	Content	Place	Hours
PR1.	Practical activities for the Economy and Management part	Lecture room	14,00
PR2.	Practical activities for the Legal part	Lecture room	12,00



## Temporary organization of learning:

Block of content	Number of sessions	Hours
ECONOMY	9,00	18,00
Practical activities for the Economy and Management part	7,00	14,00
LEGAL ASPECTS	11,00	22,00
Practical activities for the Legal part	4,00	8,00

## References

- ROBBINS, S. P., y DECENZO, D. A. (2009). Fundamentos de administración: conceptos esenciales y aplicaciones. Pearson Educación
- GUILLEM CARRAU, J. La protección jurídica de la invenciones biotecnológicas Madrid. 2011.
- MELGAR FERNÁNDEZ, M., Biotecnología y propiedad intelectual: un enfoque integrado desde el derecho internacional Méjico D.F. 2012
- ROBINSON, J. P., Protección de la biotecnología frente a las armas biológicas, 1998 Mochón, F. (2009): Economía. Teoría y Política, McGraw Hill.
- KOTLER, P., y ARMSTRONG, G. (2013). Fundamentos de márketing. Pearson education.
- FERNÁNDEZ SALMERÓN, M., SORO MATEO, B. (2001). La Articulación del Ordenamiento Jurídico Ambiental en el Estado autonómico. Atelier Administrativo.
- MUÑÍZ ESPADA, ESTHER (coord.) Un marco jurídico para un medio rural sostenible. Madrid 2011
- ESTELLÉS PERARLTA, et al. (2020).Leccion de derecho privado. Tirant lo Blanch