



Teaching Guide

Identifying Data					2023/24
Subject (*)	Management, Innovation and Entrepreneurship in Biocompanies		Code	610475506	
Study programme	Mestrado Universitario en Biotecnoloxía Avanzada				
Descriptors					
Cycle	Period	Year	Type	Credits	
Official Master's Degree	2nd four-month period	First	Obligatory	4.5	
Language	Spanish				
Teaching method	Face-to-face				
Prerequisites					
Department	Departamento profesorado máster Empresa				
Coordinador	Teijeiro Álvarez, Mercedes	E-mail	mercedes.teijeiro@udc.es		
Lecturers	Teijeiro Álvarez, Mercedes	E-mail	mercedes.teijeiro@udc.es		
Web					
General description	<p>In increasingly globalized and competitive environments, the figure of the entrepreneur acquires a leading role in the economic and social context of a community, especially the creation of high value-added companies based on development scientific and technological advances in strategic sectors such as growth promoter. This course is part of the Master in Advanced Biotechnology. The main contributions of the course are: understanding the importance of entrepreneurial culture, learning to start a business and analyzing the context, as well as evaluating the opportunities and risks of entrepreneurial actions.</p>				

Study programme competences / results

Code	Study programme competences / results
A12	Coñecer e saber aplicar os sistemas de control de calidade vixente.
A13	Saber xestionar e traballar con garantías en calquera laboratorio biotecnolóxico do ámbito público ou privado.
A14	Ter unha visión integrada dos procesos de I+D+i desde o descubrimento de novos coñecementos básicos ata o desenvolvemento de aplicacións concretas deste coñecemento e a introdución no mercado de novos produtos biotecnolóxicos.
A15	Saber deseñar unha investigación prospectiva de mercado para un produto biotecnolóxico.
A16	Coñecer e analizar os aspectos financeiros que se están expansionando no mercado biotecnolóxico.
A17	Saber buscar e obter información das principais bases de datos sobre patentes e elaborar a memoria de solicitude dunha patente dun proceso biotecnolóxico.
A38	Xerar e desenvolver ideas, converténdooas en algo novo para conseguir solucións concretas que transformen a vida e o seu entorno, e que se materialicen na posta en marcha dunha empresa.
A39	Innovar constantemente, avaliando beneficios e riscos e aportando novas ideas e formas de facer as cousas.
B1	Capacidade de análise e síntese (localización de problemas e identificación das causas e a súa tipoloxía).
B2	Capacidade de organización e planificación de todos os recursos (humanos, materiais, información e infraestruturas).
B3	Capacidade de xestión da información (con apoio de tecnoloxías da información e as comunicacións).
B4	Capacidade de planificación e elaboración de estudos técnicos en biotecnoloxía microbiana, vexetal e animal.
B5	Capacidade de identificar problemas, buscar solucións e aplicarlas nun contexto biotecnolóxico profesional ou de investigación.
B6	Capacidade de comunicación oral e escrita dos plans e decisións tomadas.
B7	Capacidade para formular xuízos sobre a problemática ética e social, actual e futura, que propón a Biotecnoloxía.
B8	Capacidade de comunicación eficazmente coa comunidade científica, profesional e académica, así como con outros sectores e medios de comunicación.
B9	Capacidade de Traballo en equipo multidepartamental dentro da empresa.
B10	Capacidade de Traballo nun contexto de sostibilidade, caracterizado por: sensibilidade polo medio ambiente e polos diferentes organismos que o integran así como concienciación polo desenvolvemento sostible.
B11	Racionamento crítico e respecto profundo pola ética e a integridade intelectual.
B12	Adaptación a novas situacións legais, ou novidades tecnolóxicas así como a excepcións asociadas a situacións de urxencia.



B13	Aprendizaxe autónoma.
B14	Liderazgo e capacidade de coordinación.
B15	Sensibilización cara á calidade, o respecto medioambiental e o consumo responsable de recursos e a recuperación de residuos.
C3	Using ICT in working contexts and lifelong learning.
C4	Acting as a respectful citizen according to democratic cultures and human rights and with a gender perspective.
C5	Understanding the importance of entrepreneurial culture and the useful means for enterprising people.
C6	Acquiring skills for healthy lifestyles, and healthy habits and routines.
C7	Developing the ability to work in interdisciplinary or transdisciplinary teams in order to offer proposals that can contribute to a sustainable environmental, economic, political and social development.
C8	Valuing the importance of research, innovation and technological development for the socioeconomic and cultural progress of society.

Learning outcomes			
Learning outcomes	Study programme competences / results		
Organize and manage biotechnology companies	AC13 AC14 AC16 AC39	BC1 BC2 BC5 BC6 BC9 BC12 BC14 BC15	CC5 CC6
Identify the different phases of the process of creating new biological products of commercial and biotechnological interest	AC14 AC15 AC17	BC1 BC4	CC5
Use the basic tools necessary to generate new business ideas based on knowledge of the procedures, aid and incentives for the launch of a new biotechnological product	AC15 AC16 AC17 AC38 AC39	BC3 BC5 BC12 BC13	CC3 CC7
Design the business model of a company and analyze its potential within the biotechnological sector on a national and international scale	AC12 AC14 AC15 AC16 AC17 AC39	BC1 BC2 BC3 BC4 BC5 BC6 BC8 BC9 BC10 BC12 BC13	CC3 CC4 CC7 CC8
Recognize the processes associated with the transfer of research, development and innovation	AC14 AC15 AC17	BC11 BC12	CC3 CC8
Assume the value of entrepreneurial culture and its impact on society	AC12 AC14 AC38 AC39	BC5	CC3 CC4 CC7



Develop basic strategies for self-employment and entrepreneurship based on innovation	AC14	BC4	CC3
	AC16	BC5	CC7
	AC17	BC7	
	AC38	BC8	
	AC39	BC11	
		BC12	
		BC13	
		BC14	
		BC15	

Contents	
Topic	Sub-topic
Introduction to Entrepreneurship in Biotechnology	importance of biotechnological entrepreneurship in the social and economic advances of a society Situation of the EU and Spain Types of entrepreneurship according to purpose and level of innovation
Innovation	Innovation R&D bases. global vision of R&D programs. European projects. A Technology transfer Valorization of transferable knowledge and its protection
Phases of entrepreneurship in biotechnology	Life cycle of a biotech company Stages of biotechnological entrepreneurship. Innovation and transferable knowledge.
Organization and management of a biotech company	Components of a business model and examples Analysis of the environment and feasibility studies Structure and development of a business plan Canvas Model
HR management in the company	HR management Leadership and efficient work teams Efficient communication Conflict resolution

Planning				
Methodologies / tests	Competencies / Results	Teaching hours (in-person & virtual)	Student?s personal work hours	Total hours
Guest lecture / keynote speech	A12 A16 A38 A39 B4 B8 B9 B11 B12 C5 C6 C8	10	10	20
Workshop	A12 A13 A14 A15 A16 A17 A38 A39 B1 B2 B3 B4 B5 B6 B7 B8 B9 B10 B11 B12 B13 B14 B15 C3 C4 C7	16	24.5	40.5
Introductory activities	A17 A38 A39 B2 B3 B6 B9 B10 B13 B14 B15 C3 C5 C7 C8	3	10	13
Student portfolio	B2 B3 B6 B9 B14	1	0	1



Supervised projects	A12 A13 A14 A15 A16 A17 A38 A39 B1 B2 B3 B4 B5 B6 B7 B8 B9 B10 B11 B12 B13 B14 B15 C3 C4 C7	2	36	38
Personalized attention		0	0	0
(*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.				

Methodologies	
Methodologies	Description
Guest lecture / keynote speech	Oral presentation (using audiovisual material and student interaction) designed to transmit knowledge and encourage learning. Presentations of this type are variously referred to as ?expository method?, ?guest lectures? or ?keynote speeches?. (The term ?keynote? refers only to a type of speech delivered on special occasions, for which the lecture sets the tone or establishes the underlying theme; it is characterised by its distinctive content, structure and purpose, and relies almost exclusively on the spoken word to communicate its ideas.)
Workshop	Training modality oriented to the application of learning in which various methodologies/tests can be combined (exhibitions, simulations, debates, problem solving, guided practices, etc.) through which students develop eminently practical tasks on a specific topic, with the support and supervision of teachers.
Introductory activities	Initial activities in the teaching-learning process (interest in the subject, people who already have an idea of ??starting a business, group formation, searches for possible business ideas, etc.)
Student portfolio	It is a folder or computer file by sections, duly identified that contains the records of the different learning activities carried out by the student (includes all the activities that the student has carried out and the results thereof and their self-evaluation, as well as the evaluation of the members of your group).
Supervised projects	The students in a group, independently prepare a document on the creation of an innovative company or project in order to demonstrate that they have acquired the skills inherent to entrepreneurship.

Personalized attention	
Methodologies	Description
Supervised projects	All doubts will be answered during the tutoring schedule via Teams

Assessment			
Methodologies	Competencies / Results	Description	Qualification
Student portfolio	B2 B3 B6 B9 B14	Test that includes the self-assessment of teamwork, which is used to evaluate the work done by each member. A rubric is used to assess its contents, which is available to students from the beginning of the subject. The qualification is individual and weighs the one obtained in the memory.	20
Supervised projects	A12 A13 A14 A15 A16 A17 A38 A39 B1 B2 B3 B4 B5 B6 B7 B8 B9 B10 B11 B12 B13 B14 B15 C3 C4 C7	Preparation and presentation of a business plan where all the contents covered in the module are reflected. The note will take into account the contents of the work as well as its exposure.	80

Assessment comments



1. The delivery of documentary work carried out in this subject:
 - a. It will be requested in virtual format and/or computer support
 - b. It will be done through Moodle, in digital format without the need to print them
 2. The presentation and defense of the business project is obligatory. To pass the subject it will be essential to obtain at least 4 point in the memory and in the presentation of the work. It is mandatory that a report be delivered both on the first and on the second opportunity and a presentation of the business project is made.
 3. The students who do not pass the subject but have obtained more than a 5 in the report or presentation, will keep the qualification of the passed part for the second opportunity. However, you must submit/defend a new report or presentation (depending on which one is suspended) in the second call individually.
 4. Exceptionally, there is the possibility of a single global evaluation.
 5. Honors will be awarded to those students who, passing a 9, achieve the highest qualification in the first opportunity at each of the universities.
- The evaluation dates and times are published in the academic calendar published on the master's webs

Sources of information

Basic	<ul style="list-style-type: none"> - de la Huerta, P. (2021). Emprender en biotecnología. LID - Hormiga, E., Batista, R. y Sánchez, A. (2008). El capital intelectual en las empresas de nueva creación: influencia de los activos intangibles en el éxito empresarial. Fundación FYDE - Trías, F. (2007). El libro negro del emprendedor. Urano S.A. - Rovira, A. y Miralles, F. (2011). El mapa del tesoro. Grijalbo - Rovira, A. y Trías, F. (2004). La buena suerte. Urano S.A. - Ferrante, L. (2012). Aprenda de la mafia para alcanzar el éxito en su empresa. Random House Mondadori - Pascual, J. (2021). Innovation and collaboration in the digital era. Business&Economics
Complementary	

Recommendations

Subjects that it is recommended to have taken before

Industrial Biotechnology /610475105
 Biotechnological Processes and Products/610475106

Subjects that are recommended to be taken simultaneously

Subjects that continue the syllabus

Biotechnological company audit/610475202
 Legal and ethical aspects in Biotechnology/610475203

Other comments

The delivery of the documentary work carried out in this subject: a. It will be requested in virtual format and/or computer support. b. It will be done through Moodle, in digital format without the need to print them out. c. The importance of ethical principles related to sustainability values in personal and professional behaviour must be taken into account. d. Work will be done to identify and modify gender biases and attitudes and influence the environment to change them and promote values of respect and equality. e. The full integration of students who, for physical, sensory, mental or socio-cultural reasons, experience difficulties in gaining adequate, equal and beneficial access to university life will be facilitated.The coordinators of this course are:UDC: Profesora Mercedes Teijeiro UVigo: Profesor Pedro P Gallego

(*)The teaching guide is the document in which the URV publishes the information about all its courses. It is a public document and cannot be modified. Only in exceptional cases can it be revised by the competent agent or duly revised so that it is in line with current legislation.