Teaching Guide				
Identifying Data				2024/25
Subject (*)	Industrial Innovation		Code	730497213
Study programme	Mestrado Universitario en Enxeñaría Industrial (plan 2018)			
Descriptors				
Cycle	Period	Year	Type	Credits
Official Master's Degree	2nd four-month period	First	Obligatory	3
Language	SpanishGalicianEnglish			
Teaching method	Face-to-face			
Prerequisites				
Department	Empresa			
Coordinador	Lamas Rodriguez, Adolfo	E-mail	adolfo.lamasr@udc.es	
Lecturers	Lamas Rodriguez, Adolfo	E-mail	adolfo.lamasr@udc.es	
Web	www.gii.udc.es			
General description	Xestión da Innovación. O plan estratéxico tecnolóxico. Identificación de ideas innovadoras. Financiamento da innovación. Explotación dos resultados. O marco español para a innovación.			

Study programme competences / results	
Code	Study programme competences / results
A16	EG8 - Capacity for the management of Research, Development and Technological Innovation.
B1	CB6 - Possess and understand knowledge that provides a basis or opportunity to be original in the development and / or application of ideas, often in a research context.
B2	CB7 - That students know how to apply the knowledge acquired and their ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their area of ??study.
B3	CB8 - That students are able to integrate knowledge and face the complexity of making judgments based on information that, being incomplete or limited, includes reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments.
B4	CB9 - That the students know how to communicate their conclusions -and the knowledge and ultimate reasons that sustain them- to specialized and non-specialized audiences in a clear and unambiguous way.
B5	CB10 - That students have the learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous.
B6	G1 - Have adequate knowledge of the scientific and technological aspects in Industrial Engineering.
B9	G4 - Conduct research, development and innovation in products, processes and methods.
B12	G7 - Being able to perform general management, technical management and project management R & D & I functions in plants, companies and technology centers.
B13	G8 - Apply the knowledge acquired and solve problems in new or unfamiliar environments within broader and multidisciplinary contexts.
B14	G9 - Be able to integrate knowledge and face the complexity of making judgments based on information that, being incomplete or limited, includes reflections on social and ethical responsibilities linked to the application of their knowledge and judgments.
B15	G10 - Knowing how to communicate the conclusions -and the knowledge and ultimate reasons that sustain them- to specialized and non-specialized publics in a clear and unambiguous way.
B16	G11 - Possess the learning skills that allow to continue studying in a self-directed or autonomous way.
C1	ABET (a) - An ability to apply knowledge of mathematics, science, and engineering.
C3	ABET (c) - An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
C6	ABET (f) - An understanding of professional and ethical responsibility.
C7	ABET (g) - An ability to communicate effectively.
C8	ABET (h) - The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
C9	ABET (i) - A recognition of the need for, and an ability to engage in life-long learning.

Learning outcomes

Learning outcomes	Study programme competences / results		
Capacity for the management of Research, Development and Technological Innovation.	AJ16	BJ1 BJ2 BJ3 BJ4 BJ5 BJ6 BJ9 BJ12 BJ13 BJ14 BJ15 BJ16	CJ1 CJ3 CJ6 CJ7 CJ8 CJ9

Contents	
Topic	Sub-topic
The following blocks or subjects develop the contents established in the Verification Report file:	Research, Development and Technological Innovation Programmes (R&D&I). R&D&I Management: Strategic Plan; Creativity and R&D&I; Technology Watch, Project Management; Financing; R&D&I Assurance, R&D&I Exploitation. Emerging technologies in the industrial sector.

Planning				
Methodologies / tests	Competencies / Results	Teaching hours (in-person & virtual)	Student?s personal work hours	Total hours
Short answer questions	A16 B1 B2 B3 B4 B12 B13 B15 B16 B6 B9 C1 C3 C6 C7 C8 C9	5	6	11
Case study	A16 B1 B2 B3 B4 B5 B12 B13 B14 B6 B9 C1 C3 C6 C7 C8 C9	10	34	44
Supervised projects	A16 B1 B2 B3 B4 B5 B12 B13 B14 B6 B9 C1 C3 C6 C7 C8 C9	5	15	20
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
Short answer questions	The student will answer conceptual questions on the subject.
Case study	The lecturer will analyse and explain several research projects that the student will take as a reference to elaborate one or several group works.
Supervised projects	The work will be carried out in groups and will consist of the drafting of an R&D&I project.

Personalized attention

Methodologies	Description
Supervised projects Case study	Personalised attention will be given during tutorial hours. In the event that the student requests academic dispensation, the student will receive specific personalised attention via the moodle forum or email.

Assessment			
Methodologies	Competencies / Results	Description	Qualification
Short answer questions	A16 B1 B2 B3 B4 B12 B13 B15 B16 B6 B9 C1 C3 C6 C7 C8 C9	The student will answer conceptual questions about the subject. The student will have to pass this test in order to pass the subject.	50
Supervised projects	A16 B1 B2 B3 B4 B5 B12 B13 B14 B6 B9 C1 C3 C6 C7 C8 C9	The work will be done in a group and will consist of writing an R+D+i project.	50

Assessment comments
First opportunity evaluation: a weighted mark will be calculated according to the weights indicated in the methodologies. All tests must be passed. Second chance assessment: the same criteria will be followed as for the first chance assessment. Advance call: before the date of this call, the student will hand in the proposed work that has not been passed in previous calls. All regulatory aspects related to ?academic dispensation?, ?dedication to the study?, ?permanence? and ?academic fraud? are governed by the current regulations of the UDC.

Sources of information	
Basic	Apuntes elaborados por Adolfo Lamas que se compartirán con el alumno a través de moodle.BIBLIOGRAFÍA ADICIONAL DE LA ASIGNATURA GESTIÓN DE LA INNOVACIÓNArbonies A.L 1991 Nuevos Enfoques en la innovación de productos para la empresa industrial. Departamento de promoción y desarrollo económicoCentro de Diseño Industrial S.A. 1995, Manual de Gestión del DiseñoBaxter M., 1995 Product Design. Chapman & HallEscorsa, P, Herbolzheimer, E y Solé F. 1995 Diseño industrial y su gestión en la PYME española Diez casos reales. EsadeFundación COTEC, 1998 El sistema español de Innovación. Diagnóstico y Recomendaciones.EDDI, 1998, La mejora de la gestión del proceso de diseño en la PYME.Montaña, J.Cómo diseñar un producto. Manuales IMPINueno, P, Diseño y Estrategia empresarial. Manuales IMPIOficina Española de Patentes y Marcashttp://www.oepm.es
Complementary	- Henry Chesbrough (2003). Open Innovation: The New Imperative for Creating and Profiting from Technology. USA: Harvard Business School Press Books - Mary Jo Frederich, Peter Andrews. (2009). Innovation Passport: The IBM First-of-a-Kind (FOAK) Journey From Research to Reality. USA: IBM Press

Recommendations
Subjects that it is recommended to have taken before
Subjects that are recommended to be taken simultaneously
Subjects that continue the syllabus
Other comments

?Para axudar a conseguir un entorno inmediato sostenido y cumprir có obxetivo da acción número 5: ?Docencia e investigación saludable e sustentable ambiental e social? do "Plan de Acción Green Campus Ferrol":A entrega dos traballos documentales que se realicen nesta materia:Se solicitarán en formato virtual e/ou soporte informáticoSe realizará a través de Moodle, en formato dixital sen necesidade de imprimilosAdemás durante o curso:Se debe facer un uso sostenible dos recursos y a prevención de impactos negativos sobre o medio naturalSe debe tener en conta a importancia dos principios éticos relacionados cos valores da sostenibilidad nos comportamentos personales e profesionalesSe incorpora perspectiva de xénero na docencia desta materia (se usará lenguaxe non sexista, se utilizará bibliografía de autores de ambos sexos, se propiciará a intervención en clase de alumnos e alumnas?)Se traballará para identificar e modificar prexuicios e actitudes sexistas, e se influirá no entorno para modificalos y fomentar os valores de respeto e igualdad.Se deberán detectar situacions de discriminación e se propondrán acciones e medidas para correxilas.

(*)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.