Teaching Guide				
Identifying Data				2020/21
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	SpanishGalician			
Teaching method	Hybrid			
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.			
Contingency plan	1. Modifications to the contents 2. Methodologies *Teaching methodologies that are maintained *Teaching methodologies that are modified 3. Mechanisms for personalized attention to students 4. Modifications in the evaluation *Evaluation observations: 5. Modifications to the bibliography or webgraphy			

Study programme competences	
Code	Study programme competences
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		
Capacidade para a xestión da Investigación, Desenrolo e Innovación Tecnolóxica.	AJ16	BJ1 BJ2 BJ3 BJ4 BJ5 BJ6 BJ9 BJ12 BJ13 BJ14 BJ15 BJ16	CJ1 CJ3 CJ6 CJ7 CJ8 CJ9

Contents	
Topic	Sub-topic
Os bloques ou temas seguintes desenrolan os contidos establecidos na ficha da Memoria de Verificación, que son:	Programas de Investigación, Desenrolo e Innovación tecnolóxica (I+D+i). Xestión da I+D+i: Plan Estratéxico; Creatividade e I+D+i; Vixilancia Tecnolóxica, Xestión de Proxectos; Financiación; Aseguramento da I+D+i, Explotación da I+D+i. Tecnoloxías emerxentes no eido industrial.

Planning				
Methodologies / tests	Competencies	Ordinary class hours	Student?s personal work hours	Total hours
Guest lecture / keynote speech	A16 B1 B2 B3 B4 B5 B12 B13 B15 B14 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**
Guest lecture / keynote speech	Clases telemáticas
Case study	O profesor analizará e explicará varios proxectos de investigación que o alumno tomará como referencia para elaborar un ou varios traballos en grupo.
Supervised projects	O traballo realizaráse en grupo e consistirá no diseño dun producto ou proceso innovador para una empresa galega.

Personalized attention	
Methodologies	**Description**
Supervised projects Guest lecture / keynote speech Case study	La atención personalizada se realizará en horario de tutorías. A atención personalizada realizarase en horario de tutorías. No caso de que o alumno solicite dispensa académica, o alumno recibirá atención personalizada específica por medio do foro del moodle, tutorías e correo electrónico.

Assessment			
Methodologies	**Competencies**	**Description**	**Qualification**
Guest lecture / keynote speech	A16 B1 B2 B3 B4 B5 B12 B13 B15 B14 B16 B6 B9 C1 C3 C6 C7 C8 C9	Coñecementos teóricos da materia. Examen tipo test. Se tenrá en conta a asistencia a clase.	20
Case study	A16 B1 B2 B3 B4 B5 B12 B13 B14 B6 B9 C1 C3 C6 C7 C8 C9	O traballo se exporá ó profesor e o resto de los alumnos. A súa evaluación dependerá de: - a calidade da presentación - a documentación aportada - os resultados obtidos - a orixinalidade da innovación	80

Assessment comments
Avaliación de primeira oportunidade: o 100% da calificación se obterá mediante a nota media ponderada obteida de las partes avaliadas. Evaluación de segunda oportunidade: se seguirá o mismo criterio que para a de primeira oportunidade. Se exixirá que o alumno obteña como mínimo unha nota de tres puntos sobre dez en cada unha das partes avaliadas. O ?Alumnado con recoñecemento de dedicación a tempo parcial e dispensa académica de exención de asistencia? comunicarán ó inicio do curso a súa situación os profesores da materia, segundo establece a "Norma que regula o réxime de dedicación ao estudo dos estudantes de grao na UDC? (Art.3.b e 4.5) e as ?Normas de avaliación, revisión e reclamación das cualificacións dos estudos de grao e mestrado universitario (Art. 3 e 8b). Os alumnos nesta situación, poderán facer un traballo tutelado individual.

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.