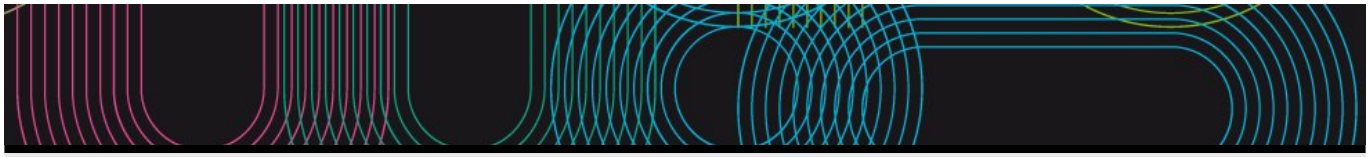

IDENTIFYING DATA				
Knowledge and technological innovation management				
Subject	Knowledge and technological innovation management			
Code	V03G020V01925			
Study programme	Grado en Administración y Dirección de Empresas			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	6	Optional	4th	1st
Teaching language	Galician English			
Department				
Coordinator	Vázquez Vicente, Xosé Henrique			
Lecturers	Santos da Silva França, Alexandra Maria Vázquez Vicente, Xosé Henrique			
E-mail	xhvv@uvigo.es			
Web	http://webs.uvigo.es/xhvv			
General description	The course highlights the challenges posed by the knowledge economy, justifies the need to innovate in this context, and deepens into the tools available to sistematize R&D and innovation within organizations. Although we will mainly focus in private firms, the course will show that the management of knowledge and innovation finds a wide field of application beyond the business arena. The rationale of the course will thus play an important role in the dynamization of change in any type of organization; from an NGO or a trade union, for instance, to the very same public administration.			

Skills	
Code	
A2	Students need to be able to apply the knowledge acquired to their work or vocation in a professional manner, and should have the skills normally demonstrated through the ability to develop and defends points of view and to solve problems related to their field of study.
A3	Students should be able to collect and interpret relevant data (usually within their field of study) in order to make judgements that include a reflection on the relevant social, scientific or ethical issues.
A4	Students should be able to transmit information, ideas, problems and solutions to both specialised and non-specialised audiences.
B1	Ability to analyse and synthesise
B2	Critical and self-critical thinking
C1	Acquire and understand knowledge regarding: the relationships between the different subsystems that make up the business system
C3	Acquire and understand knowledge regarding: Internal aspects, functions and processes of organisations including their nature, structure, direction, operation and management
D2	Capacity for leadership, including empathy with others

Learning outcomes				
Expected results from this subject	Training and Learning Results			
Understand the Knowledge Economy and the role that the management of the innovation plays.	A3	B1 B2	C1 C3	
Capacity to analize the main strengths that move the ecosystem of innovation	A2	B1 B2	C1 C3	
Capacity to analyse the internal processes of the company that influence the potential of innovation	A4	B2	C1 C3	D2
Creative capacity to distinguish new projects of innovation, evaluate them with rigour, and implement them.	A2 A3	B1	C1	D2

Contents	
Topic	
1.- Why innovation management? From an industrial to a knowledge economy.	The world economy. The rationale of growth and convergence. The new technological system: microelectronics and biotechnology. Knowledge economy: more than bytes. The firm in a new context: the innovation plan.
2.- Technological change and National Systems of Innovation.	Technology and innovation: definitions and typologies. The configuration of National Systems of Innovation. The system Science-Technology-Industry: the role of universities.
3.- The elaboration of a diagnosis: from environmental insights to new ideas for the market.	Competitive intelligence. Technological prospection. Technological audit.
4.- The importance of designing a strategy to develop a project portfolio.	Strategic coherence. Innovation strategies. Technological strategies. Interactions. Indicators. Project portfolio. Technology protection.
5.- How to implement a project? Organizational structure, control and leadership.	Organizational structures to stimulate change and innovation. Coordination mechanisms to innovate. The technological perspective of control systems and incentives. Participation systems for the workforce. The flow of change: training, comunication and leadership.

Planning	Class hours	Hours outside the classroom	Total hours
Introductory activities	1	0	1
Lecturing	19	30	49
Problem solving	5	15	20
Debate	5	5	10
Mentored work	20	20	40
Objective questions exam	2	28	30
*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.			

Methodologies	Description
Introductory activities	Presentation of contents and goals. Teaching methodology and evaluation systems.
Lecturing	Presentation of the theoretical basis and guidance on program contents. Students should read previously the recommended material for each session.
Problem solving	Students will write essays on diverse topics addressed in the course, and/or discuss cases/exercises.
Debate	Teachers will debate with students about questions with answers that will require to associate arguments from the current and previous lectures.
Mentored work	These sessions will also have the teachers' support, but students will work cooperatively and autonomously in small groups in order to carry out an Innovation Plan for a particular organization. In order to carry out these tasks, it is important to absorve the knowledge discussed in master sessions.

Personalized assistance	
Methodologies	**Description**
Problem solving	Students will adress analyses, cases or exercises under the teacher's supervision.
Mentored work	The innovation plan will be supervised by the teacher.

Assessment	Description	Qualification	Training and Learning Results	
Problem solving	Students will write essays on diverse topics addressed in the course, and/or discuss cases/exercises.	20	A2	B1 B2
Debate	The teachers will question the students with issues that will require answers relating to different topics.	10	A2 A3 A4	B2

Mentored work	The tutored works consists on developing an Innovation Plan, which can follow a model available at MOOVI (UVigo's online teaching platform). The assesment of this Plan will be based on the following criteria: FORMAL PRESENTATION The table of contents will be broken down and will indicate the page on which each element is. All the figures included in the text, tables, graphs and figures must specify the source. Literal quotations must be enclosed in quotation marks and accompanied by the source from which they are extracted. If they are not literal, only the source will be cited. The detection of a plagiarism will be punished with the greatest of sanctions according to the regulations of the University of Vigo. The sources (documentary, oral, internet...) must be collected in a final section. LEVEL AND QUALITY OF THEMATIC DEPTH ANALYTICAL SKILL Structuring and critical analysis of information Originality and rigor of the arguments FINAL PRESENTATION TO SEEK FINANCING FOR ONE OF THE PROJECTS DEVELOPED IN THE INNOVATION PLAN 5/10 minutes presentation Fluency of the presentation Conviction capacity	40	A2 A3 A4	B1 B2	C1 C3	D2
Objective questions exam	The exam will consist of 20 test questions with 4 possible answers each. One correct answer adds one point; one incorrect answer substracts 0,33. Alternatively, this test-type exam may be substituted by short questions that students must deal with extensively.	30	A3	B1 B2	C1 C3	

Other comments on the Evaluation

The grade that students obtain for the fulfillment of several of the tasks is maintained in the academic course and will not be saved for successive years.

Alternatively to the evaluation system described above, students may choose to be assesed through an objective questions exam from which he/she will obtain 100% of his/her overall grade.

Notes regarding the exam (regardless of whether it represents 20% or 100% of the grade):

(1) It can be a test or made of short questions.

(2) In the slides available in MOOVI, students will find an extended index of the course that they will have to complement on their own during face-to-face teaching and/or with the recommended bibliography.

(3) The exam date can be consulted on the website: http://fccee.uvigo.es

Sources of information

Basic Bibliography

Fernández Sánchez, Esteban, **Innovar para competir**, 9788436841763, Pirámide, 2019

Enric Barba, José Ramón Magarzo, **Cómo gestionar la innovación**, Altran, 2018

Schilling, M. A., & Shankar, R., **Strategic management of technological innovation**, 9781260565799, McGraw-Hill Education, 2020

Complementary Bibliography

Tidd, Joe e Bessant, John, **Managing Innovation: Integrating technological, market and organizational change**, Wiley,

Antonio Davila, Marc J Epstein, and Robert D. Shelton, **Making Innovation Work: How to Manage It, Measure It, and Profit from it**, Pearson Education, 2013

Recommendations

Subjects that continue the syllabus

Investment decisions/V03G020V01402
Financing decisions/V03G020V01501

Subjects that are recommended to be taken simultaneously

Commercial Research/V03G020V01701

Subjects that it is recommended to have taken before

History: Economic history/V03G020V01103
Operations management/V03G020V01302
Accounting analysis/V03G020V01601

Other comments

The master sessions address topics that must be related to other contents of the course and other courses such as statistics, market research, law or business economics.
The practical sessions demand from the students a proactive and creative attitude that can be hardly exaggerated. Lateral thinking and innovative output in the innovation plan and in the teacher's own exercises are key elements in the evaluation of these sessions.
The development of the course and its future exploitation in professional life advises a level of reading in English equivalent to that required in the entrance exams to the university.

Contingency plan

Description

=== EXCEPTIONAL PLANNING ===
Given the uncertain and unpredictable evolution of the health alert caused by COVID-19, the University of Vigo establishes an extraordinary planning that will be activated when the administrations and the institution itself determine it, considering safety, health and responsibility criteria both in distance and blended learning. These already planned measures guarantee, at the required time, the development of teaching in a more agile and effective way, as it is known in advance (or well in advance) by the students and teachers through the standardized tool.

=== ADAPTATION OF THE METHODOLOGIES ===

* Teaching methodologies
They can be developed through UVigo's Remote Campus system.

* Non-attendance mechanisms for student attention (tutoring)
Tutoring can be carried out through online means (email, videoconference, discussion forums). Videoconferences will be arranged through previous appointment.

=== ADAPTATION OF THE TESTS ===

* Tests could be carried out through UVigo's Remote Campus system.