



IDENTIFYING DATA

Technology Management

Subject	Technology Management			
Code	V05G300V01801			
Study programme	(*)Grao en Enxeñaría de Tecnoloxías de Telecomunicación			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	6	Mandatory	4th	2nd
Teaching language	Spanish			
Department				
Coordinator	González Castaño, Francisco Javier			
Lecturers	Fernández Hermida, Xulio Fernández Vilas, Ana González Castaño, Francisco Javier López Ardao, José Carlos			
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Web	http://http://fatic.uvigo.es			
General description	This course provides skills in design, management and leadership of technological projects. This includes detection of needs, technological surveys, team creativity techniques, project management, property definition and protection, and business models.			

Competencies

Code	
B7	CG7: The ability to analyze and assess the social and environmental impact of technical solutions.
B8	CG8: To know and apply basic elements of economics and human resources management, project organization and planning, as well as the legislation, regulation and standarization in Telecommunications.
C54	(CE54/PY1) The ability to elaborate the proposal of technical projects according to the specified requirements in a public competitive bidding.
C55	(CE55/PY2) The ability for technical direction of telecommunication project.
C56	(CE56/PY3) The ability to manage telecommunication project human resources and economic.
C57	(CE57/PY4) The ability to elaborate technical reports and for the follow up of a telecommunication project.

Learning outcomes

Expected results from this subject	Training and Learning Results	
- To analyze the technical and economic feasibility of a project. Project budgets.	B7 B8	C55 C56
- Learn how to find statistical information and indicators		C57
- Learn how to perform technological surveys and consulting		
- Learn how to apply the main certification regulations	B8	
- Project reporting		C54 C55 C56 C57
- Project planning and management	B8	C54 C55 C56
- Sociological and human aspects of projects.		C55 C56
- Telecommunications, safety and environmental regulations	B7	C54

- To develop models for the creation of enterprises, products and services

B8

C55

- To propose business models in telecommunications

C56

Contents

Topic

Identifying and interpreting needs	<ul style="list-style-type: none"> - Gathering requisites - Translating needs into technical objectives - Technological perspective. Hype cycles - Sources and methods for technical surveys
Creativity techniques	<ul style="list-style-type: none"> - Research, development and innovation - Team methods to boost creativity - Is my idea original? Formulating and evaluating it
Project design and management	<ul style="list-style-type: none"> - Definition of technical goals - Translating goals into tasks - Planning the project - Project resources - Human team. R&D profiles - Budget - Tracking project evolution
Business models	<ul style="list-style-type: none"> - Product proposal - Risk analysis - Customer survey - Business plan
Entrepreneurship	<ul style="list-style-type: none"> - From the idea to the business plan - Looking for capital - Technological partnerships - First steps towards the creation of an enterprise
Legal aspects	<ul style="list-style-type: none"> - Types of property: Intellectual and industrial - Technological actives vs. legal property. Models, patents. Licenses - Spanish case/international case. Europe and the US. Internationalization hints - CIN/352/2009 regulation

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Planning

	Class hours	Hours outside the classroom	Total hours
Master Session	22	26	48
Projects	4	20	24
Troubleshooting and / or exercises	2	12	14
Practice in computer rooms	28	36	64

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies

	Description
Master Session	Oral presentation of the main concepts of the course by the professors, supported by multimedia. Lectures by experts. Through this methodology the competencies CG7, CG8, CE54, CE55, CE56 and CE57 are developed.
Projects	Personal project (individual or in groups) to be presented during class hours A of the last week. Through this methodology the competencies CE54, CE55, CE56 and CE57 are developed.
Troubleshooting and / or exercises	Brief individual assignments on the topics of the master sessions. Through this methodology the competencies CE54, CE55, CE56 and CE57 are developed.
Practice in computer rooms	Practice on aspects of specification of requisites, creativity and project design and tracking using computer tools. Through this methodology the competencies CE54, CE55, CE56 and CE57 are developed.

Personalized attention

Methodologies	Description
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Projects	- The professors will publish a timetable to attend the students individually at their offices - Course documentation (slides employed in the classroom, homework, questionnaires of practical assignments, documentation for the seminars, recommended lectures) will be available through the TEMA platform (http://fatic.uvigo.es)
Troubleshooting and / or exercises	- The professors will publish a timetable to attend the students individually at their offices - Course documentation (slides employed in the classroom, homework, questionnaires of practical assignments, documentation for the seminars, recommended lectures) will be available through the TEMA platform (http://fatic.uvigo.es)

Assessment				
	Description	Qualification	Training and Learning Results	
Master Session	Exam	25	B7	C54
			B8	C55
				C56
				C57
Projects	Individual defense (committee)	30		C55
				C56
				C57
Troubleshooting and / or exercises	Correction by the professors	5		C55
				C56
				C57
Practice in computer rooms	Evaluation of partial results+exam	40		C55
				C56
				C57

Other comments on the Evaluation

Continuous evaluation consists in:

- Individual exam (Maximum 5 points). Official calendar.
- Intermediate practical test (Maximum 2 points).
- Final project (Maximum 3 points).

To pass the course, the student must obtain a final score (as the sum of the previous activities) above 5 points. Maximum score is 10 points.

COURSE END EVALUATION:

It will consist in an exam with theoretical and practical parts in the official date. The practical part will cover the same content as the continuous evaluation along the course.

Sources of information

- Thinkertoys: A Handbook of Creative Thinking Techniques (2nd Edition), 2006. Michael Michalko. Ten Speed Press; 2nd edition. ISBN 10: 1580087736.

- Six Thinking Hats Paperback, 1999. Edward de Bono. Back Bay Books; 2nd edition. ISBN 10: 9780316178310

Recommendations