SYLLABUS

Course	
Name	**Project Management**
Code	**DOI-TEL-681**
Degree	**Máster Universitario en Ingeniería de Telecomunicación**
Year	**2**
Semester	**Fall**
ECTS credits	**4.5 ECTS**
Character	**Basic**
Department	**Organización Industrial**
Area	**Manufacturing and Logistics**

Professor	
Name	**Juan de Norverto Moríñigo**
Department	**Industrial Management**
Area	**Industrial Engineering**
Office	**By email**
e-mail	**jnorvertom@icai.es**
Office hours	

Professor	
Name	**Bárbara Sáiz de Bustamante Pérez**
Department	**Industrial Management**
Area	**Industrial Engineering**
Office	**By email**
e-mail	**bsaiz@movistar.es**
Office hours	

COURSE SPECIFICS

Context of the course

Contribution to the professional profile

At the end of the season students must:

1. Acquire knowledge and competences to manage an industrial Project and also a Research and development one.

2. Be able to define the key items and elements of the Project management.

3. Be able to identify the main process groups in PM.

4. Understand and analyze the basic tools to manage the time, cost, risk and quality in a Project.

5. Be able to check, control and audit industrial projects.

6. Be able to present and defend both orally and in written the scheduling and execution of a Project.

Pre-requisites

No prior knowledge is required for attending this course.

Competences – Goals

Generic competences

CG3. Lead, Plan and supervise multidisciplinary teams.

CG6. To manage technically and budgetary, installations, industrial plants, enterprises and tech centers.

CG7. Deploy roles of general management, technical management, and Project management in plants, companies or tech centers, including R&D projects.

CG8. Use the given knowledge to solve concerns in new or strange environments inside wide ranges and multidisciplinary.

CG9. Be able to integrate knowledge and face the complexity of making decisions based on partial or limited information, having in mind all social and ethic consequences derived from these decisions.

CG10. Be able to communicate conclusions and the reasons and knowledge used to do so, in front of general and specialized audiences in a simple and clear way.

Specific Competences and Learning Results
CMG7. Knowledge and abilities for the integrated Project management.   CMG8. Capability to manage research, development and technical innovation.   CMI6. Knowledge and abilities to check and control installations, processes and products.   CMI7. Knowledge and abilities to prepare certificates, audits, tests and reports.

CONTENTS AND MODULES

Contents
1 Overview of Project Management
Basic concepts. Life Cycle of a Project. The Steps in managing a Project. International Standards (PMI, IPMA). Different types of projects: industrial, telecommunication, research and more. The role of the Project Manager
2 Planning the Project
Project Planning. Developing a Mission, Vision, Goals and Objectives of the Project. Owners and Stakeholder. The Work Breakdown Structure (WBS) to plan a project.
3 Time and Cost Management
Estimation of Time, Costs and Resources. Scheduling Project Work. Critical Path Method (CPM). Assignment Resources to Tasks. Resource balancing. Analysis and reports using Software tools (Microsoft Project).
4 The Project Risk Plan
Defining Project Risks. Process to establish the project risk plan. Contingency Reserves. Coordination points. Risk Matrix Analysis. Project Control and Evaluation. The Change Control Process. Project Control using Earned Value Analysis
5 Project as an independent activity in the Company
Project Performance. Project Integration into the Finance Planning of the Company. Post-project Value. Multi-project Value.
6 Project management related Quality Standards
Components and objectives of a Quality Management System. ISO 21500:2013. UNE 157001. UNE 166001 & 166002. Project Quality Plan. Verification, Control and Audit of Industrial Projects. RD 1432 for R&D&IT Projects

TEACHING METHODOLOGY

General methodological aspects
In order to achieve the learning objectives stated above, the course will focus on the students' activity and on their active learning. Therefore, the methodology will be oriented towards a more active role of the student.

Classroom methodology: Activities
1. **Lectures**: the teacher will give specific topics about the different aspects of the entrepreneurial activity (see contents) 2. **Cases**: focusing on the main entrepreneurship problems, some specific cases will be analysed and discussed, helping students to identify, think and reflect on different aspects of the entrepreneurial activity. These cases will have previously been given to and read by the students. 3. **Real entrepreneurs' conferences**: some conferences will be given by real entrepreneurs that have launched different projects. This will help students to understand from real experiences. 4. **Entrepreneurship projects**: developed by the student, organized in teams and presented in class

Non-classroom methodology: Activities
The objective of non-classroom activities is to understand the concepts and methodologies described in class, and to apply them into a real entrepreneurship project that will be presented by different teams in class.

SUMMARY OF THE STUDENT WORKING HOURS		
CLASSROOM ACTIVITIES		
Lectures	case solving	Exam
19	23	3
NON-CLASSROOM ACTIVITIES		
Autonomous individual work – cases	Autonomous work in groups – entrepreneurial project	Exam preparation
28	42	12
		ECTS: 4.5 (135 hours)

EVALUATION AND GRADING CRITERIA

Evaluation activities	Grading criteria	Weight
Mid-term exam	- Understanding of concepts. - Application of concepts to problem solving (a case study) - Quality of writing and overall presentation.	15%
Final exam	- Same criteria as the mid-term exam	35%
Final entrepreneurship project (in groups)	- Application of concepts to a real entrepreneurship project - Team work capabilities	20%
Case studies given for out-of-classroom work	- Handing them in before the corresponding session	20%
Active participation in class	- Questions and comments in class	10%

Grading

The final grade of the course will result from adding the following elements:

- 15% from the mid-term exam

- 35% from the grade in the final exam.

- 20% from the grade in the final entrepreneurship project

- 20% from handing in the cases given for out-of-classroom work. **Homework should be handed in prior to or at the beginning of the lecture. Late homework will not be graded.**

- 10% from the grade corresponding to participation in class.

The exam grade (weighting 30% mid-term and 70% final exam grades) should be over 4.0 to include the rest of element grades. In case of being lower than 4.0, the final grade will be the exam grade.

Extraordinary session

The same criteria are valid, except that the 100% of the grade will be split into a final exam (50%) and the final entrepreneurship project and out-of-classroom work (50%)

Students who fail to attend more than 15% of the lectures may be denied the right to take the final exam during the regular assessment period.

REFERENCES AND RESOURCES

Basic references
J. Heagney.: "Fundamentals of project Management" (2011)   H. Kerzner. Project Management: a Systems Approach to Planning, Scheduling and Controlling. John Wiley & Sons, 2006

Complementary references
- M.P. Spinner, Project management : principles and practices, Prentice-Hall International, [1997]   - ISO.UNE 21500:2013

		LIVE LESSONS				HOMEWORK				LEARNING OUTCOMES
Week	h/wk	Living lessons in class	Practical cases in Class	Tests	h/wk	Self study	Practical cases	Exams preparation	Generic	
1	3	Subject Presentation (1h)+ Theory Unit 1 (2h)			2	2			1	Acquire knowledge and competences to manage an industrial Project and also a Research and development one.
2	3	TU 2 (1h)	PC Unit 1 (2h)		5	2	3		2	Be able to define the key items and elements of the Project management.
3	3	TU 2 (1h)	PC Unit 2 (2h)		5	2	3		2	
4	3	TU3 (1h)	PC Unit 2 (2h)		5	2	3		3	Be able to identify the main process groups in PM.
5	3	TU3 (2h)	PC Unit 3 (1h)		5	2	3		3	
6	3	TU3 (1h)	PC Unit 3 (2h)		5	2	3		3	
7	3	Mid term exam			8	Mid term exam preparation (8h)				
8	3	TU4 (1h)	PC Unit 3 (2h)		8	2	6		4	Understand and analyze the basic tools to manage the time, cost, risk and quality in a Project.
9	3	TU4 (2h)	PC Unit 3 (1h)		5	2	3		4	
10	3	TU4 (1h)	PC Unit 4 (1h)		5	2	3		4	
11	3	TU5 (2h)	PC Unit 4 (2h)		5	2	3		6	Be able to present and defend both orally and in written the scheduling and execution of a Project.
12	3	TU5 (1h)	PC Unit 4 (1h)		5	2	3		6	
13	3	TU6 (1h)	PC Unit 5 (2h)		5	2	3		6	
14	3	TU6 (1h)	PC Unit 5 (2h)		5	2	3		5	Be able to check, control and audit industrial projects.
15	3		PC Unit 6 (3h)		5	2	3		5	
					12	Final exam preparation				