



Subject: Management and Direction of Scientific and Technological Projects  
Code: 32415  
Institution: Escuela Politécnica Superior  
Degree: Master's program in Research and Innovation in Information and Communications Technologies (i<sup>2</sup>-ICT)  
Level: Master  
Type: Core

## COURSE GUIDE: Management and Direction of Scientific and Technological Projects (PROJ)

**Academic year:** 2015-2016

**Program:** Master's program in Research and Innovation in Information and Communications Technologies (I<sup>2</sup>-ICT)

**Center:** Escuela Politécnica Superior  
**University:** Universidad Autónoma de Madrid

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## 1. ASIGNATURA / COURSE (ID)

Dirección y gestión de proyectos científicos y tecnológicos  
Management and Direction of Scientific and Technological Projects (PROJ)

### 1.1. Programa / Program

Máster Universitario en Investigación e Innovación en Tecnologías de la Información y las Comunicaciones (I<sup>2</sup>-TIC)

Master in Research and Innovation in Information and Communications Technologies (I<sup>2</sup>-ICT) [Officially certified]

### 1.2. Course code

32415

### 1.3. Course areas

Computer Science and Artificial Intelligence

### 1.4. Tipo de asignatura / Course type

Obligatoria [itinerario: Todos]  
Core [itinerary: All]

### 1.5. Semester

First semester

### 1.6. Credits

6 ETCS

### 1.7. Language of instruction

The lecture notes are in English. The lectures are mostly in Spanish. Some of the lectures and seminars can be in English.



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## 1.8. Recommendations / Related subjects

Knowledge of project management and scientific text processors at an introductory level is useful to follow the course.

Related subjects are:

- Iniciación a la investigación y la innovación [Practical Training in Research and Innovation]

## 1.9. Lecturers

Add @uam.es to all email addresses below.

**Lectures and labs:**

**Dr. Juan Alberto Sigüenza (Coordinator)**  
Departamento de Ingeniería Informática  
Escuela Politécnica Superior  
Office: B-312  
Tel.: +34 914972237  
e-mail: j.alberto.sigüenza  
Web: <http://www.eps.uam.es/~sigüenza>

**Dr. Francisco Jurado**  
Departamento de Ingeniería Informática  
Escuela Politécnica Superior  
Office B-344  
Tel: +34 91 497 7527  
e-mail: francisco.jurado@uam.es

## 1.10. Objetivos de la asignatura / Course objectives

Esta asignatura presenta el sistema español de Ciencia y Tecnología y su política científica, la financiación de la investigación (pública y privada, nacional e internacional), la creación de propuestas de los programas nacionales y europeos, y la difusión de los resultados de la investigación. Con una orientación muy aplicada, al finalizar esta asignatura los alumnos deberán ser capaces de presentar un proyecto científico (o una propuesta de proyecto) en prestigiosas revistas científicas de su área de conocimiento (o en el foro correspondiente).

This course introduces the Spanish's Science and Innovation System and its Scientific Policy, research funding (public and private, national and international), the creation of proposals for the national and international programs, and the dissemination of research results. With a practical approach, at the end of this subject students should be able to present a scientific project (or a project proposal) in prestigious scientific journals of their research area (or in the appropriate context).



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At the end of each unit, the student should be able to:

UNIT BY UNIT SPECIFIC OBJECTIVES	
<b>UNIT 1.- The Spanish Science and Innovation System and its Scientific Policy</b>	
1.1.	To know the main characteristics of this system from a practical view point.
1.2.	How to create a proposal.
1.3.	Ethical aspects to consider.
1.4.	Identification of funding agencies/programs.
<b>UNIT 2.- International projects</b>	
2.1.	Management of calls and documentation for European projects.
2.2.	Project preparation, project phases and project monitoring.
2.3.	Documents for patents and intellectual property.
<b>UNIT 3.- Dissemination</b>	
3.1.	Working with scientific papers, JCR journals and publication impact.
3.2.	Papers preparation: bibliographic references.
3.3.	Oral presentations for a scientific congress
3.3.	Presence on the web: what to do once the paper is published.
<b>UNIT 4.- Enterprises and Entrepreneurs</b>	
4.1.	Business plans and creation of enterprises.
4.2.	Tech-based enterprises: examples of success cases.
4.3.	Entrepreneur initiatives: the expert's advice.

## 1.11. Course contents

1. Introduction to the Spanish Science and Innovation System and its Scientific Policy.
2. Research Funding: Public and private, National and International.
3. Introduction to the gestation of a research project. Ethical aspects.
4. Calls documentation analysis and project preparation.
  - a. Project phases.
  - b. Project monitoring.
5. Spanish research projects. Practical case: writing a Scientific Project.
6. European Research framework. European projects. Practical case: Workshop on writing.
7. Practical case: Design and writing a scientific paper.
8. Dissemination of research results: Scientific papers, journals and impact. Quality measures.
9. Searching bibliographic references with ISI. Managing bibliographic references.
10. Subject presentation. JCR and journal selection.
11. Practical case: Efficient creation of scientific papers.



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12. Practical case: Dissemination of research results: Conferences, Workshops, etc.
13. Dissemination and presence on the Web.
14. Knowledge and Technology Transfer. Research and Technology transfer offices (OTRIs).
15. Intellectual Property protection. Patents. European Patents and Trademarks Office. Creating documentation for patents.
16. Entrepreneurs and Tech-based companies. Business plans. Entrepreneur initiatives, Entrepreneur Centers, Scientific and Technological parks, Funding.
17. Creation of Tech-based companies (entrepreneur examples: Vaelsys)
18. Organization and management of Tech-based companies

## 1.12. Course bibliography

1. Computer Ethics. A global perspective. Giannis Stamatellos. Jones and Bartlet Publishers, 2007.
2. Understanding computers in a changing society. Deborah Morley. Course Technology CENGAGE, 2009.
3. Cases on information technology entrepreneurship. José Aurelio Medina-Garrido, Salustiano Martínez-Fierro and José Ruiz-Navarro. IGI Publishing, 2008.
4. 6. La Sociedad de la información en el siglo XXI: un requisito para el desarrollo.
5. Ministerio de Ciencia y Tecnología, Secretaría de Estado de Telecomunicaciones y para la Sociedad de la Información, 2005.
6. Writing for computer science. Justin Zobel. Springer, 2004.
7. Ethics for the Information Age. M.J. Quinn. Pearson, 2010.

## 1.13. Coursework and evaluation

The course involves lectures, weekly assignments, and a practical work (journal paper or project proposal).

In both the ordinary and the extraordinary exam period it is necessary to have a pass grade ( $\geq 5$ ) to pass the course.



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- In the ordinary exam period, the evaluation grade will be computed according to the following weights
  - 10 % Class attendant
  - 30 % Research Project
  - 30 % Scientific Paper
  - 30 % Congress Communication

The grades of the individual parts are kept for the extraordinary exam period.

- In case of a fail grade in the ordinary exam period, in the extraordinary exam period, the student has the opportunity to
  - Turn in all the exercises with corrections
  - Turn in the practical work.

The grade will be determined by

- Oral examination over the 100 % of the exercises [only if the exercises are turned in]

If the student does not turn in some of these items, the grades used will be those corresponding to the ordinary exam period.