62229 - ICT innovation management

Syllabus Information

Academic year: 2024/25
Subject: 62229 - ICT innovation management
Faculty / School: 110 - Escuela de Ingeniería y Arquitectura
Degree: 534 - Master's Degree in Informatics Engineering
ECTS: 6.0
Year: 1
Semester: Second semester
Subject type: Compulsory
Module:

1. General information

The subject and its expected results respond to the following approaches and objectives:

This is a mainly practical subject. Upon its successful completion, each student should have achieved the following objectives:

- To know and understand the process, agents, and structure of the production of scientific and technical knowledge.
- To learn about various public financing systems for R&D&I (National, European Union...).
- To know and understand the legal framework of industrial protection and intellectual property.
- To be able to identify opportunities and develop the corresponding business plans.
- To be able to develop a results exploitation plan.
- To be able to lead the development of competitive innovation and research proposals.
- To be able to coordinate and execute R&D+i projects, including their technical and administrative justification.
- To be able to efficiently perform technological surveillance tasks.
- To be able to make public presentations of proposals and results of research and innovation activities.

2. Learning results

Upon completion of this subject, the student will be able to:

1. Develop and manage an innovation or research project independently.
2. Understand the process, agents, and structure of the production of scientific and technical knowledge.
3. Understand the public financing system for R&D in the European Union, at all administrative levels, as well as other research funding schemes.
4. Know and understand the legal framework of industrial protection and intellectual property. Apply the different modalities of software licenses and data usage.
5. Develop the corresponding business plans. Identifying Weaknesses and Strengths Threats and Opportunities (SWOT analysis).
6. Develop a results exploitation plan.
7. Apply techniques to lead the development of competitive research proposals.
8. Execute R&D+i projects, including their technical and administrative justification.
9. Understand and be able to perform technological surveillance tasks.
10. Publicly communicate proposals and present their results.

3. Syllabus

General notions and theoretical concepts

- Basic concepts about research, development and innovation. The role of innovation in businesses and public administrations. The inclusion of diversity and the gender perspective.
- Models of technological innovation. (1) Structure of innovative ecosystems (universities, research centres, companies, science parks, technological centres, business incubators, interface structures, etc); (2) Innovation indicators, (3) Technological innovative culture, (4) Open innovation, (5) Ways to promote innovation in collective contexts.
- IT product lines.

Administrative structure of R&D. Financing methods

- Approach models for R&D+i projects. Public-private collaboration.
- Administrative levels linked to public funding of R&D+i. Detailed development of the structure and programs of the Spanish national system and the European system for R&D+i financing.

Methodology for innovation and practical skills

- Developing competitive research proposals: models, structures and patterns, life cycle, best practices.
- Execution of R&D+i projects: project development, technical and administrative justification.
- Protection of R&D+i results in the field of IT: utility, protection models, limitations.
- Examples of innovation success in ICT companies.
- Defence of proposals and presentation of results.

4. Academic activities

The subject consists of 6 ECTS which correspond to around 150 hours of student work distributed as follows:

- Face-to-face activities: 50 h (master class, problem and case solving and laboratory practices)
- Study of theory and completion of practical application or research works: 90 h
- Personalized teacher-student tutoring: 5 h
- Assessment tests: 5 h

5. Assessment system

The student must demonstrate achievement of the intended learning results through the following assessment activities:

Reports, essays or short questionnaires on one or more topics related to the subject derived from an activity related to it [30%]. Learning results: 1, 2, 3, 4, 5, 6, 8 and 9

Project. A group project in which the knowledge and skills acquired in the subject will be put into practice [50%]. Learning results: 1, 2, 3, 4, 5, 6, 7, 8 and 9

Presentation of the Project proposal. Presentation of the developed project proposal [20%]. Learning results: 7 and 10

6. Sustainable Development Goals

5 - Gender Equality
8 - Decent Work and Economic Growth
9 - Industry, Innovation and Infrastructure