30174 - Management of Innovation and Technology Policy

Syllabus Information

Academic year: 2024/25
Subject: 30174 - Management of Innovation and Technology Policy
Faculty / School: 179 - Centro Universitario de la Defensa - Zaragoza
Degree: 563 - Bachelor's Degree in Industrial Organisational Engineering
ECTS: 4.5
Year: 3
Semester: Second semester
Subject type: Compulsory
Module:

1. General information

The main objective is to be able to manage innovation and technological development using basic tools for technological analysis and strategic planning in the specific framework of security and defence, as well as the technology policy inherent to collaborations and technology transfers and the innovation system in Spain.

These approaches and objectives are aligned with the following Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda (https://www.un.org/sustainabledevelopment/es/), in such a way that the acquisition of the learning outcomes of the subject provides training and knowledge, skills and competencies to contribute to some extent to its achievement. Specifically, on Goal 5 on gender equality in research work and Goal 9 on industry, innovation and infrastructure.

2. Learning results

• Designs and implements innovation and technological development strategies in organizations.

• Designs and implements technology surveillance systems to defend against competitors and be able to take advantage of business opportunities in the market.

• Uses patent systems as a means of protecting innovation and identifying competitive opportunities.

• Conducts technological audits that allow diagnosing the comparative situation of the organization with its competitors.

• Designs and implements effective technology transfer systems to improve the competitiveness of the organization.

• Knows the success and failure factors in the development and adoption of product and process innovations in organizations.

• Knows how to evaluate and select the most appropriate R+D+i proposals in accordance with the technological innovation strategy.

• Manages the development of innovation activities in the organization (new products and processes) identifying the appropriate modes of action for their correct planning and management.

• Knows how to propose and decide early cancellations of the development of technological innovations.

• Knows the principles of training and management of multidisciplinary teams of human resources for the development of innovations.

• Knows the structure of public innovation systems in which organisations are going to develop technological innovations.

• Establishes and manages technological cooperation agreements with other economic agents (companies and research centres).

• Is aware of the external sources of funding available in public innovation systems to carry out innovation activities and knows how to use them.

• Prepares proposals for innovation and development activities to national and international R+D+i plans.

3. Syllabus

Topic 1 – Innovation Management

Topic 2 - Audit, Surveillance and Technology Foresight

Topic 3 - Protection of knowledge

Topic 4 – Selection and management of innovation development

Topic 5 – Technology transfer and cooperation

Topic 6 – Innovation Systems

4. Academic activities

• Master classes and flipped classroom: theoretical foundations.

• Practical classes: application in practical work in innovation management.

• Presentation of the Technology Analysis of a technology with utility in Defence (group activity).

• Study and personal work, tutoring.

• Assessment Tests: conducting exams and individual tests.

5. Assessment system

FIRST CALL

Continuous Evaluation:

1. Individual practice topics 1 and 2 (20%).

2. Individual examination of topics 1 and 2 (25%).

3. Group practice (15%).

5. Individual practice topic 4 (20%).

6. Individual examination of topics 3, 4, 5 and 6 (20%).

The final grade will be calculated according to the specific weight of each test (no minimum grade required).

Global test: Individual exam for those who do not pass the subject through continuous evaluation and/or want to improve their grade.

SECOND CALL

The individual exam.

EVALUATION CRITERIA

In the theoretical, theoretical-practical and practical tests, knowledge of the topics of study and interpretation of the questions posed in accordance with the contents.

In the group practice, the contents provided, the design of the search methodology, the technological analysis carried out, the coherence between sections, correct presentation of bibliography and the general design will be assessed.

INSTRUMENTS (I) vs. LEARNING RESULTS (LR)

Instruments	Weight	LR1	LR2	LR3	LR4	LR5	LR6	LR7	LR8	LR9	LR10	LR11
Individual Practices	40%	X	X		X	X	X	X	X	X	X	X
Theoretical and practical tests	45%	X	X	X	X	X	X	X	X	X	X	X
Group work	15%	X	X	X	X	X	X	X	X			

6. Sustainable Development Goals

5 - Gender Equality
9 - Industry, Innovation and Infrastructure