Project Management in Informatics Engineering

Academic Year: (2020 / 2021) **Review date: 10/09/2020 10:24:15**

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: AMESCUA SECO, ANTONIO DE

Type: Compulsory ECTS Credits : 6.0

Year : 1 Semester : 1

OBJECTIVES

BASIC SKILLS
-To possess and understand knowledge that provides a basis or opportunity to be original in the development and / or application of ideas, often in a research context
-That students know how to apply the acquired knowledge and their problem-solving capacity in new or little-known environments within broader (or multidisciplinary) contexts related to their area of ¿¿study
-That students are able to integrate knowledge and face the complexity of formulating judgments based on information that, being incomplete or limited, includes reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments
-That students know how to communicate their conclusions and the latest knowledge and reasons that support them to specialized and non-specialized audiences in a clear and unambiguous way
-That students possess the learning skills that allow them to continue studying in a way that will have to be largely self-directed or autonomous.

GENERAL COMPETENCES
-Ability to project, calculate and design products, processes and facilities in all areas of Computer Engineering.
-Capacity for the management of works and installations of computer systems, complying with current regulations, ensuring the quality of the service.
-Ability to lead, plan and supervise multidisciplinary teams.
-Capacity for the elaboration, strategic planning, direction, coordination and technical and economic management of projects in all areas of Computer Engineering following quality and environmental criteria.
-Capacity for general management, technical management and management of research, development and innovation projects, in companies and technology centers, in the field of Computer Engineering.
-Capacity for the start-up, direction and management of computer equipment manufacturing processes, guaranteeing safety for people and goods, the final quality of products and their approval.
-Ability to apply the acquired knowledge and to solve problems in new or little-known environments within broader and multidisciplinary contexts, with the ability to integrate knowledge.
-Ability to understand the ethical responsibility and professional deontology of the activity of the profession of Computer Engineer.
-Ability to apply the principles of economics and human resources management and projects, as well as the legislation, regulation and standardization of IT.
-Ability to know how to communicate (orally and in writing) the conclusions - and the ultimate knowledge and reasons that support them - to specialized and non-specialized audiences in a clear and unambiguous way.
-Knowledge, understanding and ability to apply the necessary legislation in the exercise of the profession of Computer Engineer.

SPECIFIC COMPETENCES
-Capacity for the integration of technologies, applications, services and systems typical of Computer Engineering, with a general character, and in broader and multidisciplinary contexts.
-Capacity for strategic planning, preparation, direction, coordination, and technical and economic management in the fields of Computer Engineering related, among others, with: systems, applications, services, networks, infrastructures or computer facilities and development centers or factories software,

respecting adequate compliance with quality and environmental criteria and in multidisciplinary work environments.
-Capacity for the management of research, development and innovation projects in companies and technology centers, guaranteeing safety for people and goods, the final quality of products and their approval.
-Capacity for the integration of technologies and systems typical of Computer Engineering, with a general character, and in broader and multidisciplinary contexts such as transport and logistics, product sales (in-store and online), social robotics, health, tourism, education, environment, banking or business development services.

DESCRIPTION OF CONTENTS: PROGRAMME

1.- Project Management in Computer Engineering: Introduction
1.1.- Classic approach
1.2.- Agile approach
1.3.- Mixed approach

2.- Project Management in Computer Engineering: Processes and Techniques (mixed approach)
2.1.- Principles
2.2.- Business Case Process
2.3.- Organization Process and Roles
2.4.- Quality Process
2.5.- Planning Process
2.6.- Risk Process
2.7.- Change Process
2.8.- Control and Monitoring Process

3.- Project Management in Computer Engineering: Main Activities (mixed approach)
3.1.- Project Start-up Activities
3.2.- Project Execution Activities
3.3.- Project Control Activities
3.4.- Product Delivery Activities
3.5.- Project Closing Activities

4.- Project Management in Computer Engineering: Specific aspects of agility
4.1.- DevOps
4.2.- Requirements
4.3.- Communication
4.4.- Frequent Releases
4.5.- Agile contracts

LEARNING ACTIVITIES AND METHODOLOGY

FORMATION ACTIVITIES
Theorical class
Practical classes
Tutoring
Team work
Individual student work
Partial and final exams

TEACHING METHODOLOGIES
-Exhibitions in the teacher's class with computer and audiovisual media support, in which the main concepts of the subject are developed and the bibliography is provided to complement the learning of the students.
-Critical reading of texts recommended by the teacher of the subject:
Press articles, reports, manuals and / or academic articles, either for later discussion in class, or to expand and consolidate the knowledge of the subject.
-Resolution of practical cases, problems, etc. ¿raised by the teacher individually or in groups
-Exhibition and discussion in class, under the teacher's moderation of topics related to the content of the subject, as well as practical cases
-Preparation of works and reports individually or in groups

ASSESSMENT SYSTEM

% end-of-term-examination/test:	30
% of continuous assessment (assigments, laboratory, practicals…):	70

-Class participation
-Individual or group work carried out during the course
-Final exam

BASIC BIBLIOGRAPHY

- AXELOS Managing Successful Projects with PRINCE2, TSO, 2017