

30248 - Software Project Management

Syllabus Information

Academic year: 2023/24

Subject: 30248 - Software Project Management

Faculty / School: 110 - Escuela de Ingeniería y Arquitectura

Degree: 439 - Bachelor's Degree in Informatics Engineering

ECTS: 6.0

Year: 4

Semester: First semester

Subject type:

Module:

1. General information

The purpose of this subject is for students to acquire advanced knowledge of software project management. On the one hand they will learn about agile management, based on the agile methodology Scrum, and on the other hand will deepen in project management techniques beyond what they have learned in the compulsory subject of Software Project.

These approaches and objectives are aligned with the following Sustainable Development Goals (SDGs) of the United Nations Agenda 2030 (<https://www.un.org/sustainabledevelopment/es/>), in such a way that the acquisition of the learning results of the subject provides training and competence to contribute to some extent to their achievement. Goal 9: Industry, innovation and infrastructure.

2. Learning results

- Know strategies and approaches to develop and manage the processes related to obtaining a contract for a software project. This includes approaches for defining objectives and deliverables for a project, estimating project cost and budgeting for the project.
- Know the bases to approach the management and optimization of the human team that integrates the project. This includes strategies for team building, tools to optimize team functioning (based mainly on group dynamics), and approaches to the identification, characterization and assignment of roles within a project.
- Know the concept of risk within a software project. As well as mechanisms for the planning of its management. These mechanisms include, among other elements, the identification, assessment, selection and definition of mitigation strategies.
- Know the conceptual bases and various techniques for the monitoring, review and evaluation of a software project.
- Know procedures to carry out the closing of a software project, the implications that this has, the measurement and evaluation of a project, as well as the use of the information generated by these processes.
- Know the problems associated with software maintenance.
- Know how to manage and organize the activities involved in software maintenance.
- Know the ethical, social, legal and economic aspects intrinsic to the development of an enterprise software project, both general and specific to one or more application domains.
- Know an infrastructure of processes and tools needed to develop a software project, based on the good software engineering practices available in a software factory business environment.
- Put into practice the knowledge acquired in the subjects of the Software Engineering intensification in a concrete project developed in a team: requirements, analysis, design, testing (verification and validation), project management.

3. Syllabus

1. Agile management with Scrum.

1. Agile principles.
2. Sprints.
3. User stories.
4. The product battery.

5. Estimation, speed and planning.
 6. Technical debt.
2. Advanced project management techniques.
1. Integration.
 2. Scope.
 3. Time.
 4. Cost.
 5. Quality.
 6. People.
 7. Risks.

4. Academic activities

Lectures. 30 hours.

Development of the contents of the subject.

Problems. 27 hours.

Application of the contents of the theory both in small cases and in the software project of the subject.

Subject work. 30 hours.

Study. 60 hours.

The hours of subject work and study will be applied, fundamentally, to the software project to be developed.

Assessment tests. 3 hours.

5. Assessment system

The subject will be assessed in the **global** assessment modality by means of the following activities:

Practical team project (80% of the grade): delivery of results (technical memory, source code and others) that reflect the work of the students in a software development project managed with Scrum. It is especially evaluated the complexity of the work done, the application of the concepts learned in the theory classes of the subject to the management of the project, and the correct application of good software engineering practices acquired in other subjects.

Individual written test (20% of the grade): this exercise, with multiple-choice questions, evaluates the fundamental knowledge to be acquired by each student in theory and problem sessions.

In order to pass the subject it will be necessary that the total sum of both exercises is at least 5 out of 10 points (not being necessary to obtain a minimum grade in any of the separate activities)