

62221 - Quality in Software Development, ICT Services and Infrastructures

Syllabus Information

Academic year: 2023/24

Subject: 62221 - Quality in Software Development, ICT Services and Infrastructures

Faculty / School: 110 - Escuela de Ingeniería y Arquitectura

Degree: 534 - Master's Degree in Informatics Engineering

ECTS: 6.0

Year: 1

Semester: First semester

Subject type: Compulsory

Module:

1. General information

When taking this subject, students will learn about the principles, standards and frameworks of good practices, as well as about the certification and audit processes related to the quality of infrastructures, software developments, and services. In addition, they will be able to apply them in the stages of strategy definition, design, implementation, operation, maintenance and improvement.

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/>), so that the acquisition of the learning results of the subject provides training and competence to contribute to some extent to their achievement. Specifically, they are aligned with the following objectives:

- Objective 7.2 By 2030, significantly increase the proportion of renewable energy in the overall energy mix.
- Objective 7.3 By 2030, double the global rate of improvement in energy efficiency.

2. Learning results

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

1. Know, understand and apply some of the most relevant quality models in the field of IT services (for example ITIL).
2. Specify an IT service according to one of the quality models learned.
3. Know, understand and apply some of the most relevant quality models in the field of software project development (for example CMMI).
4. To specify a software project development process area according to one of the quality models learned.
5. Know, understand and apply the most relevant normative, certification as well as treatment and access safety and guarantee elements that govern the design and operation of calculation and storage infrastructures.
6. Develop the basic design of a calculation and storage infrastructure in accordance with the learned regulations.

3. Syllabus

1. Design and operation of calculation and storage infrastructures, regulatory elements, certification and safety guarantee in treatment and access.
2. IT service management, quality models and best practices.
3. Quality in software development.

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: 30 h (master class and problem and case resolution)
- Completion of practical application or research work: 90 h
- Personalized teacher-student tutoring: 5 h
- Theory study: 20 h
- Assessment tests: 5 h

5. Assessment system

In order to pass the subject, the student must demonstrate they has acquired the foreseen learning results by the following assessment activities:

P1 [30%] - Written test. Open face-to-face test on practical cases proposed by the teachers and on the project developed by the student. Learning results: 1, 2, 3, 4 and 5.

P2 [60%] - Directed works. Works and exercises in which the knowledge and skills acquired in the subject will be put into practice. Learning results: 3, 4 and 5.

P3 [10%] - Oral presentations and debates. Learning results: 1, 2, 3, 4 and 5.

The student who does not opt for the evaluation procedure described above , does not pass these tests during the teaching period or who would like to improve their grade will be entitled to a global test that will be scheduled within the exam period corresponding to the first or second call.