Universidad Zaragoza

Academic Year/course: 2021/22

62221 - Quality in Software Development, ICT Services and Infrastructures

Syllabus Information

Academic Year: 2021/22
Subject: 62221 - Calidad en el desarrollo de software, servicios de infraestructuras TI
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

1.1. Aims of the course

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

By taking this subject, students will know the principles, standards, best practice frameworks and certification and auditing processes related to the quality of infrastructures, software developments and services. In addition, they will be able to apply them in the phases of strategy definition, design, implementation, operation and maintenance and improvement.

These approaches and objectives are aligned with the following Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda (https://www.un.org/sustainabledevelopment), in such a way that the acquisition of the learning results of the course provides training and competence to contribute to a certain extent to its achievement. Specifically, they are aligned with the following objectives:

- Goal 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix
- Goal 7.3 By 2030, double the global rate of improvement in energy efficiency

1.2. Context and importance of this course in the degree

This course deals with quality and its certification, which are fundamental aspects of engineering. The course addresses the necessary competencies to be applied in engineering projects in general, and in particular those related to IT.

2. Learning goals

3. Assessment (1st and 2nd call)

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

The methodology followed in this course is oriented towards achievement of the learning objectives. It favors the understanding and evaluation of system's quality. A wide range of teaching and learning tasks are implemented, such as

- Lectures. The professor explains the contents through presentations and illustrative examples.
- Laboratory sessions. Activities developed with specialized equipment (in labs, computer labs).
- Tutorials. Students can review and discuss with the teacher the materials and topics presented in class.
- Assessment. A set of written/oral tests, lab assignments, projects, other assignments, etc..

- Autonomous work. Preparation of assignments, exercises, problems, study, and preparation of practice sessions.

Students are expected to participate actively in the class throughout the semester.

4.2. Learning tasks

The course (150 hours) includes the following learning tasks:

- Classroom activities (30 hours). Seminars, problem solving, laboratory, visits, etc.
- Research assignments and projects (90 hours).
- Tutorials (5 hours).
- Autonomous work and study (20 hours).
- Assessment (5 hours).

4.3. Syllabus

The course will address the following topics:

1. Topic 1. Quality in data centers
2. Topic 2. Quality in IT services
3. Topic 3. Software quality

4.4. Course planning and calendar

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course, will be provided on the first day of class.