

62221 - Quality in Software Development, ICT Services and Infrastructures

Información del Plan Docente

Academic Year	2017/18
Faculty / School	110 - Escuela de Ingeniería y Arquitectura
Degree	534 - Master's in IT Engineering
ECTS	6.0
Year	1
Semester	First semester
Subject Type	Compulsory
Module	---

1.General information

1.1.Introduction

1.2.Recommendations to take this course

1.3.Context and importance of this course in the degree

1.4.Activities and key dates

2.Learning goals

2.1.Learning goals

2.2.Importance of learning goals

3.Aims of the course and competences

3.1.Aims of the course

3.2.Competences

4.Assessment (1st and 2nd call)

4.1.Assessment tasks (description of tasks, marking system and assessment criteria)

5.Methodology, learning tasks, syllabus and resources

5.1.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.

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- 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.

5.2.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).

5.3.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

5.4.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.

5.5.Bibliography and recommended resources

- [Infrastructures] - Barroso, Luiz André. The datacenter as a computer : an introduction to the design of warehouse-scale machines / Luiz André Barroso, Urs Hölzle, Jimmy Clidaras . 2nd ed. San Rafael (California, USA) : Morgan and Claypool, 2011
- [Services] - Information Technology. Service Management. Part 1: Specification (ISO/IEC 20000-1:2005).
- [Services] - Information Technology. Service Management. Part 2: Code of practice (ISO/IEC 20000-2:2005)
- [Services] - Morris, Helen. ITIL foundation exam study guide / Helen Morris, Liz Gallacher . Chichester : John Wiley, cop. 2012
- [Software] - Metrics and Models in Software Quality Engineering. Kan, Stephen H. (2nd Edition) 2008
- [Software] - Model-Driven Dependability Assessment of Software Systems. S. Bernardi, J. Merseguer and D. Petriu. Springer 2013