

Academic Year/course: 2021/22

30245 - Software Architecture

Syllabus Information

Academic Year: 2021/22

Subject: 30245 - Arquitectura software

Faculty / School: 110 - Escuela de Ingeniería y Arquitectura

Degree: 439 - Bachelor's Degree in Informatics Engineering

ECTS: 6.0

Year: 3

Semester: Second semester

Subject Type:

Module:

1. General information

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 the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as study and work from the very first day. Lectures will be focused on learning concepts and techniques for designing software architectures. The role of the student will be prominent both in teaching classes and in problem-solving classes. The latter will focus on applying the theory to solve complex design problems. The workgroup will be guided to reach the development of a medium-sized software with a special focus on documenting the architecture.

4.2. Learning tasks

The course includes the following learning tasks:

- Lectures will develop the Program of the course.
- Problem-solving classes will be focused on designing problems.
- The students will develop a course project for developing and documenting the architecture of the software.

4.3. Syllabus

The course will address the following topics:

- Introduction to Software Architecture
- Documenting Software Architecture
 - Module View. Component and Connector View. Deployment View. Documenting Interfaces
- Architectural Patterns
 - Layered systems
 - Client/Server
 - Broker

- Publish-subscribe
- MVC
- Microservices
- Antipatterns

4.4. Course planning and calendar

Calendar

- Problems and Theory (2 hours per week).
- Assessment of workgroups. 30 minutes per group and week.

Students work

150 hours as follows:

30 hours for theory and problems classes

90 hours workgroup (including 7 hours of professor assessment)

25 hours of individual work and study

5 hours for evaluation

4.5. Bibliography and recommended resources

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=30245&Identificador=14710>