

Academic Year/course: 2022/23

30215 - Computer architecture and organisation 2

Syllabus Information

Academic Year: 2022/23

Subject: 30215 - Computer architecture and organisation 2

Faculty / School: 110 - Escuela de Ingeniería y Arquitectura
326 - Escuela Universitaria Politécnica de Teruel

Degree: 439 - Bachelor's Degree in Informatics Engineering
443 - Bachelor's Degree in Informatics Engineering

ECTS: 6.0

Year: 2

Semester: Second semester

Subject Type: Compulsory

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. The student will learn the basic elements of a computer and how they relate to computer performance, by means of the case study (problem-solving, lab sessions, and assignments).

4.2. Learning tasks

The course includes the following learning tasks:

- Lectures (2 h per week)
- Problem-solving sessions (1 h per week)
- Lab sessions (1 h per week on average)
- Self-assessment tasks, assignments and course projects (about 85 h)
- Assessment tasks (5 h)

4.3. Syllabus

The course will address the following topics:

- Design of a complex digital system.
- Introduction to performance analysis.
- Processor organization: monocycle and multicycle non-pipelined machines. Exceptions and processor's modes. Pipelining.
- Memory system: memory types, the principle of locality, memory hierarchy, cache memories and main memory

organization.

- Buses and I/O devices.

4.4. Course planning and calendar

The course's schedule abides by the academic calendar of the University of Zaragoza, [EINA](#) and [EUPT](#).

4.5. Bibliography and recommended resources

Teruel:

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=30215&Identificador=12957>

Zaragoza:

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=30215&Identificador=13383>