

## 30215 - Computer architecture and organisation 2

### Syllabus Information

**Academic Year:** 2019/20

**Subject:** 30215 - Computer architecture and organisation 2

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

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

**ECTS:** 6.0

**Year:** 2

**Semester:** Second semester

**Subject Type:** Compulsory

**Module:** ---

### 1.General information

#### 1.1.Aims of the course

#### 1.2.Context and importance of this course in the degree

#### 1.3.Recommendations to take this course

### 2.Learning goals

#### 2.1.Competences

#### 2.2.Learning goals

#### 2.3.Importance of learning goals

### 3.Assessment (1st and 2nd call)

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

### 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:

- 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 and [EINA](#)

#### **4.5.Bibliography and recommended resources**