30220 - Hardware Project

Información del Plan Docente

Academic Year	2017/18
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	3
Semester	Half-yearly
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

This class enables students to acquire the set of skills and abilities required to deal with semester-long projects. Monthly, students have to complete milestones and present
their progress in the lab. Therefore, there are almost no theory classes, and the class provides an ample set of self-study material. Milestones enable a continuous tracking of the students, and, at each milestone, students have to defend their

progress with real hardware demos and technical written reports showcasing their designs.

This subjetct will be teach in Spanish

5.2.Learning tasks

The scheduling that the student is offered to achieve the expected results includes the following activities:

Lectures (5 hours) in these master classes an introduction to each project will be done by reviewing the necessary theoretical knowledge, relating the knowledge acquired in previous courses, describing the support materials available, and briefly explaining the expected tasks that should be done.

Laboratory practical sessions (4 hours per week throughout the course): in these sessions a teacher is present in the lab so that students can query any questions.

Study and personal work (55 estimated hours): students work on their own, using the material available to acquire the necessary skills and progress in the requested project.

Documentation (20 hours): After completing the project with the teacher approval to it, students must submit a written technical report.

Deliveries and corrections (5 hours): Students must periodically submit the work to one of the teachers of the subject. These deliveries serve both to evaluate the student and to guide him. In addition teachers will review the reports submitted by students to give them feedback.

5.3.Syllabus

* Optimization of assembly code.

* Integrating assembler code with high level language and libraries.

* Compilation, linking and debugging.

* Input / output peripherals.

* Development an embedded software project with real-time constraints.

* Introduction to performance analysis.

* Performance evaluation and verification of response times.

5.4.Course planning and calendar

It will be implemented for each teaching group when the academic calendar of the University of Zaragoza is approved and established by each center.

5.5.Bibliography and recommended resources

Students are provided with ample material for self-study related to the hardware devices and software development frameworks used