

Academic Year/course: 2022/23

## 30241 - Embedded Systems Laboratory

### Syllabus Information

**Academic Year:** 2022/23

**Subject:** 30241 - Embedded Systems Laboratory

**Faculty / School:** 110 - Escuela de Ingeniería y Arquitectura

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

**ECTS:** 6.0

**Year:** 4

**Semester:** Second semester

**Subject Type:**

**Module:**

## 1. General information

## 2. Learning goals

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

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

The students must develop a project related to embedded systems.

## 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. This course 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. Milestones enable 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.

### 4.2. Learning tasks

The course includes the following learning tasks:

1. Lectures (10 hours): in these sessions, 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 tasks.
2. Laboratory sessions (46 hours, 3 hours per week throughout the course), working in the laboratory with a teacher.
3. Autonomous work and study (74 estimated hours): students work on their own, using the material available to acquire the necessary skills and develop the requested project.
4. Drafting of documentation (15 hours): after completing the project, students must submit a report and present their work in a public presentation.
5. 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.

### **4.3. Syllabus**

The course will address the following topics:

A project development of an embedded system, hardware and software with real-time constraints. Performance analysis. Students have to defend their progress with real hardware demos and technical written reports showcasing their designs.

### **4.4. Course planning and calendar**

Class sessions are held in the laboratory according to the schedule set by the centre (schedules available on their website).

Each teacher will inform about his hours of tutoring.

The other activities will be planned depending on the number of students and will be announced in advance. It can be found at the course web site at <http://moodle.unizar.es>

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

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=30241&Identificador=14706>