

## 30036 - Electrical Technology

### Información del Plan Docente

Academic Year	2017/18
Faculty / School	110 - Escuela de Ingeniería y Arquitectura
Degree	436 - Bachelor's Degree in Industrial Engineering Technology
ECTS	6.0
Year	4
Semester	First semester
Subject Type	Optional
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

The learning process that has been designed for this course is based on the following:

Classes of theory, problems and laboratory, with active participation of the student in all of them.

## **30036 - Electrical Technology**

- Classes of theory and problems: will be presented the concepts of the contents of the subject, with practical examples.
- Practices of laboratory: The student will perform calculations by computer with advanced software for design of electrical installations, will mount protection devices, will perform the installation of fluorescent tubes and will program PLCs.

### **5.2.Learning tasks**

### **5.3.Syllabus**

#### **Topics**

1. Introduction
2. Electrical cables
3. Overcurrent protection devices
4. Protection against indirect contacts
5. Transformation centres
6. Reactive power compensation
7. Electricity supply contract
8. Fundamentals of lighting
9. Electric motors
10. Wired logic
11. Works on electrical installations

#### **Laboratory practices**

1. Calculation of electrical installations (3 h)
2. Protection against indirect contacts (3 h)
3. Programming of PLCs I (3 h)
4. Programming of PLCs II (3 h)
5. Installation of fluorescent tubes. Measurement of power (3 h)

### **5.4.Course planning and calendar**

### **5.5.Bibliography and recommended resources**