

## 30036 - Electrical Technology

### Información del Plan Docente

Academic Year	2016/17
Academic center	110 - Escuela de Ingeniería y Arquitectura
Degree	436 - Bachelor's Degree in Industrial Engineering Technology
ECTS	6.0
Course	4
Period	First semester
Subject Type	Optional
Module	---

### 1. Basic info

#### 1.1. Recommendations to take this course

#### 1.2. Activities and key dates for the course

### 2. Initiation

#### 2.1. Learning outcomes that define the subject

#### 2.2. Introduction

### 3. Context and competences

#### 3.1. Goals

#### 3.2. Context and meaning of the subject in the degree

#### 3.3. Competences

#### 3.4. Importance of learning outcomes

### 4. Evaluation

### 5. Activities and resources

#### 5.1. General methodological presentation

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.

- Classes of theory and problems: will be presented the concepts of the contents of the subject, with practical examples.

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- 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 activities

### 5.3.Program

#### 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.Planning and scheduling

### 5.5.Bibliography and recommended resources