

## Electrical Installations

Academic Year: ( 2020 / 2021 )

Review date: 12-07-2020

Department assigned to the subject: Electrical Engineering Department

Coordinating teacher: BURGOS DIAZ, JUAN CARLOS

Type: Compulsory ECTS Credits : 6.0

Year : 3 Semester : 2

## REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Electrical Power Engineering Fundamentals  
 Transformers and Magnetic Circuits  
 Transmission Lines and Switchgear

## OBJECTIVES

This subject enables the student to acquire the following competences and skills.

- Designing a L.V. installations and select its components properly.
- Anlizing electromagnetic transients in electrical systems.
- Knowing the origin of the main overvoltages in an electrical system (clasifierd according their duration) and how to protect equipment against those overvoltages.
- Selecting properly the switchgear of a médium and high voltaje substations.

## DESCRIPTION OF CONTENTS: PROGRAMME

First order transients. Second order transients.

H.V. and M.V. Installations. Circuit breaker selection. Overvoltages (temporary, switching transientes, ligthning overvoltages). Surge arresters.

L.V. Installations. Conductor selection. Fuse selection. Breaker selection.

## ASSESSMENT SYSTEM

Theory exams

Problem exams

Laboratory sessions.

**% end-of-term-examination:** 60

**% of continuous assessment (assigments, laboratory, practicals...):** 40

## BASIC BIBLIOGRAPHY

- A.R. Hileman Insulation Coordination for Power Systems, CRC Taylor and Francis, 1999
- Jose Garcia Trasancos Instalaciones Electricas en Media y Baja Tension , Paraninfo , 2016