

Electrical Installations

Academic Year: (2019 / 2020)

Review date: 22-11-2018

Department assigned to the subject: Department of Electrical Engineering

Coordinating teacher: BURGOS DIAZ, JUAN CARLOS

Type: Compulsory ECTS Credits : 6.0

Year : 3 Semester : 2

STUDENTS ARE EXPECTED TO HAVE COMPLETED

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

COMPETENCES AND SKILLS THAT WILL BE ACQUIRED AND LEARNING RESULTS.

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 (clasified 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, lighthning 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