

COURSE NAME

Name: **ELECTRICAL TECHNOLOGY**

Code: 101198

Curriculum: **DEGREE IN ENERGY ENGINEERING AND MINERAL RESOURCES**

Year: 1

Subject: ELECTRICAL TECHNOLOGY

Nature: BASIC Duration: FIRST SEMESTER

ECTS Credits: 6

Classroom hours: 60

Face-to-face classroom percentage: 40%

Non-contact hours: 90

FACULTY DETAILS

Name: CANTIZANI OLIVA, JUAN (Coordinator)

Department: ELECTRICAL AND AUTOMATION ENGINEERING

Area: Electrical Engineering

Location of the office: EPS Belmez. Old building. (3st Floor)

E-Mail: p02caolj@uco.es

Phone number: 957218336

SKILLS

- CB1 Have and understand specific knowledge of the field of study of mining engineering.
- CB2 Have and understand current and cutting-edge knowledge of the field of mining engineering.
- CB3 Be able to apply the knowledge acquired in professional contexts and to elaborate and defend arguments in the field of knowledge of mining engineering.
- CB4 Solve problems within the study area of Mining Engineering.
- CB5 Gather and interpret relevant data within the study area of mining engineering in order to make judgments that include reflection on social, scientific or ethical issues.
- CB7 Possess the learning skills necessary to undertake studies with a high degree of autonomy
- CU2 Know and refine the user level of ITs.
- CEC11 Fundamental knowledge of the electrical power system: power generation, transmission network, distribution and distribution, as well as types of lines and conductors. Knowledge of the regulations on low and high voltage. Knowledge of basic electronics and control systems.

OBJECTIVES

Know the electrical power system: power generation, transmission network, applications and distribution, as well as types of lines and conductors. Knowledge and application of the regulations in electrical installations.

CONTENTS:

1. Theoretical contents

1. ELECTRICAL INSTALLATIONS.
2. PROTECTING INSTALLATIONS.
3. TRANSPORTATION, DELIVERY AND DISTRIBUTION GRID.

1. Practical contents.

Exercise nº 0: Group tutorial - Consolidation of preliminary concepts.

Exercise nº 1: Measuring devices (PC)

Exercise nº 2: Single-phase problems

Exercise nº 3: Work with electric current. Safety and Regulations.

Exercise nº 4: Single-phase Circuits (Laboratory)

Exercise nº 5: Three-phase Problems

Exercise nº 6: PC classroom

Exercise nº 7: Grounding measurement. (Laboratory)

Exercise nº 8: Electrical Installations I. (PC)

Exercise nº 9: Electrical Installations. II (PC)

Exercise nº 10: Classroom PC

Exercise nº 11: EXERCISE EVALUATION (PC)