

COURSE NAME

Name: **EXPLOSIVES**

Code: 101217

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

Year: 3

Name of the module to which it belongs: SPECIFIC TO ENERGY RESOURCES, FUELS AND EXPLOSIVES

Subject: EXPLOSIVES

Nature: OBRIGATORY Duration: FIRST SEMESTER

ECTS Credits: 6

Classroom hours: 60

Face-to-face classroom percentage: 40%

Non-contact hours: 90 Online

FACULTY DETAILS

Name: RIVERA RODRÍGUEZ, RAFAEL (Coordinator)

Department: MECHANICS

Area: MINING OPERATIONS

Location of the office: Main building (Second floor)

E-Mail: rriverar@uco.es

Phone number: 674318510

Name: PASTOR ESPEJO, ADRIÁN

Department: INORGANIC CHEMISTRY AND CHEMICAL ENGINEERING

Area: INORGANIC CHEMISTRY

Location of the office: Main building (Third floor)

E-Mail: q92paesa@uco.es

Phone number: 620005040

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. |
| CU2 | Know and refine the user level of ITs. |
| CERE9 | Manufacture, handling and use of industrial and pyrotechnic explosives. Explosive substance characterization tests. Transportation and distribution of explosives. |
| CERE10 | Quality control of the materials used. |

OBJECTIVES

The aim of the course is for the student to accomplish the following items:

Understand and apply knowledge on the characterisation of explosive substances. Composition, formulation, modification and design of new explosives. Be able to handle and use industrial and pyrotechnic explosives. Be able to apply the mechanisms for transporting and using explosives. Understand and apply knowledge of the appropriate way of distributing the different explosives.

CONTENTS:

1. Theoretical contents

Block I

Topic 1: Basic concepts.

Topic 2: The energy of explosives.

Topic 3: Characteristics of explosives. Tests and trials.

Topic 4: Explosive substances.

Topic 5: Industrial and pyrotechnic explosives.

Block II

Topic 1: Industrial explosives and criteria for selecting them.

Topic 2: Blasting accessories.

Topic 3: Initiation and priming systems.

Topic 4: Regulation of basic mining safety standards with regard to explosives.

Topic 5: Regulation of explosives and the Complementary Technical Instruction

Topic 6: UNE Standard referring to explosives.

Topic 7: Other in-force legislation.

2. Practical contents.

Technical visits.

Specific seminars.