

## 30163 - Health and Safety

### Syllabus Information

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**Academic Year:** 2022/23

**Subject:** 30163 - Health and Safety

**Faculty / School:** 175 - Escuela Universitaria Politécnica de La Almunia

**Degree:** 425 - Bachelor's Degree in Industrial Organisational Engineering

**ECTS:** 6.0

**Year:** 4

**Semester:** First semester

**Subject Type:** Optional

**Module:**

## 1. General information

### 1.1. Aims of the course

The subject and its expected results respond to the following approaches and objectives:

Mainly, know and master the regulations in safety and health at work applicable in different industrial environments

For this it is a must to be able to interpret the regulations to know the basic preventive measures to eliminate the occupational risks.

These approaches and objectives are in line with the following Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda (<https://www.un.org/sustainabledevelopment/es/>), in such a way that the acquisition of the course learning outcomes provides training and competence to contribute to their achievement to some degree

3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents.

3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

3.D Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks.

4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university

4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decisionmaking in political, economic and public life

8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment

12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature

### 1.2. Context and importance of this course in the degree

The subject of Occupational Safety and Health, is part of the Degree in management Engineering of Industrial Organization taught at the EUPLA, framed within the group of optional subjects of the fourth year.

The necessity of the subject within the curriculum of this degree is more than justified by the existing obligation of every company to comply with the Law on Prevention of Occupational Hazards as well as the Royal Decrees that accompany it and that affect it depending on the activity developed. Most of the graduates will have direct or indirect preventive responsibility within the designation of established functions, so it is imperative that they have knowledge in preventive matters.

### 1.3. Recommendations to take this course

This subject does not have any normative prerequisites or requires previous knowledge.

## 2. Learning goals

### 2.1. Competences

By passing the subject, the student will be more competent to ...

- Plan, budget, organize, direct and control tasks, people and resources. Solve problems and make decisions with initiative, creativity and critical thinking. Communicate and transmit knowledge, skills and abilities in Spanish.
- Use the techniques, skills and engineering tools necessary for its practice. Knowledge and skills to lead, manage and lead human resources teams.
- Knowledge and ability to make decisions in any of the functional areas of the company integrating its objectives with those of the organization.
- Knowledge and skills for the integral management of the supply chain.
- knowledge of preventive regulations, specifically the responsibilities and documentation necessary for compliance in industrial activities
- Capacity for the detection of basic labor risk and their control through the adoption of basic preventive hazards

### 2.2. Learning goals

The student, to overcome this subject, must demonstrate the following results

They Manage safety by:

- Defining the preventive regulations applicable in companies.
- Differentiating and valuing the different preventive responsibilities that are assumed by different agents within the companies.
- Identifying the mandatory and recommended preventive documentation.
- Identifying the different basic occupational hazards that may arise.
- Designing adequate basic preventive measures to eliminate or minimize labor risks that may arise.
- Having basic knowledge of safety management

### 2.3. Importance of learning goals

The learning outcomes are focused on obtaining the competencies set for this subject and cover the whole process of safety management

## 3. Assessment (1st and 2nd call)

### 3.1. Assessment tasks (description of tasks, marking system and assessment criteria)

#### **ASSESSMENT SYSTEM throughout the semester:**

In order to qualify for this system, it is necessary for the student to attend 80% of the classroom activities of which the subject is composed.

- **EXERCISES AND TASKS POSED:** The teacher will pose exercises, problems, practical cases, theoretical questions, etc. to solve. These papers will have a value of 50% of the subject's grade
- **Written assessment tests:** There will be one theoretical exam that will have a value of 50% of the total grade of the subject, with a required minimum mark of 2 points out of 5 to be able to add the other grades of the subject

#### **Call ASSESSMENT:**

- **Written test:** There will be one theoretical-practical test that will have a score of 100% of the total grade of the subject, with a required minimum mark of 5 out of 10 to be able to add the other grades of the subject. This test will have questions related both to the theoretical part of the subject and to tasks similar to those carried out throughout the semester

## 4. Methodology, learning tasks, syllabus and resources

## 4.1. Methodological overview

The learning process designed for this subject is based on the following:

- **Lectures and practice sessions:** Theoretical activities given mostly in an expository way by the teacher, in such a way as to explain the theoretical supports of the subject, highlighting the fundamental issues, structuring them in units and/or sections and relating them to each other. A great part of the theoretical classes has an important practical component of interpretation and application of regulations of the company associated.
- **Individual tutorials:** These are the ones made through the individual attention of the teacher in the department. They are intended to help solve the doubts that students find, especially those who for various reasons cannot attend group tutorials or need more personalized attention. These tutorials can be face-to-face or virtual, through regular e-mail, mail through Moodle or messages published in the forum for solving Moodle doubts

The approach, methodology and assessment of this guide are intended to be the same for any teaching scenarios. They will be adapted to the social-health situation at any particular time, as well as to the instructions given by the authorities concerned.

## 4.2. Learning tasks

The program offered to the students to help them achieve the expected results includes the following activities. It implies the active participation of the students, in such a way that, in order to achieve the learning outcomes, the following activities will be developed:

**Generic face-to-face activities:**  
- Lectures: The theoretical concepts of the subject will be explained and illustrative practical examples will be developed as a support to the theory when it is deemed necessary.  
- Practice sessions: Exercises and practical cases will be done as a complement to the theoretical concepts studied. Visits to companies about to the content of this subject may also be made, and questions may be included in continuous assessment

**Generic non-class activities:**  
- Study and assimilation of the theory explained in the lectures.  
- Comprehension, interpretation, and application of the preventive regulations commented in the class Preparation of tasks.  
- Preparation of exams.

The course consists of 6 ECTS credits, which represents 150 hours of student work during the semester, 10 hours a week for 15 teaching weeks.

## 4.3. Syllabus

The course will address the following topics:

Basic Concepts and Health and Safety Management

- Risk Prevention Basic Concepts-
- Law on Prevention of Occupational Risk
- Prevention Services
- Offenses and penalties in the area of prevention
- Health and Safety Management Systems health and safety

Preventive measures to be taken in certain occupational hazards

- Collective Protections
- Epis
- Signaling
- Workplaces
- Working equipment
- Noise, vibrations, electrical hazard, manual load handling
- Chemical Agents
- Office work hazards, LDC
- Emergency plans and self-protection
- First Aid

### Practical contents:

Each topic discussed in the previous section leads associated practical contents, such as:

- Interpretation of the relevant rules applied to the case of companies in the industrial environment
- Analysis of situations that have caused accidents
- Viewing photos and videos about unsafe working conditions
- Design applicable preventive measures in each of the theoretical topics given

Some of the practical contents must be performed and presented in class by students individually and/or in groups

#### 4.4. Course planning and calendar

Class hall sessions & work presentations timetable

Basic Concepts and Health and Safety Management

- Risk Prevention Basic Concepts. 1-2 week
- Law on Prevention of Occupational Risk. 3-4 week
- Prevention Services. 5 week
- Offenses and penalties in the area of prevention. 5 week
- Health and Safety Management Systems health and safety. 6-7 week

Preventive measures to be taken in certain occupational hazards

- Collective Protections. 8 week
- Epis. 9 week
- Signaling. 10 week
- Workplaces. 11 week
- Working equipment. 12 week
- Noise, vibrations, electrical hazard, manual load handling. 13 week
- Chemical Agents. 13 week
- Office work hazards, LDC. 14 week
- Emergency plans and self-protection . 15 week
- First Aid. 15 week

To achieve the learning outcomes, the following activities will be developed:

**Generic face-to-face activities:**

**Theoretical-practical classes:** The theoretical concepts of the subject will be explained and illustrative practical examples will be developed as support for the theory when it is deemed necessary.

**Practical classes:** Practical cases will be done as a complement to the theoretical concepts studied.

**Generic non-presence activities:**

- Study and assimilation of the theory explained in the lectures.
- Comprehension and assimilation of examples and practical cases
- Preparation exercises and practical cases to be solved by the student
- Preparation of written tests of continuous assessment and final exams.

The weekly schedule of the subject and the dates in each call will be described in the EUPLA website.

#### 4.5. Bibliography and recommended resources

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=30163>