

## 68902 - Industrial hygiene

### Teaching Plan Information

**Academic year:** 2024/25

**Subject:** 68902 - Industrial hygiene

**Faculty / School:** 102 - Facultad de Derecho

**Degree:** 462 - Master's in Occupational Health and Safety

**ECTS:** 7.0

**Year:** 1

**Semester:** First semester

**Subject type:** Compulsory

**Module:**

### 1. General information

This subject provides the necessary training for the performance of the competences established in RD 39/1997, of January 17, which establishes the Regulations of the Prevention Services. It also includes the fundamentals of the formation of this discipline.

These approaches and objectives are aligned with the following Sustainable Development Goals (SDGs) of the United Nations Agenda 2030(<https://www.un.org/sustainabledevelopment/es/>), so that the acquisition of the learning results of the subject provides training and competence to contribute to some extent to the achievement of Goals 3 and 8.

### 2. Learning results

In order to pass this subject, the students shall demonstrate they has acquired the following results:

1. To know the risk posed by the presence of physical, chemical and biological agents in the work environment.
2. To acquire basic knowledge about the applicable legislation related to physical, chemical and biological agents.
3. To identify related hazards in the work environment and their potential impact on the worker's health.
4. To propose appropriate collective and individual protection measures.
5. To acquire specific skills to promote the improvement of working conditions with respect to exposure to chemical, physical and biological agents.
6. To be able to apply the different operational techniques of individual and collective protection in industrial hygiene.

### 3. Syllabus

Introduction to industrial hygiene.

Specific legislation on industrial hygiene.

Chemical contaminants: General concepts.

Toxicology.

Evaluation of chemical contaminants, limit values. Measurement of chemical contaminants, equipment used.

Industrial hygiene laboratories.

Selection of PPE against chemical agents

Control of chemical contaminants. General ventilation. Localized extraction.

Industrial noise.

Radiation.

Vibrations.

Thermal environment. Lighting

Noise and vibration control.

Preparation of reports on industrial Hygiene. Physical agents. Preparation of reports on industrial Hygiene. Chemical agents.

Biological contaminants I

Presentation and delivery of a case study. Exam

### 4. Academic activities

The program offers the students help to achieve the expected results and comprises the following activities:

1. **Master classes.** Program topics are presented through lectures and seminars with applied examples.

**2. Case studies** There will be three types of case studies related to the management of risks related to industrial hygiene, from risk detection through risk assessment to the elimination or control of the hygienic risk. Specifically, there will be issues to be resolved related to chemical, physical and biological agents. The statements of the case studies will be provided by the faculty, by e-mail or deposited in reprographics.

**3. Tutored case study.** There will be a case study tutored by the teacher on a statement proposed by them. The resolution of the case must be submitted by the day of the end of the face-to-face classes. It must be handed in prior to the end of the face-to-face classes.

## 5. Assessment system

The student's progress and the acquisition of competencies will be evaluated by:

**Continuous evaluation**, which meets the following criteria:

- Attendance and active participation in theoretical and practical classes and tutorials (10%).
- Attendance and active participation in seminars/workshops (10%).
- The completion of tutored practical activities: descriptive report, presentation, content and defence of the work (40%).
- Performance of a written test by means of specific and short development questions, which may also be of the multiple-choice type (40%).

According to the regulations in force, the results obtained will be graded according to the following numerical scale from 0 to 10, with the expression of one decimal, to which the corresponding qualitative grade may be added:

- From 0 to 4.9: Fail (S)
- From 5 to 6.9: Passed (A)
- From 7 to 8.9: Notable (N)
- From 9 to 10: Outstanding (SB)

**Single evaluation** (Comprehensive exam of the subject)

This is a global exam of the subject for those students who have not passed it through continuous evaluation or who want to improve the grade already obtained.

The date and time of the aforementioned test will be communicated to the students during the first semester.

The acquisition of competencies will be assessed through evaluation that meets the following criteria:

- Performance of a written test including two sections:
  - specific and short development questions, which may also be of the multiple-choice type (70%).
  - practical cases (30%). A scientific calculator will be required for the practical cases during the exam.

According to the regulations in force, the results obtained will be graded according to the following numerical scale from 0 to 10, with the expression of one decimal, to which the corresponding qualitative grade may be added:

- From 0 to 4.9: Fail (S)
- From 5 to 6.9: Passed (A)
- From 7 to 8.9: Notable (N)
- From 9 to 10: Outstanding (SB)

## 6. Sustainable Development Goals

- 3 - Good Health & Well-Being
- 5 - Gender Equality
- 8 - Decent Work and Economic Growth