

## Course guide

### 240814 - 240814 - Workplace Epidemiology

Last modified: 09/05/2025

**Unit in charge:** Barcelona School of Building Construction  
**Teaching unit:** 1039 - UPF - Universitat Pompeu Fabra.

**Degree:** MASTER'S DEGREE IN OCCUPATIONAL HEALTH AND SAFETY (Syllabus 2016). (Compulsory subject).

**Academic year:** 2025    **ECTS Credits:** 3.0    **Languages:** Catalan, Spanish

#### LECTURER

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**Coordinating lecturer:** MIREIA UTZET SADURNI

**Others:** MIREIA UTZET SADURNI

#### DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

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##### Specific:

1. Know the relation between occupational and health safeties.
2. Know the main investigation techniques in labour health. The toxicology basics applied to the contaminants in the occupational field and the technical solutions for the design and evaluation of the ventilation systems.
3. Know to develop emergency and security plans, make training and information plans assigned to workers, including the detection of needs and establish the evaluating systems and monitoring measures, lay out corrective measures in front of risks of chemical nature, physical or biological; carry out risk evaluations and set out corrective measures related to the physical and mental load at work; make the epidemiologic study design to identify risk factors of occupational nature, apply its basics and manipulation and applications of the main chemical analysis techniques in the hygienic world.
4. Be able to analyse the main health problems related to work.

#### TEACHING METHODOLOGY

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Of the 75 hours of work dedicated by the student in this subject, 30 hours will be done with the presence of the teacher (although this year virtually due to the pandemic situation), with the following distribution: 14 sessions of an hour and a half where the basic information of the topics included in the program will be presented and debated; 8 theoretical sessions, 4 practical seminars, 1 group presentation session and a final tutorial session and review of the subject. In the practical sessions, the students will solve cases and problems in small groups. To this distribution is added a weekly hour of individualized tutoring with students throughout the 15 weeks that the course lasts to answer questions and monitor their learning process.

The rest of the scheduled time, 45h, the student will have to read the materials provided in the dossier of the subject, solve the practical problems and prepare the test with multiple-choice questions on minimum knowledge.

#### LEARNING OBJECTIVES OF THE SUBJECT

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- a) Describe the usefulness of epidemiological research.
- b) Calculate and interpret the frequency and association measures.
- c) Define the basic epidemiological investigation designs.
- d) Describe the existing errors in epidemiological studies.
- e) Present the concepts of confusion and interaction.
- f) Critically interpret the results of epidemiological studies.
- g) Encourage critical reading of scientific articles



## STUDY LOAD

Type	Hours	Percentage
Hours large group	27,0	36.00
Self study	48,0	64.00

**Total learning time:** 75 h

## CONTENTS

### -PRESENTATION AND OBJECTIVES. EPIDEMIOLOGY AND SCIENTIFIC RESEARCH.

**Description:**

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**Full-or-part-time:** 1h 30m

Theory classes: 1h 30m

### -BASIC DESIGNS OF EPIDEMIOLOGICAL RESEARCH

**Description:**

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**Full-or-part-time:** 1h 30m

Theory classes: 1h 30m

### -DESIGNS SEMINAR

**Description:**

-DESIGNS SEMINAR

**Full-or-part-time:** 1h 30m

Theory classes: 1h 30m

### Epidemiological measures (I)

**Description:**

Frequency measurements (1.5h)

**Full-or-part-time:** 1h 30m

Theory classes: 1h 30m

### Epidemiological measures (II)

**Description:**

Epidemiological measures (II): Association and impact

**Full-or-part-time:** 1h 30m

Theory classes: 1h 30m

### Epidemiological measures (III)

**Description:**

Epidemiological measures (III): Association and impact

**Full-or-part-time:** 1h 30m

Theory classes: 1h 30m

### Epidemiological Measures Seminar (I)

**Description:**

Epidemiological Measures Seminar (I)

**Full-or-part-time:** 1h 30m

Theory classes: 1h 30m

### Epidemiological Measures Seminar (II)

**Description:**

Epidemiological Measures Seminar (II)

**Full-or-part-time:** 1h 30m

Theory classes: 1h 30m

### Systematic and random error

**Description:**

Systematic and random error

**Full-or-part-time:** 1h 30m

Theory classes: 1h 30m

### Confusion and interaction (I)

**Description:**

Confusion and interaction (I)

**Full-or-part-time:** 1h 30m

Theory classes: 1h 30m

### Confusion and interaction (II)

**Description:**

Confusion and interaction (II)

**Full-or-part-time:** 1h 30m

Theory classes: 1h 30m



#### Seminar confusion and interaction

**Description:**

Seminar confusion and interaction

**Full-or-part-time:** 1h 30m

Theory classes: 1h 30m

#### Group presentation

**Description:**

Group presentation

**Full-or-part-time:** 1h 30m

Theory classes: 1h 30m

#### Revision

**Description:**

Revision

**Full-or-part-time:** 1h 30m

Theory classes: 1h 30m

## GRADING SYSTEM

The grade will be obtained from: attendance and participation in class (10%); group presentation (25%); 4 seminars (25%); exam (40%).

In order to pass the course it is necessary:

- 1- Deliver the four seminars.
- 2- Make the presentation in group.
- 3- Take the exam and get a 4.

## BIBLIOGRAPHY

**Basic:**

- Szklo, M.; Nieto, F. Javier. Epidemiología intermedia : conceptos y aplicaciones. Madrid: Díaz de Santos, cop. 2003. ISBN 9788479785956.
- Irala Estévez, Jokin de; Martínez-González, Miguel Ángel; Seguí-Gómez, María. Epidemiología aplicada. 2a ed.. Barcelona: Ariel, 2008. ISBN 9788434437258.
- Gordis, Leon. Epidemiología. 3a ed.. Madrid: Elsevier, cop. 2005. ISBN 8481748390.
- "Epidemiología laboral". Ruiz Frutos, Carlos. Salud laboral : conceptos y técnicas para la prevención de riesgos laborales. Barcelona: Masson, 2014.