

## Course guide

### 250729 - 250729 - Health and Safety in Construction

**Last modified:** 28/03/2024

**Unit in charge:** Barcelona School of Civil Engineering

**Teaching unit:** 751 - DECA - Department of Civil and Environmental Engineering.

**Degree:** MASTER'S DEGREE IN STRUCTURAL AND CONSTRUCTION ENGINEERING (Syllabus 2015). (Optional subject).

**Academic year:** 2023

**ECTS Credits:** 5.0

**Languages:** Spanish

#### LECTURER

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**Coordinating lecturer:** JOSE TURMO CODERQUE

**Others:** LETICIA MORENO CARRETERO, JOSE TURMO CODERQUE

#### DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

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**Specific:**

13367. To apply innovative and sustainable technological aspects in the management and implementation of projects and works.

13370. To analyze the multiple technical and legal conditions arising in the construction of public works, and use proven methods and proven technologies with the aim of achieving greater efficiency in construction while respecting the environment and protecting the safety and health of workers and users of public works.

**Generical:**

13360. To conceive, design, analyze and manage structures or structural elements of civil engineering or building, encouraging innovation and the advance of knowledge.

13361. To develop, improve and use conventional materials and new construction techniques to ensure the safety requirements, functionality, durability and sustainability.

13362. To define construction processes and methods of organization and management of projects and works.

13363. To design plans for safety, quality and environmental and socioeconomic impacts related to the construction process.

#### TEACHING METHODOLOGY

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The communication of the teachers will be mostly in Spanish. The subject consists of 3 hours a week of face-to-face classes in a classroom. Different workshops and the realization of several practical works are proposed. It is intended that the student develop their ability to work in multidisciplinary, multicultural and international environments. Student queries may be answered in Spanish, Catalan or English. The practical work and the exams can be answered in Spanish, Catalan or English. Support material is used through the virtual campus: content, statement of work and bibliography. The material can be in Spanish, Catalan and English. Workshops and interventions by speakers other than the teachers of the subject are planned for the course. These may be developed in Spanish or Catalan and exceptionally in English. Site visits made within the framework of the subject, if applicable, will be in Spanish or Catalan.

Although most of the sessions will be given in the language indicated, sessions supported by other occasional guest experts may be held in other languages.

## LEARNING OBJECTIVES OF THE SUBJECT

Subject to prepare students to be able to manage a construction site considering risk prevention and working conditions

- Capability to take into account the aspects related to occupational risk prevention and working conditions in the workplace

Job security. General aspects. Prevention planning. Organization of prevention. Machinery and equipment. Electricity . Fire . Prevention management applied to the construction sector. Prevention management in construction building works , industrial works and civil works. Risks and preventive measures. Studies of health and safety. Health and Safety Plans

## STUDY LOAD

Type	Hours	Percentage
Hours small group	9,8	7.83
Hours large group	25,5	20.38
Self study	80,0	63.95
Hours medium group	9,8	7.83

**Total learning time:** 125.1 h

## CONTENTS

### Master Classes

#### Description:

Introduction to safety and health in construction  
Regulations and Legislation  
Health and Safety Study  
Study Safety and Health 2  
Safety Plan and Health 1  
Plan Safety and Health 2  
Individual protections  
Collective Protections  
Disciplines of Occupational Risks  
Urban Resilience  
Course work  
Site visit

**Full-or-part-time:** 108h

Theory classes: 26h

Laboratory classes: 19h

Self study : 63h

## GRADING SYSTEM

The subject's grade is obtained from the continuous assessment marks. The continuous assessment consists of doing different activities, both individual and in group, of an additive and formative nature, carried out during the course (inside and outside the classroom).

The evaluation tests consist of the completion of some practical work, in groups, which have a value of 50% of the final mark and an individual exam which has a value of 40%. Attendance is worth 10% (3 or more fouls mean 0 attendance).

Completion and delivery of the practical work in time and form is an essential condition for passing the subject.



## EXAMINATION RULES.

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If any of the continuous assessment activities is not carried out in the scheduled period (practical work), it will be considered as a zero score. If the exam or the work is not done, the subject cannot be passed.

## BIBLIOGRAPHY

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### Basic:

- Varios. Los Sistemas de Gestión de la Prevención de Riesgos Laborales en el Lugar de Trabajo. Barcelona: Mutua Universal, 2016.
- Hernández i Paterna, J. Manual de seguridad y salud en la edificación, obra industrial y civil. Barcelona: [el autor], 2005. ISBN 8460979768.
- Varios. Recomendaciones relativas a seguridad y salud para la ejecución de estructuras de hormigón, puentes y estructuras de edificación convencionales. Madrid: ACHE (Asociación Científico-técnica del Hormigón Estructural), 2011. ISBN 9788489670716.
- Pérez Merlos, Ramón; Sanz Miguélez, José Antonio. Seguridad y salud en construcción : análisis normativo y soluciones prácticas. Cizur Menor: Aranzadi, 2019. ISBN 9788491778790.