Health and Safety in Construction (250729)

General Information

School	ETSECCPB
Departments	Departament d'Enginyeria Civil i Ambiental (DECA)
Credits	5.0 ECTS
Programs	MÀSTER UNIVERSITARI EN ENGINYERIA ESTRUCTURAL I DE LA CONSTRUCCIÓ (pla 2015)
Course	2024/25

Main teaching language at each group

- Group 10ES2 Spanish (Q2)

Faculty

Responsible Faculty: Jose Turmo Coderque
Faculty: Leticia Moreno Carretero, Jose Turmo Coderque

Objectives of Education

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

Competencies

Especific

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

Generic

To conceive, design, analyze and manage structures or structural elements of civil engineering or building, encouraging innovation and the advance of knowledge.
To develop, improve and use conventional materials and new construction techniques to ensure the safety requirements, functionality, durability and sustainability.
To define construction processes and methods of organization and management of projects and works.
To design plans for safety, quality and environmental and socioeconomic impacts related to the construction process.

Total hours of student work

		Hours	Percentage
Supervised Learning	Large group	25.5 h	56.67 %
	Medium group	9.75 h	21.67 %
	Laboratory classes	9.75 h	21.67 %
	Guided Activities	0.0 h	0.00 %
Self Study		80.0 h	

Contents

Master Classes

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

Teaching Methodology

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.

Grading Rules

(*) The evaluation calendar and grading rules will be approved before the start of the course.

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.

Test Rules

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.

Office Hours

In accord with teachers

Bibliography

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.