



Universitat de Lleida

DEGREE CURRICULUM  
**SAFETY AND HEALTH**

Coordination: SAEZ BELLOBI, CARLOS JULIAN

Academic year 2023-24

## Subject's general information

<b>Subject name</b>	SAFETY AND HEALTH			
<b>Code</b>	101423			
<b>Semester</b>	2nd Q(SEMESTER) CONTINUED EVALUATION / UNDEFINED			
<b>Typology</b>	<b>Degree</b>	<b>Course</b>	<b>Character</b>	<b>Modality</b>
	Bachelor's Degree in Architectural Technology and Building Construction	3	COMPULSORY	Attendance-based
<b>Course number of credits (ECTS)</b>	9			
<b>Type of activity, credits, and groups</b>	<b>Activity type</b>	PRAULA		TEORIA
	<b>Number of credits</b>	4.5		4.5
	<b>Number of groups</b>	1		1
<b>Coordination</b>	SAEZ BELLOBI, CARLOS JULIAN			
<b>Department</b>	AGRICULTURAL AND FOREST SCIENCES AND ENGINEERING			
<b>Teaching load distribution between lectures and independent student work</b>	40% at the classroom and online (depending on possibilities), 60% autonomous work See "Development plan".			
<b>Important information on data processing</b>	Consult <a href="#">this link</a> for more information.			
<b>Language</b>	Catalan 50% Spanish 50%			
<b>Distribution of credits</b>	Theoretical credits: 6 ECTS Practical credits: 3 ECTS			

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
COMA ARPON, JULIA	julia.coma@udl.cat	0	
SAEZ BELLOBI, CARLOS JULIAN	carlos.saez@udl.cat	9	

## Subject's extra information

- The course, which will race in the 2nd semester of the 3rd year, belongs to the module "Specific training", namely the "process management".
- This subject requires a study habit progressive and continuous.
- All unauthorized recordings of class are prohibited.
- Mobile phones, tablets and computers remain off in the classroom until they are required.
- The necessary documentation, the agenda (with dates for submission of papers and realització exercise) can be found in the virtual campus. It is advisable to consult the campus the day before class, to have prepared the materials and activities or to check ads extraordinary.
- Compliance deadlines of works and planned exercise is inexcusable, except for extraordinary cases properly justified according to the rules of evaluation of the UDL.
- The use of personal protective equipment is **compulsory** for the realization of visits to building works. That will be: high visibility vest, safety helmet (can be purchased through the shop Údels of the UdL) and safety footwear. The safety footwear must be acquired by the student to any individual protection equipment provider, and must meet the requirements S1 + P (head and antiforce template) according to EN ISO 20345. Additionally it is convenient not wear short trousers or short skirts, bangles, pendants or wide sleeves as they can be trapped. Avoid the use of contact lens and better use glasses. No food or drink is allowed and it is forbidden to smoke. Follow specific instructions of responsible persone at the building work. For further information, you can check the web of *Servei de Prevenció de Riscos Laborals de la UdL*: <http://www.sprl.udl.cat/alumnes/index.html>

## Learning objectives

### Knowledge Objectives:

Accurately manage terminology, and regulations of the Occupational Health and Safety in the construction of buildings.

### Capability goals:

Perform functions of safety and health coordinator during the project and execution of building work.  
 Identify, analyze, evaluate risks in building work.  
 Compose Security Studies and Safety Plans.  
 Propose alternatives to the safe construction process.

## Competences

- **UdL strategic** competences:

- **UdL3**. Information and Communication Technologies domain.

- EPS Degree-**transversal** competences:
- **EPS2**. Ability to reunite and interpret relevant data, inside an area of study, to express reasons which include reflecting upon relevant subjects of a social, scientific or ethical nature.
- **EPS7**. Ability to work in situations where information is lacking or you are under pressure.
- **EPS8**. Ability to plan and organise the personal work.
- **EPS13**. Ability to consider the socio-economical context as well as the criteria of sustainability in the solutions of engineering.
- Degree-**specific** competences according to ORDEN ECI/3855/2007:
- **GEE26**. Knowledge of construction law and of the contractual relationships which are produced in the different phases of the building process, as well as the legislation, reglamentation and specific rules of prevention and coordination in the subject of work security and health on the building site.
- **GEE27**. Aptitude to redact studies, basic studies and plans of work security and health, in the project and execution phase of the project.

## Subject contents

1. Health and work. Occupational hazards. Accident and labour illness. Prevention.
2. Regulatory Framework. Regulations on Risk Prevention. Prevention Services. Representation, rights and duties. ISO 45001.
3. Security. Technical Security. Risk Assessment. Accidents. Accident investigation. Objectives. Data collection. Stages. The interview and the tree of causes.
4. Industrial hazards. Evaluation and control of different types of risks. Chemical agents: toxicology. Physical agents: noise, vibrations, thermal environment, ionizing and ionizing radiations. Biological agents: effects, evaluation and control.
5. Ergonomics. Environmental ergonomics. Workplace. Physical load of work. Ergonomic Methodology: assess, predict, and investigate. Ergonomic tools to assess. Methodology. Psychosociologic. Factors: time, task organization structure. Communication and Leadership. Indicators of psychosocial problems. Evaluation methods.
6. DB- CTE-SI. Safety in case of fire.
7. CTE DB--SUA. Safety of use and accessibility.
8. Security Coordination. Profile professional coordinator, knowledge and skills. Identification of the tasks, functions and responsibilities of managers in the construction process. Coordination on health and safety. Security techniques and management. Document control. Procedures regarding the Labour Inspectorate in building trade. Coordination of preventive measures in case of coincidence of works.
9. Safety and Health study. Health and Safety Plan. Contents: Scope, role designations, memory, specifications, plans. Emergencies and first aids.
10. Building trade. Auxiliary machinery. Individual and collective protection equipment.

## Methodology

1. Lecture and participatory classes. Theoretical aspects. Concepts and regulations applicable to different situations.
2. Course work for application of methodologies and regulations to coordinate and promote safety and health at building constructions.
3. Identification of in situ risks. Visits and technical talks.
4. Evaluation tests.

## Development plan

Setmana	Methodology	Lectures	Presential hours	Online hours	Study hours
1-7	Lectures and case studies	1-5	24	24	75
8	1st test	1-5	2		
9-15	Lectures and case studies	6-10	18	18	60
15	Discussion of team work	6-10	2		
20	Recovery exam	1-10	2		

## Evaluation

Individual 70%

- Two written tests including from a rating over 3.0 (25%+25%). Official calendar dates according to the EPS.
- One deliverables: in base of a case (10%).
- Compulsory attendance to practical or online classroom lessons, outings and talks. Deliveries without notice ask (10%):

$\geq 80\%$       -> 10%  
 80% - 50%    -> 5%  
 $\leq 50\%$       -> 0%

Collaborative 30%

- ESS (20%): Delivery on May 3
- Presentation graphic work (10%): on May 22. Compulsory attendance. Delivery on May 3

Coursework. The rating reflects the degree of fulfillment of the objectives set in the subject. Delays in deliveries and the lack of assistance to final discussion session will be penalized. In case of failure to attend a practice session the student can find an alternative compensatory replacement. Plagiarism is a violation and is qualified with 0. Partial scores are not saved from one year to another. Minimum final score 50%

## Bibliography

### Recomended

#### Basics

- BOE i DOGC
- Documents del INSHT
- [Normativa en prevención](#)
- Evaluación de riesgos laborales, España, 2006, Instituto Nacional de Seguridad e Higiene en el Trabajo MTAS.
- European Agency for Safety and Health at Work. Publications
- [Observatori europeu de riscos](#)
- Manual per a la identificació i avaluació de riscos laborals. Generalitat de Catalunya. Departament de Treball

i Indústria

## Applied to construction

- [Specific legal text related to construction.](#)
- [Guía técnica para la evaluación y prevención de riesgos relativos a las obras de construcción](#)
- [CTE-DB-SI](#)
- [CTE-DB-SUA](#)
- Coordinadores de seguridad y salud en el sector de la construcción. Minerva Espeso Expósito, José Avelino Espeso Santiago, Beatriz Fernández Muñiz, Florentino Fernández Zapico, Alberto ParamioParamio. Ed. Lex Nova.
- La prevenció de riscos laborals en el sector de la construcció. Generalitat de Catalunya. Departament de Treball
- Las redes de seguridad en la construcción. José Sáiz Núñez i altres. Universidad de Alicante
- Manual de composición de medidas preventivas para construir. Pedro Antonio Begueria Latorre. Col.legi d'Aparelladors i Arquitectes Tècnics de Girona
- Manual práctico de seguridad en la construcción. Colegio de Aparejadores y Arquitectos Técnicos de Madrid
- Prevención de Riesgos Laborales en la construcción. Ma. Montaña Benavides Agúndez. Editorial Lex Nova
- Prevención de riesgos en las obras de construcción. Juan Ignacio Moltó. AENOR
- Seguridad práctica en obras de construcción . Ramón Pérez Merlos. Ed: Etosa obras y servicios SA