



Universitat de Lleida

## DEGREE CURRICULUM

# **SAFETY AND HEALTH**

Coordination: IGLESIAS RODRIGUEZ, M. CARMEN

Academic year 2018-19

## Subject's general information

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

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
IGLESIAS RODRIGUEZ, M. CARMEN	carmen.iglesias@eagrof.udl.cat	0	
RINCÓN VILLARREAL, LÍDIA	lrincon@diei.udl.cat	0	
SÀEZ BELLOBÍ, CARLES	carlessabe@eagrof.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.spri.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

### University of Lleida strategic competences

- Information and Communication Technologies.

### Degree-specific competences

- Aptitude to redact studies, basic studies and plans of work security and health, in the project and execution phase of the project.
- 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.

### Degree-transversal competences

- 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.
- Ability to plan and organise the personal work.
- Ability to consider the socio-economical context as well as the criteria of sustainability in the solutions of engineering.
- Ability to work in situations where information is lacking or you are under pressure.

### Specific competences of the subject

- Run out functions of security and safety coordinator both during the project and execution of building work.
- Write Safety and Health study, Health and Safety Plan.
- Design safer alternatives in the construction process.

## Subject contents

1. Health and work. Occupational hazards. Accident and labour illness. Prevention.
2. Regulatory Framework. Regulations on Risk Prevention. Prevention Services. 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.
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	Study hours
1-8	Lectures and case studies	1-5	48	75
9	1st test	1-5	2	
10-18	Lectures and case studies	6-10	36	60
19	2nd test	6-10	2	
20	Recovery exam	1-10	2	

## Evaluation

### Individual

Two written tests including from a rating over 3.0 (25% + 25%). Hopefully, in the second test it is necessary to apply knowledge of the first. Official calendar dates according to the EPS.

Compulsory attendance to practical classroom lessons, outings and talks. Deliveries without notice ask.

≥ 80%      -> 10%  
80% - 50% -> 5%  
≤ 50%      -> 0%

### Collaborative

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.

- EBSS (10%): Delivery on April 11
- ESS (20%): Delivery on May 3
- Fotosafari (5%): Delivery on May 17
- Oral presentation by lot from among the group on May 22 (5%). Compulsory attendance.

Partial scores are not saved from one year to another. Minimum final score 50%

## Bibliography

### Recommended

## Basics

- Estrategia española en materia de salud y seguridad en el trabajo 2007-2012. Plan de acción para el impulso y ejecución de la estrategia española de seguridad y salud en el trabajo 2007-2012.
- 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

- 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