

Academic Year/course: 2021/22

## 28635 - Undergraduate Dissertation

### Syllabus Information

**Academic Year:** 2021/22

**Subject:** 28635 - Undergraduate Dissertation

**Faculty / School:** 175 - Escuela Universitaria Politécnica de La Almunia

**Degree:** 422 - Bachelor's Degree in Building Engineering

**ECTS:** 12.0

**Year:** 4

**Semester:** Second semester

**Subject Type:** End of Grade Dissertation

**Module:**

## 1. General information

### 1.1. Aims of the course

The subject and its expected results respond to the following approaches and objectives:

In the first place, that the student knows the scope and circumstances in which she will develop the exercise of her profession and the regulations that regulate it.

Secondly, that based on the skills acquired throughout the career, you are able to design, develop and execute systems and processes, in whole or in parts of the constructive event within the scope of the building.

These approaches and objectives are in line with the following Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda ( <https://www.un.org/sustainabledevelopment/es/>), in such a way that the acquisition of the course learning outcomes provides training and competence to contribute to their achievement to some degree:

Goal 4: Quality Education

Goal 5: Achieve gender equality and empower all women and girls

Goal 9: Build resilient infrastructure, promote sustainable industrialization and foster innovation

Goal 11: Make cities inclusive, safe, resilient and sustainable

Goal 12: Ensure sustainable consumption and production patterns

Goal 13: Take urgent action to combat climate change and its impacts

Specifically with the goals:

4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations

4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development

5.B Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women

8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment

9.C Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020

11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage

11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

## **1.2. Context and importance of this course in the degree**

The meaning of this work is none other than preparing the student to face working life and making it clear that, in application of the acquired skills, is able to develop and defend a job with similar characteristics to any of those that you may face in your professional life.

## **1.3. Recommendations to take this course**

To complete the Final Degree Project, it is an essential requirement to have passed all the subjects of the Title.

# **2. Learning goals**

## **2.1. Competences**

Upon passing the subject, the student will be more competent to ...

Knowledge of the traditional or prefabricated materials and construction systems used in the building, its varieties and the physical and mechanical characteristics that define them.

Ability to identify the elements and construction systems, define their function and compatibility and their implementation in the constructive process. Pose and resolve constructive details.

Knowledge of the specific procedures for controlling the material execution of the building work.

Ability to rule on the causes and manifestations of building injuries, propose solutions for avoid or correct pathologies, and analyze the life cycle of elements and construction systems.

Ability to apply technical regulations to the building process, and generate technical specification documents of building construction procedures and methods.

Ability to apply specific regulations on facilities to the building process.

Ability to analyze, design and execute solutions that facilitate universal accessibility in buildings and their surroundings.

## **2.2. Learning goals**

The student, to pass this subject, must demonstrate the following results ...

At the end of this subject, the student must present and defend an end-of-degree project before a university tribunal, consisting of an exercise in integrating the training content received and the skills acquired.

## **2.3. Importance of learning goals**

At the end of this subject, the student must present and be able to defend before a university court a project to degree, consisting of an exercise in integrating the training content received and the skills acquired.

The Final Degree Project supposes the culmination of the student's training process and the beginning of what their Professional future.

# **3. Assessment (1st and 2nd call)**

## **3.1. Assessment tasks (description of tasks, marking system and assessment criteria)**

The student must demonstrate that he / she has achieved the expected learning results through the following evaluation activities

Presentation and defense before a university court of a Final Degree Project that integrates the training contents received and skills acquired.

The final grade will correspond to the weighted average of the grades associated with the originality of the work and its quality

scientific. The candidate's ability to present the work before the examining court will also be taken into account.

## 4. Methodology, learning tasks, syllabus and resources

### 4.1. Methodological overview

The methodology followed in this course is oriented towards achievement of the learning objectives. It is based on participation and the active role of the student favors the development of communication and decision-making skills. A wide range of teaching and learning tasks are implemented, such as lectures, guided assignments, laboratory sessions, autonomous work, and tutorials.

Students are expected to participate actively in the class throughout the semester.

Classroom materials will be available via Moodle. These include a repository of the lecture notes used in class, the course syllabus, as well as other course-specific learning materials.

Further information regarding the course will be provided on the first day of class.

**If classroom teaching were not possible due to health reasons, it would be carried out on-line**

### 4.2. Learning tasks

The course includes 6 ECTS organized according to:

- Lectures (1.5 ECTS): 37.5 hours.
- Guided assignments (1.5 ECTS): 37.5 hours.
- Autonomous work (3 ECTS): 75 hours.

Lectures: the professor will explain the theoretical contents of the course and solve illustrative applied problems. These problems and exercises can be found in the problem set provided at the beginning of the semester. Lectures run for 3 weekly hours. Although it is not a mandatory activity, regular attendance is highly recommended.

Guided assignments: students will complete assignments, problems and exercises related to concepts seen in lectures. They will be submitted at the beginning of every session to be discussed and analyzed. If assignments are submitted later, students will not be able to take the assessment test.

Autonomous work: students are expected to spend about 75 hours to study theory, solve problems, prepare lab sessions, and take exams.

Tutorials: the professor's office hours will be posted on Moodle and the degree website to assist students with questions and doubts. It is beneficial for the student to come with clear and specific questions.

1 ECTS= 10 onsite hours

### 4.3. Syllabus

The program offered to the student to help him achieve the expected results includes the following activities...

It involves the active participation of the students, in such a way that for the achievement of the learning results will develop, without wishing to result in the above, the following activities:

Autonomous directed activities: These activities will be directed by the director of the Final Degree Project and the Drafting of the same will be done under the supervision of said director.

Individual tutorials: They can be face-to-face or virtual and can be done with each of the teachers specialists in different subjects.

### 4.4. Course planning and calendar

For further details concerning the timetable, classroom and further information regarding this course please refer to the "EUPLA " website (<http://www.eupla.unizar.es>)

### 4.5. Bibliography and recommended resources

Material	Format
Topic theory notes, Topic problems	Paper/repository
Topic theory notes Topic presentations Related links	Digital/Moodle E-Mail
Educational software	Web page

<http://www.eupla.unizar.es/asuntos-academicos/trabajo-fin-de-grado>