

# 30711 - Construction 1

## Syllabus Information

**Academic Year:** 2020/21

**Subject:** 30711 - Construction 1

**Faculty / School:** 110 - Escuela de Ingeniería y Arquitectura

**Degree:** 470 - Bachelor's Degree in Architecture Studies

**ECTS:** 6.0

**Year:** 2

**Semester:** First semester

**Subject Type:** Compulsory

**Module:** ---

## 1.General information

### 1.1.Aims of the course

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

### 1.3.Recommendations to take this course

## 2.Learning goals

### 2.1.Competences

### 2.2.Learning goals

### 2.3.Importance of learning goals

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

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

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

### 4.1.Methodological overview

The methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as theory sessions, practice sessions, assignments, visits, tutorials, autonomous work and study, and exams.

The course consists of a theoretical part in which the evolution of knowledge about historical and current construction and structural building solutions are introduced.

In parallel, practical activities are devoted to the analysis of structural solutions in leading architectural references of residential buildings. The exercises are performed in groups of 3-4 students during the semester and are supervised during the course, thus allowing a continuous evaluation.

Complementarily, visits and practical exercises may be proposed.

### 4.2.Learning tasks

This course is organized as follows:

#### Activities

1. Theory and problem-solving sessions (large group).
2. Practice classes (intermediate group).
3. Visits or conferences.

4. Tutorials:
5. Test
6. Studying and individual work.
7. Performing tasks and projects individually and/or in small groups.

Total hours of student work: 150 hours (6 ECTS )

Theory credits: 75 hours (3 ECTS )

Practice credits: 75 hours (3 ECTS )

### **4.3.Syllabus**

This course will address the following topics:

- Introduction to building in Architecture: basic terminology, types of buildings and construction, construction elements of buildings and their functions.
- Introduction to the construction of structural elements: structure and project, construction of structural elements throughout history.
- Soils and Foundation: field survey, earthwork, footings, slabs, piles, retaining walls.
- Pillars and slabs: one-way slabs, waffle slabs, solid slabs, and other types of floor structures. Reinforced concrete and metal pillars.
- Masonry walls: brick, thermal clay blocks, concrete blocks.
- Vertical Communications: stairs and elevators

### **4.4.Course planning and calendar**

- 2 hours of theory sessions per week according to the School schedule.
- 2 hours of practice sessions per week according to the School schedule.
- The course assignments will have partial pre-delivery and final delivery dates that will be defined at the beginning of the course.

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course will be provided on the first day of class or please refer to the College of Higher Engineering and Architecture (EINA) website (<https://eina.unizar.es/>) and Moodle.

### **4.5.Bibliography and recommended resources**