

30726 - Construction 2

Syllabus Information

Academic year: 2023/24

Subject: 30726 - Construction 2

Faculty / School: 110 - Escuela de Ingeniería y Arquitectura

Degree: 470 - Bachelor's Degree in Architecture Studies

ECTS: 6.0

Year: 3

Semester: First semester

Subject type: Compulsory

Module:

1. General information

The objective of this subject is to develop in the student a critical knowledge of construction systems. Systems are defined as a set of material elements related to each other, with a knowledge-based organization requirement-performance-function-order-matter. The qualitative or quantitative characteristics of the constructive systems, objectively identifiable, determine their ability to meet the corresponding basic requirements and to respond to high levels of quality in terms of health and comfort and to the new challenges of society, such as decarbonization and circularity.

These approaches and objectives are aligned with some of the Sustainable Development Goals, SDGs, of the Agenda 2030 (<https://www.un.org/sustainabledevelopment/es/>), specifically, the learning activities foreseen in this subject will contribute to the achievement of target 3.9, 5.5, 7.3, 11.6, 11.b and 13.3.

2. Learning results

- Ability to recognize the architectural repercussions of each construction system and each material in the architectural project.
- To know how to evaluate the suitability of materials according to their characteristics and conditions of use.
- Recognize the most common systems, materials and products in construction by their characteristics.
- To know the documents that constitute the construction regulations and to know how to apply them in the choice of materials.
- Know and use the technical vocabulary of construction.

3. Syllabus

BLOCK A: BUILDING SYSTEMS

DIDACTIC UNIT 0: FUNDAMENTALS

DIDACTIC UNIT 1-COMPARTMENTALIZATION SYSTEM

TOPIC 1.1- Vertical and Horizontal Separation Elements (E.S.V., E.S.H.) and partition walls.

TOPIC 1.2- Interior carpentry

DIDACTIC UNIT 2- FINISHING SYSTEM

TOPIC 2.1- Interior cladding

TOPIC 2.2- Exterior coatings

DIDACTIC UNIT 3-SURROUNDING SYSTEM:

TOPIC 3.1- Elements in Contact with the Ground (E.C.T.)

TOPIC 3.2- Facades and dividing walls

TOPIC 3.3- Exterior carpentry

TOPIC 3.4- Roofs

BLOCK B: MATERIALS AND PRODUCTS

TOPIC M1: Ceramics

TOPIC M2: Gypsum

TOPIC M3: Paints and varnishes

TOPIC M4: Conglomerates

TOPIC M5: Concrete

TOPIC M6: Bituminous materials

TOPIC M7: Stone products
TOPIC M8: Metal products
TOPIC M9: Glass
TOPIC M10: Wood
TOPIC M11: Plastic materials
TOPIC M12: Recycled materials

4. Academic activities

Lectures: sessions with the teacher in which the subject matter will be explained with punctual interventions by the students: 30 hours.

Problems and cases: sessions to solve practical cases proposed by the teacher, according to the theoretical blocks developed in the master classes: 28 hours.

Special practices: special internships, supervised visits or practical work in external or unique facilities. 2 hours.

Teaching jobs, other training offers: 24 hours.

Personal study: 60 hours.

Assessment tests: 6 hours.

5. Assessment system

The student must demonstrate that they have achieved the expected learning results by means of the following assessment activities.

The student is evaluated through a **written/graphic theoretical test**, with theory and problems at the end of the semester and **three practical exercises** carried out throughout the subject. The valuation of each part in the final grade ($A = 0.5 * Pt + 0.5 * Ep$) will be:

- Theoretical written/graphic test (**Pt**). 50% of the final grade. Minimum passing grade 5/10.
- Practical exercise (**Ep**): 5% (Ep1) +15% (Ep2)+30% (Ep3) = 50% of the final grade. Minimum passing grade 5/10.
- Requirements to pass the subject are:

- Obtain at least a 5 in the theoretical test.
- Make all the partial deliveries, delivery and public exhibition of the practical exercises on the dates announced.
- Obtain at least a 5 on the final submission of the practical exercise.
- Obtain at least a 5 overall grade in the subject.

If the grade of A is lower than 5, the grades of Ep (as long as its evaluation is higher than 5) will be kept for the calls of the same academic year. They are not saved for successive courses.

The faculty may consider the possibility of passing part of the theoretical test (Pt) in a voluntary partial exam to be held during the semester. If a grade equal to or higher than 7 points is obtained in this partial test, the topics raised in it will be considered as passed.

If a student does not pass the final delivery of the practical exercise or does not make all the deliveries and/or public presentations on the agreed dates, they must take a global practical test (Pp), in addition to the written/graphical theoretical test at the end of the semester.

In this case, the requirements to pass the subject are:

- Obtain at least a 5 in the global practical test (**Pp**).
- Obtain at least a 5 on the written/graphic theory test (**Pt**).
- To obtain at least a grade of 5 overall grade in the subject. The grade will be calculated from the following equation: $A = 0.5 * Pt + 0.5 * Pp$.