

30743 - Construction 4B

Syllabus Information

Academic year: 2023/24

Subject: 30743 - Construction 4B

Faculty / School: 110 - Escuela de Ingeniería y Arquitectura

Degree: 470 - Bachelor's Degree in Architecture Studies

ECTS: 6.0

Year: 5

Semester: Second semester

Subject type: Optional

Module:

1. General information

In this subject we will go in depth into specific construction techniques of urbanization in the surface components, including different types of pavements, the design of roadways, pedestrian and bicycle spaces, free areas, with all the corresponding equipment, signage, and auxiliary elements. The student will be provided with tools in aspects related to the architecture of public horizontal space, knowledge of urban infrastructure, equipment of streets and public areas, urban ecosystems, and systems of parks and public open spaces.

These approaches and objectives are aligned with the following Sustainable Development Goals (SDGs) of the United Nations Agenda 2030: Objective 11 (11.2, 11.3 and 11.7).

2. Learning results

- Ability to draft Urbanization Projects.
- Knowledge of the construction systems applicable to urban constructions and equipment, and aptitude for their representation, construction, conservation, measurement and valuation methods.
- Know and use the technical vocabulary of construction.
- Knowledge and application of basic construction regulations.
- Acquisition of criteria for the correct choice of construction materials applicable to buildings and urban facilities urban equipment.
- Ability to understand the tectonic logic of constructive solutions applicable to buildings and urban facilities.
- Ability to recognize the architectural repercussions of each construction system and of each material in the urbanization, building and construction project and building project and in the construction site.
- Know how to elaborate constructive details and technical prescriptions of the constructive systems applicable to the constructions and urban equipments and to the urbanization works, expressing the architectural fact and its construction.

3. Syllabus

1. Introduction: Environmental conditions and transformations
2. Standards and Technique
3. Walls and Fenders
4. Stairs and Ramps
5. Construction of the road. Geometry and Structure
6. Analysis of urban environments
7. Furniture
8. Water and Green Zones
9. Constructive syndromes
10. Urban Street Design

4. Academic activities

- The acquisition of basic knowledge will be developed through lectures and case studies in theory classes and occasionally in practical classes.
- The application of the knowledge will be done through practical sessions in which a final work will be developed focused on the constructive resolution of an urban space, proposing a geometric, technical and structural solution, taking into account the needs of urban itineraries.

- The tutorials will be used to review both knowledge and work done.

The student will have access to the teaching materials prepared by the subject's faculty.

5. Assessment system

The student will be evaluated through a **progressive assessment** system, consisting of:

- Theoretical work of study and research, to deepen the analysis and resources available in the development of practical work. Territory, geomorphology, topography, urban environment connections, natural environment, pavements, and the design of a singular urbanization element. 4 points.

- Final practical work of the course on the constructive development of an outdoor space. The scope will cover the definition of the general geometries and uses, the selection of construction typologies and materials, the justification of the regulations and the development of the necessary construction details. 4 points.

- Exercises of analysis and transformation of urban environments, related to advantages and disadvantages of all kinds of the constructive solutions observed, for their good performance and/or syndromes, as well as a proposal for the transformation of such spaces. 2 points.

In order to pass, it will be necessary to have submitted the three papers and pass the project with a minimum grade of 4 out of 4 10.

Global assessment

Students may be evaluated by means of a single global test, consisting of a theoretical-practical exam to be taken on the dates indicated by the academic calendar of the School of Engineering and Architecture.