Course guide
310740 - 310740 - Workshop 8: Projects

Last modified: 08/10/2025

Unit in charge: Barcelona School of Building Construction
Teaching unit: 752 - RA - Departamento de Representación Arquitectónica.
753 - TA - Department of Architectural Technology.
732 - OE - Department of Management.

Degree: BACHELOR'S DEGREE IN ARCHITECTURAL TECHNOLOGY AND BUILDING CONSTRUCTION (Syllabus 2019). (Compulsory subject).

Academic year: 2025 **ECTS Credits:** 9.0 **Languages:** Catalan, Spanish

LECTURER

Coordinating lecturer: Sarro Garcia, Pedro

Others: Baringo Sabater, Pedro
Sarró García, Pedro
Taltavull Fedelich, Antonio
Kàtia Gaspar Fabregas
Besne Yanguas, Alia

PRIOR SKILLS

Have successfully passed the subjects up to the 3rd year, especially those related to Construction, installations and structures, as well as knowledge of the processes of Planning, organization of works, Budgets and cost control

REQUIREMENTS

Consolidated knowledge of structures, construction, facilities, budgeting and planning.
Medium-high level in the use of computer tools, especially 2D or 3D drawing.
Not enrolling in other subjects that totally or partially coincide with the workshop schedule 8

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
FE-01. FE-1 Ability to understand and make the graphical documentation of a project, to do data gathering, surveying of plans and geometric control of construction units.
FE-05. FE-5 Ability to adapt the construction materials to the typology and use of the building, manage and run the receipt and quality control of the materials, its implementation in the construction, the control of execution of the construction units and the realization of trials and final tests.
FE-07. FE-7 Ability to identify the constructive elements and systems, define its function and compatibility, and its implementation to construction in the construction process. Plan and solve constructive details.
FE-13. FE-13 Ability to apply the technical regulation to the construction process, and generate documents of technical specification in the constructive procedures and methods of buildings.
FE-15. FE-15 Aptitude for the pre-measuring, design, calculation and verification of structures and manage its materials execution.
FE-16. FE-16 Ability to develop constructively the facilities of a building, control and plan its execution and verify the service and receipt trials, as well as its maintenance.
FE-28. FE-28 Aptitude to write technical projects of constructions, which don¿t require architectural projects, as well as projects of demolition and design.
FE-29. FE-29 Aptitude to write documents which are part of execution projects made in a multidisciplinary form

Transversal:
04 COE N3. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 3. Communicating clearly and efficiently in oral and written presentations. Adapting to audiences and communication aims by using suitable strategies and means.
05 TEQ N3. TEAMWORK - Level 3. Managing and making work groups effective. Resolving possible conflicts, valuing working with others, assessing the effectiveness of a team and presenting the final results.
07 AAT N3. SELF-DIRECTED LEARNING - Level 3. Applying the knowledge gained in completing a task according to its relevance and importance. Deciding how to carry out a task, the amount of time to be devoted to it and the most suitable information sources.

TEACHING METHODOLOGY

In the subject, the execution project of a real building will be developed, based on a basic project provided at the beginning of the semester.
The work will be carried out in groups of three students who, collaborating with each other, must manage to deliver at the end of the semester, a document comparable to a professional execution project.
During the semester, three partial deliveries will be made (activities 1, 2 and 3), each of them related to a main aspect of the defined project.
The contents of each week of class are specified in the subject program, the dates of partial deliveries will also be indicated.
At the end of the semester the last delivery will be formalized (activity 4), consisting of the final document that will be the execution project of the building under study.
The evaluation of the subject will be continuous from the qualification of each of these activities. As the subject is evaluated continuously, there will be no re-evaluation exam.
It should be noted that as it is a 9 ECTS subject, each student receives 90 hours of classroom-directed learning and 135 hours of autonomous learning during the semester.

LEARNING OBJECTIVES OF THE SUBJECT

The objective of the workshop is to put into practice, in a transversal way, the knowledge acquired during the degree materialized in writing and the development of an execution project. Also the integration of the student in a work team, so that he is involved in the analysis and resolution of problems in a coordinated manner with the rest of the group.
At the end of the course, the student will be able to manage, analyze and represent, through the appropriate language, the documentation of an execution project. You must also work and relate with solvency with colleagues in the work team.

STUDY LOAD

Type	Hours	Percentage
Self study	135,0	60.00
Hours small group	90,0	40.00

Total learning time: 225 h

CONTENTS

ACTIVITY 1. REPRESENTATION OF THE BASIC PROJECT. INTERIOR DIVISIONS AND BUILDING ENVELOPE

Description:
In this activity, teams complete basic project documentation by drawing up surface plans and verifying compliance with the habitability decree in force at all times. They also develop the blueprints that create appropriate to explain the basic project in its entirety.
Subsequently, the execution project begins, developing the interior divisions, the facades and the roofs. All this oriented towards the execution of the work. The budget of the basic project will be made and the preparation of the budget of the execution project will begin.
The organization and planning of the work is also considered

Specific objectives:
- Complete the plans of a basic project
- Define and detail the necessary construction elements in each case
- Graphically represent the construction process of the intervention
- Make use of the appropriate technical language to define the different components and materials.
- Elaboration of the budget of a basic project.
- Beginning of the budget of an execution project.
- Propose the organization and planning of the work.
- Write the corresponding memory.

Related activities:
Reminder in class of the necessary knowledge for the development of the activity
- Situation and location plans. Plans of surfaces and dimensions. Maximum occupancy. Covered facades and sections.
- Enclosures, interior division execution plans.
- Envelope, execution plans facades and roofs.
- Budget of the basic project and of execution.
- Organization and planning of the work.
- Memory index.

Full-or-part-time: 75h
Practical classes: 30h
Self study : 45h

ACTIVITY 2- BUILDING FACILITIES

Description:
The facilities of the building under study will be designed. Justify your choice and define the theoretical parameters by arguing its suitability. In this activity you will have to prepare the graphic documentation, memory and budget of the defined facilities.

Specific objectives:
Develop all the documentation of the building facilities:
- Plans of the different facilities.
- Memory that justifies and develops the facilities.
- Budget.

Related activities:
- Graphic language for the representation of facilities.
- Definition of the memory and calculation of the different installations.
- Drafting of items and assessment for the preparation of the budget.

Full-or-part-time: 60h
Practical classes: 24h
Self study : 36h

ACTIVITY 3. BUILDING STRUCTURES

Description:
Develop the graphic and technical documentation of the building structure execution project. Floor slabs, frames, foundations.
Prepare the corresponding budget.
Define the planning and organization of the work for the most significant phases of the execution.

Specific objectives:
The working group must study and understand the structure of a building as a single entity, considering all the different aspects prior to its definition, facades, interior divisions; covers; installations and all those constructive elements that condition the design of the structure.
Definition of the corresponding chapters and items for their economic valuation.
Propose a global vision of the organization of the work.

Related activities:
Calculation of floors, porticos and foundations.
Exploded stress diagrams of structural elements.
Horizontal sanitation network and grounding installation.
Measurement of structural elements for their subsequent assessment.
Development of the execution phases of a building.

Full-or-part-time: 75h
Practical classes: 30h
Self study : 45h

ACTIVITY 4. FINISHED PROJECT

Description:
From the development and correction during the four-month period of the different activities, the work group must present an execution project of the building under study the following documents:
BASIC PROJECT:
- Memory
- Budget
- Graphic documentation

EXECUTION PROJECT:
- Memory
- Budget
- Specifications
- Organization and planning of the work

GRAPHIC DOCUMENTATION:
- Foundation
- Gantries
- Slabs and stairs

INTERIOR DIVISIONS:
- Partitioning
- Internal carpentry
- Floors and false ceilings

ENVELOPE:
- Facades.
- External woodwork.
- Roofs

INSTALLATIONS:
- General floor plans
- Electricity and telecommunications.
- Plumbing and solar or alternative contribution.
- Heating and/or air conditioning and renewal of interior air.
- Gas, evacuation of kitchen fumes and boiler gases. Sanitation.
- Fire protection.

Specific objectives:
Order all the documentation generated during the semester, once the group corrects and extends the contents developed in activities 1, 2 and 3.

Full-or-part-time: 15h
Practical classes: 6h
Self study : 9h

GRADING SYSTEM

Continuous evaluation with 4 evaluable activities, each of them with the following weight in the final grade:
Activity 1: 20%
Activity 2: 20%
Activity 3: 20%
Activity 4: 40%

There are no mid-term, final or re-evaluation exams.

EXAMINATION RULES.

Each activity will be evaluated by the teachers of the workshop and the grade will be obtained from the evaluations of each teacher. At the beginning of each activity, the content and value of the different aspects of it will be published in Atenea.
The mark obtained in each activity will be the mark of each of the components of the work group, corrected with a self-assessment.
Comments to improve an activity already evaluated will be made only during the next activity.

BIBLIOGRAPHY

Basic:
- Código Técnico de la Edificación (CTE) Documento Básico de Seguridad Estructural. (DB-SE, -AE, -C, -A, -F).
- Código Técnico de la Edificación (CTE). 2006 Documento Básico de Salubridad (DB-HS1, HS2, HS3, HS4, HS5).
- Código Técnico de la Edificación (CTE). 2006 Documento Básico de Ahorro de energia. (DB-HE0, HE1).
- Código Técnico de la Edificación (CTE). 2006 Documento Básico de Seguridad de utilizacion y accesibilidad. (DB-SUA1, SUA2, SUA3, SUA 9).
- Código Técnico de la Edificación (CTE). 2006 Documento Básico de Seguridad de utilizacion y accesibilidad. (DB-SUA1, SUA2, SUA3, SUA 9).
- Instrucción de Hormigón Estructural (EHE-08).
- Jesús Espasandín López . APEOS Y REFUERZOS ALTERNATIVOS. Manual de Cálculo y Construcción. . 2009. ISBN 978-84-89150-53-9.
- Reglamento de Instalaciones Térmicas en los Edificios (RITE) y modificacions.
- Maria Lluïsa Sánchez Romero. Criterios básicos de instalaciones en los edificios de viviendas. Colegio de Arquitectos de Cataluña, 2007 . ISBN 978-8496842229.

RESOURCES

Hyperlink:
- http://detallesconstructivos.cype.es/. Constructive details library CYPE ingenieros, SA
- www.tectonica.es. TECTONICA. Construction details Magazine. nº6,7,8,36
- www.detail-online.com. DETAIL. Construction Details Magazine