

## 1. BASIC INFORMATION

<b>Course</b>	Architectural Drawing
<b>Degree program</b>	Bachelor's in the Fundamentals of Architecture
<b>School</b>	Architecture, Engineering and Design
<b>Year</b>	First year
<b>ECTS</b>	6 ECTS
<b>Credit type</b>	Basic
<b>Language(s)</b>	English
<b>Delivery mode</b>	Classroom
<b>Semester</b>	First semester
<b>Academic year</b>	2023/2024
<b>Coordinating professor</b>	Diego García Cuevas
<b>Professor</b>	Diego García Cuevas, Silvia Herrero Alonso

## 2. PRESENTATION

This subject is taught in the first year of the degree, during the first semester. It introduces students to the graphic language of architecture and the use of various tools, so that they can acquire the ability to express themselves graphically and effectively, and to represent and critically analyze forms and concepts concerning architecture. The workshop develops knowledge and skills acquired in the other subjects taught simultaneously with which a coordination project is carried out through exercises, activities and joint sessions (Construction I: Systems and Integrated Drawing Workshop II). In this way, the student will get a global vision of their studies, understanding the need for the continuous connection between different types of knowledge.

## 3. COMPETENCIES AND LEARNING OUTCOMES

### Core competencies:

- CB1 That students have demonstrated knowledge and understanding in a field of study that is based on general secondary education, at a level which, although supported by advanced textbooks, imply some knowledge of the latest advances in their field of study.
- CB2 That students know how to apply their knowledge to their work or vocation in a professional manner and possess the skills that are usually demonstrated through the elaboration and defence of arguments and the resolution of problems within their area of study.

- CB3 That students have the ability to gather and interpret relevant data (usually within their field of study) to make judgements that include reflection on relevant social, scientific or ethical issues.
- CB4 That students can communicate information, ideas, problems and solutions to both the specialist and non-specialist.
- CB5 That students have developed the necessary learning skills to undertake further studies with a high level of autonomy.

**Cross-curricular competencies:**

- CT01 Responsibility: aptitude or capacity to face responsibility that the profession of architect has in society, particularly when elaborating projects that take into consideration social and environmental factors.
- CT04 Communication skills in the native language (both oral and written) and in the English language, in accordance with the principles of the *Universidad Europea de Madrid*, any concept or specification for the development of the regulated profession of architect. This includes learning the specific vocabulary of the degree as well as the ability to manage information.
- CT05 Interpersonal skills.
- CT06 Flexibility.
- CT09 Planning and time management: ability to plan work in order to comply with delivery times and to respect the limits imposed by budgets and building codes.
- CT10 Innovation and creativity: creativity, imagination and aesthetic sensitivity applied to design in order to satisfy both the aesthetic and technical demands. This competence includes critical reasoning and historical culture.

**Specific competencies:**

- CE01 Ability to apply graphic procedures to the representation of spaces and objects.

**Learning outcomes:**

- LO1. Adapt construction materials to the typology and use of the building, manage and direct the reception and quality control of the materials, their installation, implementation of work units, testing and final trials.
- LO2. Has basic knowledge of the socioeconomic processes that affect the overall model of the city.
- LO3. Has knowledge of the specific control procedures for the material implementation of construction.
- LO4. Has basic knowledge of the public administration's legal system and the procedures for administrative and private contracts.
- LO5. Has knowledge of the concept of business, its institutional framework, organisational models, planning, control and strategic decision-making in different settings that are certain, risky or uncertain; types of promotion, planning, sources of financing and the elaboration of investment feasibility analyses and decision-making.
- LO6. Adopts attitudes for implementing team work on subjects of the programme susceptible to the application of problem-solving methodology.
- LO7. Adopts attitudes for conceiving, calculating, designing, integrating interior divisions, carpentry, stairs and other finished work in buildings and urban units with exterior walls, roofing and other structural work.

The following table shows the relationship between the competencies developed during the course and the learning outcomes pursued:

Competencies	Learning outcomes
CB1, CG2, CT10, CE1	LO1: Adapts construction materials to the typology and use of the building, manage and direct the reception and quality control of the materials, their installation, implementation of work units, testing and final trials.
CB5, CG1, CG2, CG7, CT10	LO2: Has basic knowledge of the socioeconomic processes that affect the overall model of the city.
CB2, CB4, CT4, CT5, CT10	LO3: Has knowledge of the specific control procedures for the material implementation of construction.
CT9	LO4: Has basic knowledge of the public administration's legal system and the procedures for administrative and private contracts.
CB2, CT4, CT5, CT6	LO5: Has knowledge of the concept of business, its institutional framework, organisational models, planning, control and strategic decision-making in different settings that are certain, risky or uncertain; types of promotion, planning, sources of financing and the elaboration of investment feasibility analyses and decision-making.
CT1, CT6, CT9	RA6: Adopts attitudes for implementing team work on subjects of the programme susceptible to the application of problem-solving methodology.
CB3, CB5	RA7: Adopts attitudes for conceiving, calculating, designing, integrating interior divisions, carpentry, stairs and other finished work in buildings and urban units with exterior walls, roofing and other structural work.

## 4. CONTENT

The subject is organized into five Learning Units (L.U.), plus a zero unit, directed but autonomous, of investigation and recognition of the characteristics of architectural drawing which, in turn, are divided into subjects each (depending on the units). In addition, the set of objectives that were set globally for the module are specifically linked to the development of each unit:

**Unit 0:** Introduction to architectural drawing: language and representation systems.

The student is immersed in a specific graphic world. It recognizes the representation systems, makes its own the graphic elements that make the drawing understandable (dimensions, scale, graphic scale, etc.). Directed research on authors and ways of representing is proposed.

**Unit 1:** CAD: basic coordinate layouts.

- 1.1: CAD: basic coordinate layouts.
- 1.2: CAD: Basics edition operations
- 1.3: CAD: Basics edition operations in architectural drawing

**Unit 2:** Architecture Drawing I. - Drawing of the building: Plan, elevation, section.

- 2.1: Plans in architecture drawing
- 2.1: Section in architecture drawing. Stairs
- 2.3: Section in architecture drawing
- 2.4: Layout / layers

**Unit 3:** Architecture Drawing II. - Integration of Architecture in the site. Urban and site projects.

- 3.1: Basic housing / site-urban

**3.2:** Basic housing / floors and elevations

**3.3:** Basic housing / sections

**Unit 4:** Architecture Drawing III. - Integration of architectural representation techniques. Graphic narration of the project.

**4.1:** Housing / plans

**4.2:** Housing / site-urban

**4.3:** Housing / sections-elevations

**Unit 5:** Portfolio. - Layout: image, color and typography.

**5.1:** Preparation of a graphic portfolio with the course exercises. Workshop format, presentation and public-collective correction.

**5.2:** Final hand-in.

## 5. TEACHING-LEARNING METHODOLOGIES

The types of teaching-learning methodologies used are indicated below:

- Master class.
- Cooperative learning.
- Problem-based learning.
- Project based learning

## 6. LEARNING ACTIVITIES

Listed below are the types of learning activities and the number of hours the student will spend on each one:

**Campus-based mode:**

Learning activity	Number of hours
Lectures	12.5 h
Guided studies, practical exercises and problem solving	50 h
Presentation of projects	12.5 h
Team work	12.5 h
Independent study/work	37.5 h
Tutorials, academic monitoring and evaluation	25 h
Lab work	0
Internships	0
<b>TOTAL</b>	<b>150 h</b>

## 7. ASSESSMENT

Listed below are the assessment systems used and the weight each one carries towards the final course grade:

### Campus-based mode:

Assessment system	Weight
Activity 0	5 %
Activity 1	10 %
Activity 2	10 %
Activity 3	20 %
Activity 4	25 %
Activity 5	30 %

When you access the course on the *Campus Virtual*, you'll find a description of the assessment activities you have to complete, as well as the delivery deadline and assessment procedure for each one.

### 7.1. First exam period

To pass the course in the first exam period, you must obtain a final course grade of at least 5 out of 10 (weighted average).

An additional test will be required if there are authorship doubts.

### 7.2. Second exam period

To pass the course in the second exam period, you must obtain a final grade of at least 5 out of 10 (weighted average).

The student must deliver all the activities from the first exam period after having received the corresponding corrections from the professor.

An additional test will be required if there are authorship doubts.

## 8. SCHEDULE

This table shows the delivery deadline for each assessable activity in the course:

Assessable activities	Deadline
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Activity 0	October 09
Activity 1	October 09
Activity 2	November 06
Activity 3	November 23
Activity 4	December 15
Activity 5	January 22

This schedule may be subject to changes for logistical reasons relating to the activities. The student will be notified of any change as and when appropriate.

## 9. BIBLIOGRAPHY

The main reference work for this subject is:

- ALMAGRO GORBEA, Antonio. El levantamiento arquitectónico. Granada: Universidad de Granada, 2004.
- BOIS, Yves-Alain. 'Metamorphoses of axonometry' in AAVV, De Stijl. Neo Plasticism in Architecture. Delft: Delft University Press, 1983.
- CHING Francis D. K. 'Architecture: Form, Space, & Order'. John Wiley & Sons Inc., 4th edition, 2014.
- CHING Francis D. K. 'Architectural Graphics'. John Wiley & Sons Inc., 6th edition, 2015.
- LEWIS, Paul and TSURUMAKI, Marc. 'Manual of section'. Princeton: Princeton Architectural Press, 2016.
- DI MARI, Anthony and YOO, Nora. 'Operative Design: a catalogue of Spatial Verbs'. Amsterdam: BIS Publishers, 2013.
- ZELL, Mo. 'The architectural drawing course: understand the principles and master the practices'. Thames and Hudson Ltd., 2008.
- NEUFERT, Ernst and NEUFERT, Peter. 'Architect's data'. Wiley-Blackwell, 4th edition, 2012.

## 10. EDUCATIONAL GUIDANCE AND DIVERSITY UNIT

From the Educational Guidance and Diversity Unit we offer support to our students throughout their university life to help them reach their academic achievements. Other main actions are the students inclusions with specific educational needs, universal accessibility on the different campuses of the university and equal opportunities.

From this unit we offer to our students:

1. Accompaniment and follow-up by means of counselling and personalized plans for students who need to improve their academic performance.
2. In terms of attention to diversity, non-significant curricular adjustments are made in terms of methodology and assessment for those students with specific educational needs, pursuing an equal opportunities for all students.

3. We offer students different extracurricular resources to develop different competences that will encourage their personal and professional development.
4. Vocational guidance through the provision of tools and counselling to students with vocational doubts or who believe they have made a mistake in their choice of degree.

Students in need of educational support can write to us at:  
[orientacioneducativa@universidadeuropea.es](mailto:orientacioneducativa@universidadeuropea.es)

## **11. ONLINE SURVEYS**

Your opinion matters!

The Universidad Europea encourages you to participate in several surveys which help identify the strengths and areas we need to improve regarding professors, degree programs and the teaching-learning process.

The surveys will be made available in the “surveys” section in virtual campus or via e-mail.

Your assessment is necessary for us to improve.

Thank you very much for your participation.