

Academic Year/course: 2021/22

## 28701 - Graphic expression I

### Syllabus Information

**Academic Year:** 2021/22

**Subject:** 28701 - Graphic expression I

**Faculty / School:** 175 - Escuela Universitaria Politécnica de La Almunia

**Degree:** 423 - Bachelor's Degree in Civil Engineering

**ECTS:** 6.0

**Year:** 1

**Semester:** First semester

**Subject Type:** Basic Education

**Module:**

## 1. General information

### 1.1. Aims of the course

The initial objective is to know the most common and used techniques and ways of expression.

But besides knowing how to express oneself through drawing, it is essential and equally important to learn to observe what we are going to have to represent and then shape on paper. Before we draw or project something

we have to understand those elements that we will have to draw a posteriori

These approaches and objectives are in line with the following Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda (<https://www.un.org/sustainabledevelopment/es/>), in such a way that the acquisition of the course learning outcomes provides training and competence to contribute to their achievement to some degree.

**Goal 4: Quality Education**

**Goal 5: Achieve gender equality and empower all women and girls**

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

It is a subject placed in the first semester of studies (which would be equivalent to the first semester of the first year).

It is mandatory.

It has a teaching load of 6 ECTS credits.

The course helps students develop spatial understanding, ingenuity and compositional abstract:

### 1.3. Recommendations to take this course

Without prerequisites

## 2. Learning goals

### 2.1. Competences

G01 Organizational and planning capacity

G02 Ability to solve problems

G03 Ability to make decisions

G04 Aptitude for oral and written communication of the native language

G05 Analysis and synthesis capacity

G06 Information management capacity

- G07 Ability to work in a team
- G08 Capacity for critical reasoning
- G09 Ability to work in an interdisciplinary team
- G10 Ability to work in an international context
- G11 Capacity for improvisation and adaptation to face new situations
- G12 Leadership aptitude
- G13 Positive social attitude towards social and technological innovations
- G14 Capacity for reasoning, discussion and presentation of ideas
- G15 Ability to communicate through words and images
- G16 Ability to search, analyze and select information
- G17 Capacity for autonomous learning
- G 18 Possessing and understanding knowledge in a study area that forms part of the general secondary education base, and if it usually finds a level, although it is supported by advanced textbooks, it also includes some aspects that imply specific knowledge of the subject. forefront of their field of study.
- G19 Apply their knowledge to their job or vocation in a professional way and possess the competences that they usually demonstrate by preparing and defending arguments and solving problems within their area of ??study.
- G20 Ability to collect and interpret relevant data (usually within their area of ??study) to make judgments that include reflection on relevant issues of a social, scientific or ethical nature
- G21 Transmit information, ideas, problems and solutions to a specialized and non-specialized audience
- G22 Develops the learning skills necessary to undertake further studies with a high degree of autonomy
- G23 Know and understand respect for fundamental rights, equal opportunities for women and men, universal accessibility for people with disabilities, and respect for the values of the culture of peace and democratic values.
- G24 Promote entrepreneurship
- G25 Knowledge of information and communication technologies
- B02 Ability to spatial vision and knowledge of graphic representation techniques, both by traditional methods of metric geometry and descriptive geometry, and by means of computer-aided design applications

## 2.2. Learning goals

Ability to apply representation systems: dihedral system

Ability to develop the sketch, proportionality, language, and techniques of graphic representation of the elements and construction processes.

Introduction to 2D and 3D CAD

Ability to interpret and elaborate the graphic documentation required for a construction project.

Ability to obtain the blueprints for building and construction projects.

Know the basics of construction applied drawing

## 2.3. Importance of learning goals

This subject has a vital importance in the development of the Degree in Civil Engineering.

In the world of Building, Construction, Engineering and Architecture, the correct graphic representation of any of the elements involved in a project is necessary.

In this subject, the technical drawing and the graphic expression that will be seen will be focused directly on the world of the planimetric representation necessary to represent and interpret all the documentation that may be included in a Building, Architecture, Construction, Engineering project. .

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

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

COURSE EVALUATION

Sketching 30%

Development of freehand data collection exercises correctly following the principles of technical drawing

Scaling 40%

Development of the models in a suitable way on a regular scale according to the project to be developed

2D project 30%

Development of a 2D CAD project.

FINAL EVALUATION

Final Test 100%

## 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 lectures, practice sessions, seminars, workshops, computer laboratory sessions, tutorials, and autonomous work and study. The methodology of a course such as Graphic Expression is based on the need for continuous practice, with a lot of exercises and autonomous work, both autonomously and in groups. The classes are oriented to the development of the assignments and projects, and theoretical contents will be given to achieve the expected results. It is complemented with extraordinary sessions, visits, activities, lectures, and tutorials both individual and group. The course requires the active participation of students.

**If classroom teaching were not possible due to health reasons, it would be carried out on-line**

### 4.2. Learning tasks

This course is organized as follows:

- Lectures.
- Practice sessions/seminars/workshops.
- Computer laboratory sessions.
- Tutorials. Individually or in groups. On-site or online.
- Autonomous work and study.

### 4.3. Syllabus

This course will address the following topics:

1. Graphic Expression Techniques.
  1. Basic techniques of freehand tracing.
  2. Plant concept, section, elevation, its interrelation.
  3. Measure.
  4. Sketch.
2. CAD
  1. 2D.
  2. 3D.

### 4.4. Course planning and calendar

- Project 1: 3 weeks.
- Project 2: 7 weeks.
- Project 3: 5 weeks.

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 Faculty of EUPLA website and Moodle.

### 4.5. Bibliography and recommended resources

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=28701>