

## 25111 - Systems of Representation II

### Syllabus Information

**Academic year:** 2023/24

**Subject:** 25111 - Systems of Representation II

**Faculty / School:** 301 - Facultad de Ciencias Sociales y Humanas

**Degree:** 278 - Degree in Fine Arts

**ECTS:** 6.0

**Year:** 2

**Semester:** Annual

**Subject type:** Compulsory

**Module:**

### 1. General information

The subject deals with the structuring and geometric representation of form for artistic and design purposes, focusing on the development of vision, perception, orientation and spatial organization through descriptive geometry. The deepening of the main representation systems (metric and perspective) is aimed at the description, representation and recreation of objects, figures, structures and configurations applicable to any activity and discipline in the professional artistic field. It also aims to solve problems of spatial representation in dihedral and conic system.

It is essential to attend class regularly, participating and systematically compiling what has been worked on in the classroom, ensuring that it is updated and reviewed on a weekly basis. In order to pass this subject it is mandatory to have passed the subject Systems of Representation I.

These approaches and objectives are aligned with the following Sustainable Development Goals (SDGs) of the United Nations Agenda 2030 (<https://www.un.org/sustainabledevelopment/es/>), so that the acquisition of the learning results of the subject provides training and competence to contribute to some extent to their achievement: Goals 6, 11 and 12.

### 2. Learning results

Competences CG 06, CG7, CG7, CG7, CG15, CE7, CE23, CE32.

- Argue their own productions from the knowledge of the fundamentals of descriptive geometry, its methods and history.
- Solve graphically, on a physical support and with efficiency, problems of spatial representation in the dihedral system and the perspective of different bodies in the conic system.
- Distinguish and explain the main representation systems, their structure and main methods.
- Value descriptive geometry as an auxiliary and creative tool from the knowledge of its foundations and rules.
- Explain and distinguish the main computer-aided design systems, their types, fundamentals and applications.

### 3. Syllabus

#### Block 1. Geometric transformations. Projectivity.

1. Standardized lines. Types of lines used in technical drawing. Formats. Descriptive geometry: historical notes. Projectivity: generalities. Double reasoning.
2. Projective transformations. Homography. Translation and homothety. Homology and affinity in the plane and in space. Desargues Theorem.
3. Polarity and power. General.
4. Investment. General.
5. Homological transformations of the circumference. Cases.

#### Block 2. Dihedral system. Developments and applications.

1. Downgrades. Angles.
2. Plane changes.
3. Turns.

4. Surfaces and bodies. Flat sections. Developments. Case studies. Spiral staircase, helicoids, ribbed vaults.
5. Shadows. Case studies.

### Block 3. Conical system. Linear perspective

1. Central projection system. Fundamentals.
2. Linear perspective. General. Historical approach.
3. Representation of point, line and plane.
4. Belongings. Intersections. Case studies.
5. Downgrades. Angles. Case studies.
6. Parallelism and perpendicularity. Fundamentals and case studies.
7. Measurement. Metric points. Reduced data.
8. Perspective methods.
9. Representation of bodies. Shadows and reflections: generalities. Case studies.
10. Anamorphosis. Fundamentals and types. Case studies.

## 4. Academic activities

The learning process that has been designed for this subject is based on activities focused on both the theoretical presentation of the main contents of the program and the practical approach through application exercises, problem solving and case studies. The realization of exercises and problem solving, however, will constitute the major part of the student's autonomous work, with the support of class notes.

### Methodology

- Theoretical-practical presentation by the teacher of the main contents, including theoretical explanations, practical demonstrations, problems and cases and exercise resolution, mainly using the blackboard and occasionally supported by audiovisual projections or three-dimensional models. It requires note-taking by students.

- Periodic resolution of practical exercises both face-to-face and, fundamentally, non-face-to-face. Problem solving in the form of drawing sheets that involve the realization of geometric tracings, graphic constructions and representations in relation to the contents of the program and that will make up a portfolio. When it is carried out face-to-face, this activity will complement the theoretical-practical presentations made by the teacher (generally after the study or theoretical-practical analysis of a series of related contents) and, if necessary, will serve as a direct reference to assess the evolution of learning. When the activity is not face to face, it may be accompanied by theoretical or practical questions related to a specific artistic application of the contents. In any case, it is complemented by bibliographic support and class notes and constitutes the basis of the students' study work. This activity will be subject to continuous evaluation.

- Development of a personal creative proposal and creation of sheets and clean notes. This activity will be subject to continuous evaluation.

## 5. Assessment system

### Assessment system

Failure to submit the exercises and assignments within the margins of the continuous evaluation implies the loss of the right to it. That is to say, if the student does not submit all the mandatory exercises set by the teacher, the personal creative proposal and does not pass the quarterly partial exams, they loses the right to continuous evaluation and must sit for the global exam in May/June.

### Continuous assessment:

1\_ First part composed by a set of activities and procedures that will conform the periodic realization of practical exercises on problems exposed in class on the blackboard, cases and diverse assumptions related to the contents of the program. It consists of a number of sheets that will be made from the class notes. They should be bound and delivered at the end of each quarter. Correctly labelled in ink with different thicknesses, clean and tidy.

They are performed as part of the student's autonomous work.

1\_ The portfolio will be made up of all the exercises presented daily throughout the term. As a whole, it will account for **30% of the grade**.

2\_ Class attendance. It will account for **5% of the grade**.

3\_ A3-size sheets of paper on proposed class exercises. It will account for **15% of the grade**.

4\_ Two partial written evaluation tests that will account for **50% of the final grade**. They will consist of two parts:

A\_ A series of practical exercises on problems, cases and assumptions related to the contents of the program. It will take the form of a set of drawing sheets that involve the realization of geometric tracings, graphic constructions and representations in relation to the contents of the program. This grade will account for 40% of the grade.

B\_A theoretical section on aspects of the program contents. Part of the questions raised will be related to the practical exercises. This grade will account for 10% of the grade.

#### May and June call by means of a global test

In this call, the evaluation will be carried out only by means of a global test, which will determine 100% of the grade. All students may opt for this modality, in particular those who have not taken the previous modality or have not passed the corresponding parts of the continuous evaluation or who, having passed it, wish to improve their grade. It will consist of two parts:

A\_A series of practical exercises on problems, cases and assumptions related to the contents of the syllabus. It will take the form of a set of drawing sheets that involve the realization of geometric tracings, graphic constructions and representations in relation to the contents of the program. This grade will account for 80% of the final grade for this system.

B\_A written test on theoretical aspects of the contents of the program. This grade will account for 20% of the final grade for this system.

#### Assessment criteria

The evaluation of the learning results and the acquisition of competencies, referring to all the activities performed including the global test, will be carried out according to the following criteria:

- \* Correctness in the drawing and sketching as well as in the methods and graphic constructions used in the resolution of the exercises and geometric problems posed.
- \* Correct argumentation of the foundations and theoretical elements that support the different constructions and representations.
- \* Cleanliness, clarity and precision in the execution of exercises, sheets and activities.

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#### GLOBAL TEST

*All students are entitled to a global test to pass the subject or to improve the grade obtained. Students attending the exam must be punctual on the day and at the time indicated in the exam notice, otherwise they will be considered as "No Show".*

#### SECOND CALL

*The evaluation in the second call, to which all students who have not passed the subject will be entitled, will be carried out by means of a global test to be taken during the period established for this purpose by the Governing Council in the academic calendar.*