Universidad Zaragoza

Academic Year/course: 2021/22

28706 - Graphic expression II

Syllabus Information

Academic Year: 2021/22
Subject: 28706 - Graphic expression II
Faculty / School: 175 - Escuela Universitaria Politécnica de La Almunia
Degree: 423 - Bachelor's Degree in Civil Engineering
ECTS: 6.0
Year: 1
Semester: Second semester
Subject Type: Basic Education
Module:

1. General information

1.1. Aims of the course

The methodology of a subject such as graphic expression is based on the need for continuous practice, with a lot of exercise and autonomous work, both personally and in groups.

The classes are oriented to the development of the works 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.

Involves the active participation of students

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 second semester of the studies (which would be equivalent to the second semester of the first year).

It is mandatory.

It has a teaching load of 6 ECTS.

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

1.3. Recommendations to take this course

It is recommended to have passed Expresión Gráfica I

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 and bounded system.

Know the fundamentals of the geometry of the applied space.

Ability to interpret and develop solutions in a three-dimensional space.

Ability to model 3D design

2.3. Importance of learning goals

The knowledge acquired in an abstract way in the world of geometric representation, will be applied spontaneously by the students during the rest of their university and also professional career.

3. Assessment (1st and 2nd call)

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

Evaluation by course

Evaluation tests 70%

Exercises and practices of 3D 30%

Final evaluation

100% Evaluation Test

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, autonomous work and study, and tutorials.

The methodology of this course will present a series of problems, which will be accompanied by a theoretical explanation to be able to solve them.

In an always graphic and visual way, the geometry problems will be announced, applied to a real function.

The development of the practice sessions will be autonomous, with the assistance of the teaching staff to accompany the understanding of the contents.

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 practice sessions**.
- **Autonomous workshop-type work**
- **Tutorials**. Group and individual. On-site or online.

4.3. Syllabus

This course will address the following topics:

1. Dihedral system
    1. Covers
    2. Dimensions
2. Dimensioned system
    1. Point, straight, flat
    2. Intersections
    3. Parallelism and perpendicularity
    4. Distances
    5. Plane changes
    6. Abatures
    7. Figures
3. 3D CAD

4.4. Course planning and calendar

- Topic 1: 4 weeks.
- Topic 2: 8 weeks.
- Topic 3: 3 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=28706