Universidad Zaragoza

Academic Year/course: 2021/22

29806 - Graphic expression and computer-assisted design

Syllabus Information

Academic Year: 2021/22
Subject: 29806 - Expresión gráfica y diseño asistido por ordenador
Faculty / School: 110 - Escuela de Ingeniería y Arquitectura
326 - Escuela Universitaria Politécnica de Teruel
Degree: 440 - Bachelor's Degree in Electronic and Automatic Engineering
444 - Bachelor's Degree in Electronic and Automatic Engineering
ECTS: 6.0
Year: 1
Semester: 440-First semester o Second semester
107-First semester o Second semester
444-Second semester
Subject Type: Basic Education
Module:

1. General information

2. Learning goals

3. Assessment (1st and 2nd call)

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

The teaching process will be developed in four main levels: theory sessions, practice sessions, laboratory and supervised practices which means an increased level of student participation. In the theory sessions, the contents of Standardization Industrial Drawing and Descriptive Geometry will be given and illustrated with numerous examples for each topic. In the practice sessions, the students will solve exercises, under the supervisión of a teacher. The laboratory sessions will be developed in small groups, where the student will handle the software for Computer Aided Design. The supervised practices will consist of individual or group homework of technical applications that the student will develop with the guidance and supervision of the teacher.

4.2. Learning tasks

Graphic Expression and Computer Aided Design is a 6 ECTS course, equivalent to 150 total hours of work, corresponding to 60 hours (Theory sessions, problems, laboratory of Computer Aided Design?) and 90 autonomous hours (resolution of tutored exercises, study?)

4.3. Syllabus

The main contents are summarized in the following topics:

Standardization and industrial drawing: Introduction to Graphic for Engineers. Standardization and Computer-Aided Design. Drawing instruments and drafting machines. Formats, scales, line types and tethering. Orthographic views. Representation of threads. Broken-out sections. Dimensioning.

Descriptive Geometry: Techniques of labeling points, lines, and planes. Intersections. Parallelism. Orthogonality. Auxiliary views. Rotations. True size of a plane. True-length diagram. Distances.

Surfaces: Contour apparent and representation of surfaces. Defining and types of surfaces. Sections and intersections of

lines. Transformed and geodesic. Development of surfaces

Computer-aided design 2D: Introduction and general operation of the program. Main screen. Comand input. Function keys. File management. Program environment. Drawing aids. Coordinate systems. Display commands. Drawing commands. Selecting entities. Reference entities. Editing commands. Working with layers. Text. Dimensioning. Blocks. Attribute listing.

4.4. Course planning and calendar

The theory sessions, the problem classes and the practice sessions in the laboratory are given according to an established schedule by the center. This schedule is published before the starting date at the center's web page and on the notice boards.

Each professor will inform about his tutorials' schedule.

The rest of the activities will be planned according to the number of students and they will be published enough time in advance.