

25868 - Graphic Expression I

Información del Plan Docente

Academic Year	2016/17
Academic center	110 - Escuela de Ingeniería y Arquitectura
Degree	558 - Bachelor's Degree in Industrial Design and Product Development Engineering
ECTS	6.0
Course	1
Period	Second semester
Subject Type	Basic Education
Module	---

1.Basic info

1.1.Recommendations to take this course

1.2.Activities and key dates for the course

2.Initiation

2.1.Learning outcomes that define the subject

2.2.Introduction

3.Context and competences

3.1.Goals

3.2.Context and meaning of the subject in the degree

3.3.Competences

BASIC COMPETENCES

CB01. Students have demonstrated knowledge and understanding in a field of study that is part of the general secondary education curricular, and is typically at a level which, although it is supported by advanced textbooks, includes some aspects that involve knowledge of the forefront of their field of study.

CB02. Students can apply their knowledge to their work or vocation in a professional manner and have competences typically demonstrated through devising and defending arguments and solving problems within their field of study.

CB03. Students have the ability to gather and interpret relevant data (usually within their field of study) to inform judgments that include an important reflection on social, scientific or ethical issues.

CB04. Students can communicate information, ideas, problems and solutions to both specialist and non-specialist

25868 - Graphic Expression I

audiences.

CB05. Students have developed those skills needed to undertake further studies with a high degree of autonomy.

GENERAL COMPETENCES

GC06. Ability to generate the necessary documentation for the proper transmission of ideas through graphics, reports and technical documents, models and prototypes, oral presentations in Spanish and other languages.

GC07. Ability to use and master techniques, skills, tools and techniques and communication and others specific of design engineering needed for design practice.

GC08. Ability to learn continuously, to develop autonomous learning strategies and to work in multidisciplinary groups with motivation and determination to achieve goals.

SPECIFIC COMPETENCES

SC04. Capacity of spatial vision and knowledge of graphic representation techniques, both traditional methods of metric geometry and descriptive geometry, such as through applications of computer-aided design.

3.4.Importance of learning outcomes

4.Evaluation

5.Activities and resources

5.1.General methodological presentation

The learning process that is designed for this subject is based on the following:

- Type 1 (Diédrico theory classes and Perspective System) Teaching: Based on classroom exposure of theoretical concepts using slate and animated PowerPoint presentations.
- Teaching type 2 (kinds of problems Diédrico System and Perspective): casework in the classroom to each student find difficulties in solving problems and cases.
- Type 3 (classes Laboratory Practice Computer Aided Design) Teaching: Based on the explanation, exercise approach and personal attention in computer use.control, assistance and evaluation, individually, of the exercises by mandatory appointment in office.
- Type 6 (tutored practice tracking exercises Industrial Standards) Teaching

5.2.Learning activities

5.3.Program

- Standardization and drawing sets

Introduction to Graphic Expression

Standardization and Computer Aided Design

Tools and equipment for drawing

25868 - Graphic Expression I

Formats, scales, line types and writing
Views dihedral. Representation of threads and gears
Cuts and sections
Dimensioning
Introduction to drawing sets

- Diédrico system

Intersection of lines and planes
Parallelism
Perpendicularity
Projection change plans
Views Partial Single and Double
Spins
Lowering the elements of a plane
Measure distances
Measuring angles

- Practical applications dihedral system

Defining and building surfaces, apparent contour and representation surfaces
flat sections and intersection straight
Intersection of surfaces
Surface development
Shades

- perspectiva conical

Principles of perspective
basic geometric concepts
Running prospects
Shades

5.4.Planning and scheduling

- block 1

Basic rules of representation standardized product. Development space student ability. Representation of objects and simple sets.

- Block 2

Descriptive geometry. Development of spatial geometry, application practice it to a system representation.

- Block 3

Practical applications of the dihedral system. geometrica intersection complex surfaces, their development.

- Block 4

Perception of the product. Representation systems view own.

- block 5

Shades of elements. Representation of shadows
June / July to September: Global Assessment: a test on Standardization, Systems representation and Prospects + a test on tutored exercises + a test on practices in Cad.

5.5.Bibliography and recomended resources

- Dibujo Técnico 2º Bachillerato. Autor: Jesús Álvarez, José Luis Casado y Lola Gómez. Editorial: S.M.
- Trazado Geométrico. Autor: Mario González y Julián Palencia. Editorial: Propia
- Expresión Gráfica. Autor: José María Altemir Grasa. Editorial: Copy Center
- Dibujo Industrial: Normalización. Autor: Manuel Calvo Lalanza. Editorial: Gorfisa
- Geometría Descriptiva. Autor: Fernando Izquierdo Asensi. Editorial: Dosat
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- Ejercicios de Geometría Descriptiva I, III y IV. Autor: Fernando Izquierdo Asensi. Editorial: Paraninfo
- Apuntes de la asignatura colocados en el ADD de Unizar