SUBJECT TEACHING GUIDE

G410 - Graphic Representation Techniques

Degree in Electrical Engineering
First Degree in Electrical Engineering

Academic year 2023-2024

1. IDENTIFYING DATA				
Degree	Degree in Electrical Engineering First Degree in Electrical Engineering		Type and Year	Core. Year 1 Core. Year 1
Faculty	School of Industrial Engineering and Telecommunications			
Discipline	Subject Area: Graphical Expression Basic Training Module			
Course unit title and code	G410 - Graphic Representation Techniques			
Number of ECTS credits allocated	6	Term	Semester based (1)	
Web				
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. INGENIERIA GEOGRAFICA Y TECNICAS DE EXPRESION GRAFICA
Name of lecturer	JOSE ENRIQUE CERON HOYOS
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Other lecturers	MARIA ESTHER VALLEJO LOBETE RAQUEL ARMESTO ALONSO JOAQUIN DIEZ GUTIERREZ

3.1 LEARNING OUTCOMES

- Interpretation and implementation of standardized technical drawing.
  Use of CAD Systems for:
  1.Solving geometric problems.
  2.3D representation and visualization of parts and elementes.
  3.Make and interpret technical drawings for engineering projects.

4. OBJECTIVES

Represent parts and elements in a graphical document, using descriptive geometry, graphical projection and technical drawing standards.
Expose by a graphical, oral and written way ideas of design and interpretation of engineering drawings.

6. COURSE ORGANIZATION

CONTENTS	
1	Metric and descriptive geometry. Isometric and Cavalier projection.
2	Metric and descriptive geometry. Projections of curves, surfaces and solids.
3	Technical and engineering drawings. CAD Systems.
4	Metric and descriptive geometry. Orthographic Projection. Topographic representation.

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Three partial tests (22,5%-22,5%-45%).	Written exam	No	Yes	90,00
Classroom works and projects.	Work	No	Yes	10,00
TOTAL				100,00

Observations
Students who do not pass the continuous assessment (average of 6 in the partial tests), may make the final test, similar to the three subtests, which is completed with the qualification of class work and presentation (10%), and tests partial (30%).

Observations for part-time students
Part-time students have same evaluation criteria that full-time students.

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

OCW
http://ocw.unican.es/ensenanzas-tecnicas/tecnicas-de-representacion-grafica-g420

Sist. de representación:
GEOMETRÍA DESCRIPTIVA. F. Izquierdo Asensi
GEOMETRÍA DESCRIPTIVA. (Tomo 1 - 2) F.J. Rodriguez de Abajo.
EJERCICIOS DE ... J.I.Alvaro
EXPRESIÓN GRÁFICA Y DAO. EJERCICIOS. F. Fadón

Dibujo técnico:
Dibujo Técnico. Ediciones BACHMANN – FORBERG
NORMALIZACIÓN DEL DIBUJO INDUSTRIAL. R. Villar del Fresno, R. García, J.L. Caro.
MANUAL DE NORMAS UNE SOBRE DIBUJO. Ed. AENOR
DIBUJO TÉCNICO. R. de Abajo y Alvarez. Ed. Donostiarra
Manual of Engineering Drawing. Colin H Simmons. Dennis E Maguire. Elsevier 2004

D.A.O.
GRÁFICAS POR COMPUTADORA. Hearn y Baker.
http://personales.unican.es/saizl