SUBJECT TEACHING GUIDE

G317 - Graphic Expression

Degree in Maritime Engineering
Degree in Maritime Engineering and Naval Architecture

Academic year 2023-2024

1. IDENTIFYING DATA					
Degree	Degree in Maritime Engineering Degree in Maritime Engineering and Naval Architecture			Type and Year	Core. Year 1 Core. Year 1
Faculty	School of Maritime Engineering				
Discipline	Subject Area: Graphical Expression Basic Training Module				
Course unit title and code	G317 - Graphic Expression				
Number of ECTS credits allocated	6	Term		Semester based (2)	
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	FERNANDO FADON SALAZAR
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Other lecturers	JOSE ANDRES DIAZ SEVERIANO RAQUEL ARMESTO ALONSO JOAQUIN DIEZ GUTIERREZ

3.1 LEARNING OUTCOMES
- - Analize and draw planes and implement standardized engineering drawing -Get skills for manage computer-aided drawing for: 1. solve geometric problems, 2. visualize of bodies as constituent elements of mechanisms and industrial buildings, 3. perform and interpret engineering drawings projects.
- Analysis of technical drawings, diagrams and manuals according to section A-III/1 of STCW Convention

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.
Analysis of technical drawings, diagrams and manuals according to section A-III/1 of STCW Convention

6. COURSE ORGANIZATION	
CONTENTS	
1	1: Metric geometry and descriptive geometry. Representation systems. General knowledge representation systems metric General notions of representation. Visualization. Perspective Isometric and perspective cavalier
2	2: Metric geometry and descriptive. Multiview orthographic projection system. (Spatial resolution of DAO exercises) Point, line and plane. Representation of objects. DAO. True magnitudes of flat shapes. DAO. Intersections. DAO. Minimum distances. DAO. Angles. DAO. Curves and surfaces. Polyhedra. DAO. The pyramid and the cone. The prism and the cylinder. DAO. Intersection and development of surfaces. DAO. Volume of objects.
3	3: Technical Drawing. Plane generation. Standard representations. Views auxiliaries. Cortes, sections and breaks Dimensioning. Scales. Representation of threaded elements. Sketchs. Generation and interpretation of planes. Getting DAO planes.
4	4: Metric geometry and descriptive geometry. System dimension drawings. Digital terrain models. Point, line and plane. Intersections. Roof. Minimum distances. True magnitudes. Topographical drawing. Representation of the terrain. Digital Terrain Models. Profiles. Explanaciones.MDT

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Works and three exams along the course.	Work	No	No	10,00
Partial tests (22.5% -22.5% -45%) Recuperation in final evaluation	Written exam	No	Yes	90,00
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%).
Note: Given the current uncertain health situation, in case the competent health and educational authorities so indicate, not allowing any evaluation activity to be carried out in person in the classroom, a distance evaluation modality will be adopted using telematic means.

Observations for part-time students

Follows the same dynamics at presential students

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC

OCW
http://ocw.unican.es/ensenanzas-tecnicas/expresion-grafica-y-dao
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
D.A.O.
GRÁFICAS POR COMPUTADORA. Hearn y Baker.
http://personales.unican.es/saizl