

## SUBJECT TEACHING GUIDE

### G437 - GRAPHIC EXPRESSION

#### Degree in Nautical Engineering and Maritime Transport

Academic year 2020-2021

1. IDENTIFYING DATA					
Degree	Degree in Nautical Engineering and Maritime Transport			Type and Year	Core. Year 1
Faculty	School of Maritime Engineering				
Discipline	Subject Area: Graphical Expression Basic Training Module				
Course unit title and code	G437 - 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				
E-mail	fernando.fadon@unican.es				
Office	E.T.S. de Ingenieros Industriales y de Telecomunicación. Planta: - 2. DESPACHO (S2004)				
Other lecturers	MILAGROS CANGA VILLEGAS 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 elements.
3. Make and interpret technical drawings for engineering 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	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	%
Classroom works and projects.	Work	No	No	20,00
Partial Test Section 1 and 2	Written exam	No	Yes	40,00
Partial Test Section 3 and 4	Written exam	No	Yes	40,00
TOTAL				100,00
Observations				
<p>Students who do not pass the continuous evaluation (average of grade 6 in the partial tests), will be able to carry out the Final Test, of similar characteristics to the two partial tests, which is completed with the qualification of the works collected during the quarter, the delivery of the proposed projects, the use and the attitude during the classes and the presentations in public. The final result would be, 20% for the continuous work, plus the result of the two Partial Tests (40% each). They are not kept partial for the exam of September.</p>				
Observations for part-time students				
Follows the same dynamics at presential students				

## 8. BIBLIOGRAPHY AND TEACHING MATERIALS

### BASIC

#### OCW

<http://ocw.unican.es/enseñanzas-tecnicas/expresion-grafica-y-dao>

Sist. de representación:

GEOMETRÍA DESCRIPTIVA. F. Izquierdo Asensi

GEOMETRÍA DESCRIPTIVA. (Tomo 1 - 2) F.J. Rodríguez 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>