Teaching Guide				
Identifying Data				2015/16
Subject (*)	Marine drawing		Code	730G05010
Study programme	Grao en Enxeñaría Naval e Oceánica			
Descriptors				
Cycle	Period	Year	Type	Credits
Graduate	2nd four-month period	First	Obligatoria	6
Language	Spanish			
Teaching method	Face-to-face			
Prerequisites				
Department	Enxeñaría Naval e Oceánica			
Coordinador	Junco Ocampo, Fernando	E-mail	fernando.junco@udc.es	
Lecturers	Álvarez García, Ana Junco Ocampo, Fernando	E-mail	ana.alvarez1@udc.es fernando.junco@udc.es	
Web	www.udc.es			
General description	This course shows all the technologies needed to interpret ship design and construction drawings and make and develop blueprints and other technical draws using the lines plan of a vessel.			

Study programme competences / results	
Code	Study programme competences / results
A1	Skill for the resolution of the mathematical problems that can be formulated in the engineering. Aptitude for applying the knowledge on: linear algebra; geometry; differential geometry; differential and integral calculation; differential equations and in partial derivatives; numerical methods; algorithmic numerical; statistics and optimization
B1	That the students proved to have and to understand knowledge in an area of study what part of the base of the secondary education, and itself tends to find to a level that, although it leans in advanced text books, it includes also some aspects that knowledge implicates proceeding from the vanguard of its field of study
B2	That the students know how to apply its knowledge to its work or vocation in a professional way and possess the competences that tend to prove itself by the elaboration and defense of arguments and the resolution of problems in its area of study
B3	That the students have the ability to bring together and to interpret relevant data (normally in its area of study) to emit judgments that include a reflection on relevant subjects of social, scientific or ethical kind
B4	That the students can transmit information, ideas, problems and solutions to a public as much specialized as not specialized
B5	That the students developed those skills of learning necessary to start subsequent studies with a high degree of autonomy
B6	Be able to carrying out a critical analysis, evaluation and synthesis of new and complex ideas.
C2	Coming across for the exercise of a, cultivated open citizenship, awkward, democratic and supportive criticism, capable of analyzing the reality, diagnosing problems, formulating and implanting solutions based on the knowledge and orientated to the common good.
C3	Understanding the importance of the enterprising culture and knowing the means within reach of the enterprising people.
C4	Recognizing critically the knowledge, the technology and the available information to solve the problems that they must face.
C5	Assuming the importance of the learning as professional and as citizen throughout the life.
C6	Recognizing the importance that has the research, the innovation and the technological development in the socioeconomic and cultural advance of the society.
C7	Capacidade de traballar nun ámbito multilingüe e multidisciplinar.

Learning outcomes	
Learning outcomes	Study programme competences / results

Graphical explanation of various concepts of naval terminology	A1	B1 B2 B3 B4 B5 B6	C2 C3 C4 C5 C6 C7
Explanation of several draws lines plan based	A1	B1 B2 B3 B4 B5 B6	C2 C3 C4 C5 C6 C7
Make multiple practical drawing exercises lines plan based	A1	B1 B2 B3 B4 B5 B6	C2 C3 C4 C5 C6 C7

Contents	
Topic	**Sub-topic**
CONCEPTS OF NAVAL TERMINOLOGY THEORETICAL	Graphical explanation of various concepts of naval terminology
EXPLANATION OF DELINEATION OF LINES PLAN AND OTHER AUXILIARY DRAWS USED AT SHIP DESIGN	Explanation of several draws lines plan based
	Make multiple practical drawing exercises lines plan based
SHIP CONSTRUCTION OF ANY VESSEL	

Planning				
Methodologies / tests	**Competencies / Results**	**Teaching hours (in-person & virtual)**	**Student?s personal work hours**	**Total hours**
Introductory activities	A1 B1 B2 B3 B4 B5 B6 C2 C3 C4 C5 C6 C7	10	10	20
Guest lecture / keynote speech	A1 B1 B2 B5 B6 C2 C3 C4 C5 C6 C7	30	25	55
Supervised projects	B2 B3 C4 C5 C6	8	16	24
Objective test	B6 C4 C7	10	10	20
Problem solving	B1 B2	12	12	24
Workshop	B2 B3	1	1	2
Personalized attention		5	0	5
(*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.				

Methodologies	
Methodologies	**Description**
Introductory activities	LEARNING TERMINOLOGY AND IDENTIFICATION OF PLANS
Guest lecture / keynote speech	STRUCTURAL DEVELOPMENTS AND PLAN DRAWING BODY
Supervised projects	TRACES STRUCTURAL PRACTICES

Objective test	PRACTICAL EXERCISES
Problem solving	PRACTICAL EXERCISES
Workshop	PRACTICAL EXERCISES IN CLASS ON TEACHING EXPLAINED IN THE MASTER CLASS

Personalized attention	
Methodologies	**Description**
Introductory activities Supervised projects Guest lecture / keynote speech Problem solving Workshop Objective test	PERSONALIZED CARE CONSULTATIONS TO MAKE THE STUDENT

Assessment			
Methodologies	**Competencies / Results**	**Description**	**Qualification**
Objective test	B6 C4 C7	WILL EVALUATE THE SOLUTION OF THE EXAM. WILL BE CONSIDERED FOR THIS EVALUATION POSITIVE OR NEGATIVE PARTICIPATION IN STUDENT PRACTICES	100

Assessment comments
la evaluacion se realizara sobre la prueba objetiva unicamente

Sources of information	
Basic	- CRUCELAEGUI CORVINOS, A. (1985). Geometría y representación de carenas: diseño de formas asistido por ordenador. Madrid: ETSIN - JUNCO-OCAMPO, F. (2002). Dibujo Naval. Ferrol : Escola Politécnica Superior - GEORGE C., MANNING D (1957). La teoría y técnica del proyecto de buques. Boston: Massachussets Institute of Technology - NUÑEZ BASAÑEZ J. (1987). Proyecto de formas. Madrid: ETSIN - MOLERO VERA, J. (2011). AutoCAD 2012 : guía rápida. Barcelona : Inforbooks - AENOR (2000). Dibujo técnico. Normas básicas. Madrid:AENOR
Complementary	

Recommendations
Subjects that it is recommended to have taken before
Engineering drawing/730G05003 Shipbuilding and ship propulsion/730G05009
Subjects that are recommended to be taken simultaneously
Subjects that continue the syllabus
Other comments
Se recomienda la asistencia a las clases teóricas y prácticas.La realización de las prácticas es obligatoria y no se evaluará la prueba objetiva sin la realización correcta de las mismas

(*)The teaching guide is the document in which the URV publishes the information about all its courses. It is a public document and cannot be modified. Only in exceptional cases can it be revised by the competent agent or duly revised so that it is in line with current legislation.