Teaching Guide				
Identifying Data				2016/17
Subject (*)	COMPUTATIONAL METHODS IN VESSEL PROYECT		Code	730G01143
Study programme	Grao en Arquitectura Naval			
Descriptors				
Cycle	Period	Year	Type	Credits
Graduate	1st four-month period	Fourth	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	Junco Ocampo, Fernando	E-mail	fernando.junco@udc.es	
Web				
General description				

Study programme competences / results	
Code	Study programme competences / results
A4	Coñecementos básicos sobre o uso e programación dos ordenadores, sistemas operativos, bases de datos e programas informáticos con aplicación en enxeñaría.
A18	Capacidade para a realización de cálculos de xeometría de buques e artefactos, flotabilidade e estabilidade.
A19	Coñecemento da hidrodinámica naval aplicada.
A22	Capacidade para o deseño e cálculo de estruturas navais.
A28	Coñecemento dos métodos de proxecto da súa tecnoloxía específica.
B1	Aprender a aprender.
B2	Resolver problemas de forma efectiva.
B3	Aplicar un pensamento crítico, lóxico e creativo.
B4	Traballar de forma autónoma con iniciativa.
B5	Traballar de forma colaboradora.
B8	Actitude orientada ao traballo persoal intenso.
B9	Capacidade de integrarse en grupo de traballo.
B10	Actitude orientada á análise.
B11	Actitude creativa.
B12	Capacidade para encontrar e manexar a información.
B13	Capacidade de comunicación oral e escrita.
B14	Manexo de sistemas asistidos por ordenador.
B15	Concepción espacial.
B16	Fixar obxectivos e tomar decisións.
B17	Analizar e descompoñer procesos.
B18	Capacidade de abstracción, comprensión e simplificación de problemas complexos.
B19	Motivar ao grupo de traballo.
B20	Capacidade de negociación.
B21	Abertos ao cambio.
B22	Vontade de mellora continua.
B23	Positivos fronte a problemas.
C3	Utilizar as ferramentas básicas das tecnoloxías da información e as comunicacións (TIC) necesarias para o exercicio da súa profesión e para a aprendizaxe ao longo da súa vida.
C6	Valorar criticamente o coñecemento, a tecnoloxía e a información dispoñible para resolver os problemas cos que deben enfrontarse.
C7	Asumir como profesional e cidadán a importancia da aprendizaxe ao longo da vida.

C8	Valorar a importancia que ten a investigación, a innovación e o desenvolvemento tecnolóxico no avance socioeconómico e cultural da sociedade.

Learning outcomes			
Learning outcomes	Study programme competences / results		
Ability to use different computational tools within the scope of naval architecture calculations	A4 A18 A19 A22 A28	B1 B2 B3 B4 B5 B8 B9 B10 B11 B12 B13 B14 B15 B16 B17 B18 B19 B20 B21 B22 B23	C3 C6 C7 C8

Contents	
Topic	Sub-topic
Forms	Hull Form Design Bow design Stern Design
Ship subdivision	Subdivision of the ship Tank definition Compartments definition
Loading conditions	Lightship weight definition Loading conditions Stability criteria IS 2008 Damage stability
Longitudinal Resistance	Definition of the longitudinal distribution of the lightweight Shear forces and bending moments
Structural design	Local scantling techniques

Planning				
Methodologies / tests	Competencies / Results	Teaching hours (in-person & virtual)	Student?s personal work hours	Total hours

Supervised projects	A4 A18 A19 A22 A28 B23 B22 B21 B20 B19 B18 B17 B16 B15 B14 B13 B12 B11 B10 B9 B8 B5 B4 B3 B2 B1 C3 C6 C7 C8	0	140	140
Personalized attention		10	0	10
(*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.				

Methodologies	
Methodologies	Description
Supervised projects	Development parts of ship design in the fields treated in the field with the scope defined in the course page.

Personalized attention	
Methodologies	Description
Supervised projects	Resolution of specific problems in the development of supervised work.

Assessment			
Methodologies	Competencies / Results	Description	Qualification
Supervised projects	A4 A18 A19 A22 A28 B23 B22 B21 B20 B19 B18 B17 B16 B15 B14 B13 B12 B11 B10 B9 B8 B5 B4 B3 B2 B1 C3 C6 C7 C8	Development of the areas of ship design in the field of the subject	100

Assessment comments
For the evaluation of the oral presentation and tutored works students will have to participate in at least 80% of the lectures. Students attend courses earlier this subject are exempted from this requirement. All students must meet the deadlines given in the website of subject.

Sources of information	
Basic	- David G. M. Watson (1998). Practical Ship Design. Elsevier
Complementary	

Recommendations
Subjects that it is recommended to have taken before
SHIP´S HYDROSTATIC AND STABILITY/730G01122 SHIP´S DESIGN/730G01123
Subjects that are recommended to be taken simultaneously
Subjects that continue the syllabus
3D MODEL OF HULL AND SHIP STRUCTURE /730G01166
Other comments

(*)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.