



Teaching Guide				
Identifying Data				2021/22
Subject (*)	War ships	Code	730G05043	
Study programme	Grao en Enxeñaría Naval e Oceánica			
Descriptors				
Cycle	Period	Year	Type	Credits
Graduate	2nd four-month period	Fourth	Optional	4.5
Language	Spanish			
Teaching method	Face-to-face			
Prerequisites				
Department	Enxeñaría Naval e Industrial			
Coordinador	Villa Caro, Raul	E-mail	raul.villa@udc.es	
Lecturers	Villa Caro, Raul	E-mail	raul.villa@udc.es	
Web	<a href="http://www.gii.udc.es/presentacion/persona/143">http://www.gii.udc.es/presentacion/persona/143</a>			
General description	Its objective is to provide a general description of the types of current warships, the project procedures, the characteristics that differentiate them from merchant ships, the stability criteria, the integrated logistic support and the types of maintenance. The student will acquire the necessary knowledge for his professional career in the field of military shipbuilding shipyards.			
Contingency plan	<p>1. Modifications in the contents</p> <p>The contents are not modified</p> <p>2. Methodologies</p> <p>* Teaching methodologies that are maintained</p> <p>-All teaching methodologies are maintained, changing only their face-to-face to non-face-to-face nature.</p> <p>* Teaching methodologies that change: Attendance at activities, and technical visits to facilities, planned during the course, will be replaced by virtual visits and presentations by personnel belonging to the virtually visited facilities.</p> <p>3. Mechanisms of personalized attention to students</p> <p>According to the published Tutoring schedule, via Moodle, Teams and email</p> <p>4. Modifications in the evaluation</p> <p>* Evaluation observations:</p> <p>The evaluation methodologies and their weighting are maintained, except for their face-to-face nature</p> <p>5. Modifications to the bibliography or webography</p> <p>No modifications</p>			

Study programme competences	
Code	Study programme competences
B5	That the students developed those skills of learning necessary to start subsequent studies with a high degree of autonomy
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	
To introduce the students to the "state of the art" of the new constructions of warships, singularities of the systems in comparison with those existing in civil construction, processes to follow in the projects and notions of logistical support and maintenance of ships .	B5	C6 C7



Contents	
Topic	Sub-topic
Block I. Project organization	Project organization
Block II. Survival	Survival
Block III. Noise control	Noise control
Block IV. Integrated logistic support	Integrated logistic support

Planning				
Methodologies / tests	Competencies	Ordinary class hours	Student?s personal work hours	Total hours
Guest lecture / keynote speech	B5 C6	22	22	44
Supervised projects	B5 C6 C7	8	34	42
Field trip	B5 C7	5	0	5
Problem solving	B5 C6 C7	10	9	19
Personalized attention		2.5	0	2.5

(\*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies	
Methodologies	Description
Guest lecture / keynote speech	Classes in the classroom with audiovisual media.
Supervised projects	Research and translations of military technology technical journals.
Field trip	Visits to military installations and warships.
Problem solving	Realization of a practical case.

Personalized attention	
Methodologies	Description
Problem solving Field trip Supervised projects Guest lecture / keynote speech	At any time at 655234433

Assessment			
Methodologies	Competencies	Description	Qualification
Problem solving	B5 C6 C7	They will be assigned in class by the teacher. They will include your defense.	40
Field trip	B5 C7	Assistance to warships.	5
Supervised projects	B5 C6 C7	It will be assigned in class by the teacher.	55

Assessment comments
In the mark of the supervised works as in the note of the solution of problems, the attendance to the activities and classes of the course will be included. Academic dispensation is not admitted. The criteria required to attend the second chance test are the same as in the first.

Sources of information



<p><b>Basic</b></p>	<p>- ENRIQUE CASANOVA RIVAS (). EL BUQUE DE GUERRA. FEIN Villa Caro, Raúl; Pernas Urrutia, Julio, Iluminación en los buques mediante sistemas de fibra óptica, V Congreso Nacional de i+d en Defensa y Seguridad. DESEi+d 2017. Actas, pp 594 - 600, 2017 Villa Caro, Raúl; Martínez, Angel, Eficiencia energética y sostenibilidad en los buques de la Armada española, V Congreso Nacional de i+d en Defensa y Seguridad. DESEi+d 2017. Actas, pp 662 - 670, 2017 Villa Caro, Raúl, ¿COLD IRONING?: TOMAS DE TIERRA EN LOS PUERTOS PARA LA ALIMENTACIÓN ELÉCTRICA DE LOS BUQUES, BOLETÍN TÉCNICO DE INGENIERÍA, pp 24 - 27, 2017 Raúl Villa Caro, Estudio sobre la mejora de la eficiencia energética en buques de guerra mediante el uso de cometas de tracción, Libro de Actas IV Congreso Nacional de I+D en Defensa y Seguridad, 2016, pp 555 - 562, 2016 Villa Caro, Raúl; Carral Couce, Luis; Fraguela Formoso, José Ángel; Álvarez Feal; José Carlos Juan, Posible evolución de los sistemas de amarre de los puertos militares y sus buques, Libro de Actas IV Congreso Nacional de I+D en Defensa y Seguridad, 2016, pp 173 - 180, 2016 Villa Caro, Raúl, Automatización de los Sistemas de Amarre de los Buques. Evolución Futura, III Congreso Nacional de I+D en Defensa y Seguridad, pp 181 - 187, 2015 RAÚL VILLA CARO; JOSÉ ENRIQUE FERNÁNDEZ LÓPEZ, Estándares de habitabilidad en buques, Anuario num. 5 da Facultade de Ciencias do Traballo da Universidade da Coruña, pp 421 - 434, 2014 José María Cardona; Raúl Villa Caro, ¿LA EXPONAV?, EL GRAN MUSEO DESCONOCIDO, Y LA EXPOSICIÓN ¿GIGANTES?, REVISTA GENERAL DE MARINA, pp 673 - 686, 2014 José Ángel Fraguela Formoso; Luis Carral; Raúl Villa Caro; Carlos Alvarez, Señalización de Seguridad en Buques, CD Ponencias II Congreso de Ingeniería Marítima, Portuaria y Naval CIMYN y I Congreso de Corrosión, 2014 Raúl Villa Caro; Luis Carral; José Fraguela; Pablo Novoa, Estudio de las ventajas de los nuevos sistemas de protección catódica y anticorrosivos instalados en buques de guerra, CD PONENCIAS: II Congreso Panamericano de Ingeniería Marítima, Portuaria y Naval (CIMYN) y I Congreso de Corrosión, 2014 Raúl Villa Caro, ESTUDIO DE MANTENIMIENTO PREDICTIVO EN UN BUQUE DE GUERRA DOTADO DE S.I.C.P., 2014 José J. de Troya Calatayud, Luis Carral Couce, José A. Fraguela Formoso, Raúl Villa Caro, ANÁLISIS DE LAS POSIBILIDADES DE USO DE LAS CÉLULAS DE COMBUSTIBLE EN BUQUES, IPEN JOURNAL, pp 17 - 17, 2012</p>
<p><b>Complementary</b></p>	

**Recommendations**

Subjects that it is recommended to have taken before

Subjects that are recommended to be taken simultaneously

Subjects that continue the syllabus

**Other comments**

To help achieve a sustained immediate environment and meet the objective of action number 5: "Healthy and sustainable environmental and social teaching and research "of the" Green Campus Ferrol Action Plan ".The delivery of the documentary works carried out in this matter: They will be requested in virtual format and / or computer support? It will be done through Moodle, in digital format without the need to print them? If necessary, make them on paper:- Plastics will not be used- Double-sided prints will be made.- Recycled paper will be used.- Draft printing will be avoided.? There must be a sustainable use of resources and the prevention of negative impacts on the natural environment.

(\*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.