Teaching Guide					
Identifying Data					2024/25
Subject (*)	Pollution Management			Code	631G01411
Study programme	Grao en Náutica e Transporte Marítimo				
Descriptors					
Cycle	Period	Year		Type	Credits
Graduate	1st four-month period	Fourth		Optional	6
Language	SpanishGalician				
Teaching method	Face-to-face				
Prerequisites					
Department	Ciencias da Navegación e Enxeñaría Mariña				
Coordinador	Cao Feijóo, Genaro		E-mail	genaro.cao@udc.es	
Lecturers	Cao Feijóo, Genaro		E-mail	genaro.cao@udc.es	
Web					
General description	This subject will emphasize the legal framework knowledge to carry out adequate management of marine pollution without forgetting the prevention and protection of its environment. For that purpose: regulations that pertain to liability for spills, compensation funds, pollution damage, anti-pollution contingency plans, ports of refuge will be studied in detail. At the same time, criteria and techniques for cleaning up the coast will be applied, paying special attention to the protection of sensitive areas, and options to minimize damage will be evaluated.				

Study programme competences / results	
Code	Study programme competences / results
A54	RA1C-Write, explain and transmit the theoretical knowledge acquired both orally and in writing using scientific-technical language.
A55	RA2C-Identify and relate acquired knowledge to other disciplines
A57	RA4C-Collecting and interpreting relevant data
A58	RA5C-Identify ship components.
A59	RA6C-Identify critical situations and use available means in order to resolve them effectively.
A64	RA112C?Gather objective information in personal interviews
A65	RA116C?Know the national and international regulations applicable to activities related to maritime transport and port operations.
B32	RA10H-Know, analyse, synthesise and apply the contents, fundamental concepts and applications of the subject.
B33	RA11H-Develop both individual and group work
B34	RA12H-Handle bibliographic material and computer resources.
B107	RA121H?Know and apply the regulations and techniques in matters of maritime transport safety management and protection of the marine environment.
C15	RA17X-Communicating effectively in a work environment.
C16	RA18X-Reviewing compliance with maritime legislative requirements
C45	RA122X?Develop shipboard and port facility contingency plans.

Learning outcomes			
Learning outcomes	Study programme competences / results		
RA1C-Write, explain and transmit the theoretical knowledge acquired both orally and in writing using scientific-technical language.	A54		
RA2C-Identify and relate acquired knowledge to other disciplines	A55		
RA4C-Collecting and interpreting relevant data	A57		
RA5C-Identify ship components.	A58		
RA6C-Identify critical situations and use available means in order to resolve them effectively.	A59		
RA112C-Gather objective information in personal interviews	A64		

RA116C-Know the national and international regulations applicable to activities related to maritime transport and port operations.	A65		
RA10H-Know, analyse, synthesise and apply the contents, fundamental concepts and applications of the subject.		B32	
RA11H-Develop both individual and group work		B33	
RA12H-Handle bibliographic material and computer resources.		B34	
RA121H-Know and apply the regulations and techniques in matters of maritime transport safety management and protection of the marine environment.		B107	
RA17X-Communicating effectively in a work environment.			C15
RA18X-Reviewing compliance with maritime legislative requirements			C16
RA122X-Develop shipboard and port facility contingency plans.			C45

Contents	
Topic	**Sub-topic**
PREVENCION DA CONTAMINACIÓN	EMSA, PAPEL NA LOITA CONTRA A CONTAMINACIÓN. PLANIFICACIÓN DE CONTINXENCIAS. LUGARES DE ABRIGADOIRO VIXILANCIA MARÍTIMA DA CONTAMINACIÓN. MODELOS DE DERIVA NA PREDICCION DE VERTEDURAS, ANÁLISE DE TRAXECTORIAS. MAPAS DE SENSIBILIDADE. CENTROS DE NIVEL 3. PLANIFICACIÓN DE EJERCICIOS DE DERRAMES.
LOITA CONTRA A CONTAMINACIÓN	CONTAMINACIÓN DA COSTA: AVALIACIÓN, TÉCNICAS DE LIMPEZA, PROTECCIÓN DE ZONAS SENSÍBEIS. DISPERSIVOS. ELECCIÓN DE OPCIÓNS PARA MINIMIZAR OS DANOS. XESTIÓN DE RESIDUOS.
CONVENIOS INTERNACIONAIS	C.I. DE RESPONSABILIDADE CIVIL (CLC). C.I. DO FONDO DE INDEMNIZACIÓN (IOPC FOUND). C.I. DE DANOS POLO COMBUSTÍBEL DOS BUQUES. CLUBS DE PROTECCIÓN E INDEMNIZACIÓN (P&I).
O desenvolvemento e superación destes contidos, xunto cos correspondentes a outras materias que inclúan a adquisición de competencias específicas da titulación, garanten o coñecemento, comprensión e suficiencia das competencias recollidas no cadro AII/2, do Convenio STCW, relacionadas co nivel de xestión de Primeiro Oficial de Ponte da Mariña Mercante, sen limitación de arqueo bruto e Capitán da Mariña Mercante ata o máximo de 3.000 GT.	Cadro A-II/2 del Convenio STCW. Especificación de las normas mínimas de competencia aplicables a Capitáns y primeiros oficiais de ponte de buques de arqueo bruto igual ou superior a 500 GT.

Planning				
Methodologies / tests	**Competencies / Results**	**Teaching hours (in-person & virtual)**	**Student?s personal work hours**	**Total hours**
Objective test	A54 A55 A58 A59 A65 B107 B32	2	0	2
Supervised projects	A54 A55 A57 B33 B34 B107 C16 C45	5	30	35
Guest lecture / keynote speech	A54 A55 A58 A59 A64 A65 B32 B107 C15 C16 C45	30	60	90

Oral presentation	A54 A57 B33 B34 C15	3	18	21
Personalized attention		2	0	2
(*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.				

Methodologies	
Methodologies	**Description**
Objective test	Final exam
Supervised projects	Projects carried out by students (individuals and/or in groups) regarding two contents of the subject. Throughout the four-month period, one or several assignments will be provided around two contents of the agenda that must be based on the basic and complementary bibliography of the guide and with another selected by the teaching staff and/or student pole. Its realization will begin in the classroom and be completed through the autonomous work of the students, attending more indications provided through the differentiation of teachers. Through the exhibition in the classroom, the work done will be shared.
Guest lecture / keynote speech	In the activity of the lecture guest, the contents that make up the theoretical framework will be worked on through oral presentation, guided by the use of presentations, audiovisual media and with the introduction of directed questions to the students with the purpose of favouring learning and the construction of knowledge. There will be an introductory general exposition of each one of the two different themes of which the program consists, indicating the aspects that the students should expand with their personal work, with the appropriate orientations bibliographic.
Oral presentation	On the supervised projects

Personalized attention	
Methodologies	**Description**
Guest lecture / keynote speech Supervised projects Oral presentation Objective test	The personalized differentiation described in relation to these methodologies is conceived as moments of work with the subject teachers. The way and the moment in which it will be developed will be indicated in each activity throughout the course according to the plan of matter work. Students with recognition of part-time dedication as established by the "RULE THAT REGULATES THE REGIME OF DEDICATION TO THE STUDY OF UNDERGRADUATE STUDENTS AT UDC (Articles 2.3; 3.b and 4.5)(05/29/2012). These students will develop their activity with the assistance and participation in the dynamics collected in Step 4 "Planning" and in the one that concerns us "Personalized attention" described for the " Supervised projects", through the workgroups that are formed in the subject. The activity will be carried out according to the observations of the evaluation regarding the flexibility of attendance participation and the requirements for overcoming the subject.

Assessment			
Methodologies	**Competencies / Results**	**Description**	**Qualification**
Guest lecture / keynote speech	A54 A55 A58 A59 A64 A65 B32 B107 C15 C16 C45	To evaluate the presentation, it will be evaluate: - Relevance and organization of the exposed contents. - Coordination of the presentation (reflecting collaborative work, not a sum of parts). - Level of understanding of the basic contents. - Clear explanation	10

Supervised projects	A54 A55 A57 B33 B34 B107 C16 C45	To evaluate the projects it will be taken into account: - Structure: presentation, content organization, clear explanation and grammar. - Content: Understanding of basic ideas, conceptual mastery, use of the sources worked on in the treatment of content throughout the semester and relationships between them.	20
Oral presentation	A54 A57 B33 B34 C15	The evaluation criteria referred to in Table A-II/1 of the STCW Code, and collected in the Quality Assurance System, will be taken into account when designing and carrying out the evaluation.	10
Objective test	A54 A55 A58 A59 A65 B107 B32	The evaluation criteria referred to in Table A-II/1 of the STCW Code, and collected in the Quality Assurance System, will be taken into account when designing and carrying out the evaluation.	60

Assessment comments
- STCW Convention 2010: The evaluation criteria referred to in Table A-II/1 of the STCW Code, and collected in the Quality Assurance System, will be taken into account when designing and carrying out the evaluation. - To pass the subject following the continuous evaluation it is necessary to pass each methodology. in-session lecture, at the same time as class attendance (minimum of 80%), the student participation will be valued too. Students who do not follow the continuous assessment will always have the option of taking the objective test. Consequently, under this circumstance, this will have a value in the evaluation of 100%. - Students with recognition of part-time dedication and the corresponding academic waiver that provide the assistance exemption, as established in the "RULE THAT REGULATES THE DEDICATION REGIME TO THE STUDY OF UNDERGRADUATE STUDENTS AT UDC (Articles 2.3; 3.b; 4.3; 6.b and 7.5) (05/04/2017) may carry out the partial tests, if any, without the need to attend 80% of the face-to-face classes, as long as the teacher is duly informed at the beginning of the course. Notwithstanding the foregoing, the professor can entrust these students with different works (individual and/or in groups) throughout the course to be presented in the tutorial schedule in order to score in the continuous evaluation the proportional part of the value of the master session. - About the sanctions applicable for de commission of serious offenses, article 11 of the Disciplinary Regulations of de student body of the University of A Coruña, approved by the Governing Council on 27/02/2023, point b) was amende in june 2023, to read: b) Qualification of suspense in the call in wich the fault it was commited, the student will be graded with ?fail? (numerical grade 0) in the corresponding call of the academic year, wheter the commission of the fault occurs at the first opportunity or at the second. For this, we will proceed to modify his qualification in the minutes of the first opportunity, if necessary.

Sources of information	
Basic	- IMO (). MARPOL 73/78. LONDON - IMO (2011). Directrices para la elaboración de planes de emergencia de a bordo contra la contaminación del mar . LONDRES - IMO (2011). Manual sobre la contaminación ocasionada por hidrocarburos. . LONDRES - IMO (2009). Manual sobre contaminación química. . LONDRES - Silos Rodríguez, José María (2008). Manual de lucha contra la contaminación por hidrocarburos . Cádiz : Servicio de Publicaciones de la Universidad de Cádiz - IMO (2007). Directrices relativas al Convenio sobre la prevención de la contaminación del mar por vertimiento de desechos y otras materias, 1972. . LONDRES - IMO (2007). Equipo de prevención de la contaminación conforme al MARPOL . LONDRES - Acinas García, Juan R (2003). Puertos de refugio y contaminación accidental en el mar . UDC - IMO (1997). Manual sobre contaminación química . LONDRES - (1996). La contaminación del mar fuentes, toxicidad, degradación y eliminación de contaminantes . Oviedo : Universidad, Servicio de Publicaciones - Boat Books Australia (2010). Response to marine oil spills . Livingston : Witherby Seamanship International Ltd. Australia - IMO (2010). Manual on oil spill risk evaluation and assessment of response preparedness . London
Complementary	

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
?As stated in the different regulations of application for university teaching, the gender perspective must be incorporated in this matter (Non-sexist language will be used, bibliography of authors of both sexes will be used, te intervention in class of students will be encouraged.Work will be done to identify and modify prejudices and sexist attitudes and will influence the environment to modify them and promote values of respect and equality.Situations of discrimination based on gender should be detected and actions and measures proposed to correct them?.