



Teaching Guide

Teaching Guide				
Identifying Data				2022/23
Subject (*)	Tanker and Passenger Ships		Code	631G03020
Study programme	Grao en Máquinas Navais			
Descriptors				
Cycle	Period	Year	Type	Credits
Graduate	2nd four-month period	Second	Obligatory	6
Language	SpanishGalician			
Teaching method	Face-to-face			
Prerequisites				
Department	Ciencias da Navegación e Enxeñaría Mariña			
Coordinador	Louro Rodríguez, Julio		E-mail	julio.louro@udc.es
Lecturers	Baalíña Insua, Alvaro Louro Rodríguez, Julio		E-mail	alvaro.baalina@udc.es julio.louro@udc.es
Web				
General description	It treats to give fulfillment to the formative requirements of the STCW Convention about professional courses of tanker ships (basic), and passenger ships			

Study programme competences

Code	Study programme competences
A1	CE01 - Realizar unha garda de máquinas segura
A8	CE08 - Vixiar o cumprimento das prescricións lexislativas.
A10	CE10 - Utilizar os sistemas de comunicación interna.
A12	CE12 - Garantir o cumprimento das prescricións sobre prevención da contaminación.
A13	CE13 - Prevención, control e loita contra incendios a bordo.
A16	CE16 - Aplicar as calidades de liderado e de traballo en equipo.
A17	CE17 - Contribuír á seguridade do persoal e do buque
A56	CE56 - Contribuír á seguridade das operacións de carga en petroleiros e quimiqueros.
A57	CE57 - Tomar precaucións para previr os riscos nas operacións dos buques tanque.
A58	CE58 - Tomar precaucións e medidas de seguridade e saúde no traballo a bordo de buques tanque.
A59	CE59 - Levar a cabo operacións de loita contra incendios en buques tanque
A60	CE60 - Responder a emerxencias a bordo de buques tanque.
A61	CE61 - Tomar precaucións para previr a contaminación del medio ambiente debida a la descarga de hidrocarburos o produtos químicos
A62	CE62 - Contribuír al funcionamento seguro de los buques tanque para el transporte de gas licuado.
A63	CE63 - Tomar precaucións para previr os riscos nas operacións dos buques tanque para o transporte de gas licuado.
A64	CE64 - Tomar precaucións e medidas de seguridade e saúde no traballo a bordo de buques tanque para o transporte de gas licuado.
A65	CE65 - Levar a cabo operacións de loita contra incendios en buques tanque para o transporte de gas licuado.
A66	CE66 - Responder a emerxencias a bordo de buques tanque para o transporte de gas licuado.
A67	CE67 - Tomar precaucións para previr a contaminación do medio ambiente debida ao desprendemento de gases licuados.
A68	CE68 - Organizar os procedementos de emerxencia de a bordo.
A69	CE69 - Optimizar a utilización dos recursos.
A70	CE70 - Dirixir a intervención en caso de emerxencia.
A71	CE71 - Dirixir aos pasaxeiros e aos demais membros do persoal en situacións de emerxencia.
A72	CE72 - Establecer e manter comunicacións eficaces.
A86	CE86 - Operar, reparar, manter e optimizar as instalacións auxiliares dos buques que transportan cargas especiais, tales como quimiqueros, LPG, LNG, petroleiros, cementeros, Ro- Ro, Pasaxe, botes rápidos, etc.
A99	CE99 - Ter a capacidade para exercer como Oficial de Máquinas da Mariña Mercante, unha vez superados os requisitos esixidos pola Administración Marítima.
A100	CE100 - Ter a capacidade para exercer como oficial ETO da Mariña Mercante, unha vez superados os requisitos esixidos pola Administración Marítima.



B2	CB2 - Aplicar os coñecementos no seu traballo ou vocación dunha forma profesional e posuír competencias demostrables por medio da elaboración e defensa de argumentos e resolución de problemas dentro da área dos seus estudos
B7	CG02 - Resolver problemas de forma efectiva.
B8	CG03 - Comunicarse de maneira efectiva nunha contorna de traballo.
B9	CG04 - Traballar de forma autónoma con iniciativa.
B10	CG05 - Traballar de forma colaborativa.
B11	CG06 - Comportarse con ética e responsabilidade social como cidadán e como profesional.
B12	CG07 - Capacidade para interpretar, seleccionar e valorar conceptos adquiridos noutras disciplinas do ámbito mariño, mediante fundamentos físico-matemáticos.
B13	CG08 - Capacidade para a aprendizaxe de novos métodos e teorías, que lle doten dunha gran versatilidade para adaptarse a novas situacións.
B14	CG09 - Comunicar por escrito e oralmente os coñecementos procedentes da linguaxe científica.
B15	CG10 - Capacidade para resolver problemas con iniciativa, toma de decisións, creatividade, razoamento crítico e de comunicar e transmitir coñecementos habilidades e destrezas.
B16	CG11 - Valorar criticamente o coñecemento, a tecnoloxía e a información dispoñible para resolver os problemas cos que deben enfrontarse.
B17	CG12 - Asumir como profesional e cidadán a importancia da aprendizaxe ao longo da vida.
C1	CT01 - Expresarse correctamente, tanto de forma oral como escrita, nas linguas oficiais da comunidade autónoma.
C3	CT03 - 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.
C4	CT04 - Desenvolverse para o exercicio dunha cidadanía respectuosa coa cultura democrática, os dereitos humanos e a perspectiva de xénero.
C5	CT05 - Entender a importancia da cultura emprendedora e coñecer os medios ao alcance das persoas emprendedoras.
C7	CT07 - Desenvolver a capacidade de traballar en equipos interdisciplinares ou transdisciplinares, para ofrecer propostas que contribúan a un desenvolvemento sostible ambiental, económico, político e social.
C9	CT09 - Ter a capacidade de xestionar tempos e recursos: desenvolver plans, priorizar actividades, identificar as críticas, establecer prazos e cumprilos.

Learning outcomes

Learning outcomes	Study programme competences
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Sailing, with safety and respect to the environment protection, in tanker ships	A1	B2	C1
	A8	B7	C3
	A10	B8	C4
	A12	B9	C5
	A13	B10	C7
	A16	B11	C9
	A17	B12	
	A56	B13	
	A57	B14	
	A58	B15	
	A59	B16	
	A60	B17	
	A61		
	A62		
	A63		
	A64		
	A65		
	A66		
	A67		
	A68		
	A69		
	A86		
	A99		
	A100		
The result of the learning: Sailing with safety and respect to the environment protection on tanker ships, fulfils with the obtaining of the competitions established in the Column 1 of the Tables STCW: A-V/1-1-1; A-V/1-2-1;	A1	B2	C1
	A8	B7	C3
	A10	B8	C4
	A12	B9	C5
	A13	B10	C7
	A16	B11	C9
	A17	B12	
	A56	B13	
	A57	B14	
	A58	B15	
	A59	B16	
	A60	B17	
	A61		
	A62		
	A63		
	A64		
	A65		
	A66		
	A67		
	A68		
	A69		
	A86		
	A99		
	A100		



Knowledge and skills in managing crowds, covering the mandatory competences and the required knowledge, understanding and proficiencies specified in paragraph 3 of section A-V/2 and table A-V/2-1 of the STCW code. Training in crisis management during emergency situations on board passenger ships as specified in paragraph 4 of section A-V/2 and table A-V/2-2 of STCW Code.	A8	B2	C1
	A10	B7	C3
	A16	B8	C4
	A17	B9	C5
	A69	B10	C7
	A70	B11	C9
	A71	B12	
	A72	B13	
	A86	B14	
	A99	B15	
	A100	B16	
		B17	

Contents	
Topic	Sub-topic
Basic Training for Oil and Chemical Tanker Cargo Operations. Table A-V/1-1-1, STCW. IMO Model Course 1.01.	FOR OIL, GAS AND CHEMICAL PRODUCTS: 1.- Regulations and Codes of practices 2.- Tankers ships equipment and Project 3.- Cargo properties. 4.- Ship's operations 5.- Risks prevention.
Basic Training for Liquefied Gas Tanker Cargo Operations. Table A-V/1-2-1, STCW. IMO Model course 1.04.	6.- Occupational Safety and Health 7.- Closed spaces 8.- Measures Equipments 9.-a Emergency operations 10.- Fire prevention and fire fighting 11.- Pollution prevention.



Buques de pasaxe e ro-ro. Capítulo V, sección A-V/2. Cursos modelo OMI 1.29 (ed. 2000), actualización 1.41 e 1.42 (ed 2018),	The development of these sub-topics (1) fulfils with the column 2, Knowledge, Understanding and Proficiency, of the STCW Convention, modified by Manila 2010, of the following Tables: Table A-V/1-1-1. Specification of minimum standard of competence in basic training for oil and chemical tanker cargo operations Table A-V/1-2-1. Specification of minimum standard of competence in basic training for liquefied gas tanker cargo operations Table A-V/2.- Mandatory minimum requirements for the training and qualification of masters, officers, ratings and other personnel on passenger ships. (1): The obtaining of the competences established in the Column 1 of the respective Tables STCW, complete with overcoming of the contents related in the complementary matters to this: ? Naval hygiene and Risks at work. ? Chemistry. ? Maritime Safety ? Thermodynamics and Engineering Thermodynamics.
Passenger ships and ro-ro. Chapter V, section A-V/2 IMO model courses 1.29 (ed. 2000), 1.41 y 1.42 (ed 2018),	-Proficiency in crisis management and human behaviour training including passenger safety, cargo safety and hull integrity training. Communication with passengers (standard maritime communication phrases-SMCP). Abandonment and emergency exits. - Emergency plans and procedures. Shipboard emergency drills. Procedures for lowering and hoisting ramps, setting up and stowing retractable vehicle decks. Individual safety equipment, emergency signals. Evacuation. Function table.

Planning				
Methodologies / tests	Competencies	Ordinary class hours	Student?s personal work hours	Total hours
Laboratory practice	A1 A8 A10 A12 A13 A16 A17 A56 A57 A58 A59 A60 A61 A62 A63 A64 A65 A66 A67 A68 A69 A70 A71 A72 A86 A99 A100 B2 B7 B8 B9 B10 B11 B12 B13 B14 B15 B16 B17 C1 C3 C4 C5 C7 C9	8	7	15



Mixed objective/subjective test	A1 A8 A10 A12 A13 A16 A17 A56 A57 A58 A59 A60 A61 A62 A63 A64 A65 A66 A67 A68 A69 A70 A71 A72 A86 A99 A100 B2 B7 B8 B9 B10 B11 B12 B13 B14 B15 B16 B17	9	54	63
Guest lecture / keynote speech	A1 A8 A10 A12 A13 A16 A17 A56 A57 A58 A59 A60 A61 A62 A63 A64 A65 A66 A67 A68 A69 A70 A71 A72 A86 A99 A100 B2 B7 B8 B9 B10 B11 B12 B13 B14 B15 B16 B17 C1 C3	35	35	70
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
Laboratory practice	They will realise practices with safety and rescue equipments used in this type of tanker ships. Likewise, they will realise operational practices in the simulator. A1, A10, A12, A23, A25, A27, B1, B6, B8, B11, B12, C1 and C2.
Mixed objective/subjective test	They will realise partial exams of each one of the three subjects and a final exam of all the matter. So much the ordinary examinations like the extraordinary will regulate by the same format. B2, B3, B5, B7, B13, B14, B15, B16, C1 and C2. In this context will apply the specific competences of the degree purchased from practices of laboratory and guest lecture / keynote speech sessions.
Guest lecture / keynote speech	They will realise guest lecture / keynote speech., including professionals of recognised prestige. A1, A10, A12, A17, A22, A23, A25, A27, A29, A33, A35, B1, B7, B8, B11, B12, C1 and C2.

Personalized attention	
Methodologies	Description
Guest lecture / keynote speech Laboratory practice	In addition to the hours of tutorials established for all the students of the matter, establish 2 hours for students with needs. Students with part-time enrollment and academic grant of attendance exemption, as established by the "NORMA QUE REGULA EL RÉGIMEN DE DEDICACIÓN AL ESTUDIO DE LOS ESTUDANTES DE GRADO Y MASTER EN LA UDC (Arts. 2.3; 3.b; 4.3 and 7.5) (05/04/2017) may take the mid-term exams, if any, without having to attend 80% of the face-to-face classes, as long as the professors are duly informed at the beginning of the course. Regardless of the foregoing, the professors may assign these students with different assignments/ problems throughout the course to be presented during tutorials, using the TEAMS system if appropriate in the teacher's opinion.

Assessment			
Methodologies	Competencies	Description	Qualification



Guest lecture / keynote speech	A1 A8 A10 A12 A13 A16 A17 A56 A57 A58 A59 A60 A61 A62 A63 A64 A65 A66 A67 A68 A69 A70 A71 A72 A86 A99 A100 B2 B7 B8 B9 B10 B11 B12 B13 B14 B15 B16 B17 C1 C3	It will value the assistance to guest lectura / Keynote speech	10
Mixed objective/subjective test	A1 A8 A10 A12 A13 A16 A17 A56 A57 A58 A59 A60 A61 A62 A63 A64 A65 A66 A67 A68 A69 A70 A71 A72 A86 A99 A100 B2 B7 B8 B9 B10 B11 B12 B13 B14 B15 B16 B17	It will value with a maximum of 90% the written exams	90
Laboratory practice	A1 A8 A10 A12 A13 A16 A17 A56 A57 A58 A59 A60 A61 A62 A63 A64 A65 A66 A67 A68 A69 A70 A71 A72 A86 A99 A100 B2 B7 B8 B9 B10 B11 B12 B13 B14 B15 B16 B17 C1 C3 C4 C5 C7 C9	STCW-related practices are mandatory in their entirety.	0
Others			

Assessment comments



The system of evaluation fulfils with the assessment criteria of the competence collected in the Column 4 of the following Tables of the STCW Convention, modified by Manila 2010:

- Table A-V/1-1-1. Specification of minimum standard of competence in basic training for oil and chemical tanker cargo operations

- Table A-V/1-1-2. Specification of minimum standard of competence in advanced training for oil tanker cargo operations

The assessment criteria contemplated in the Tables A-III/1 of the STCW Code, and collected in the System of Guarantee of Quality, will take into account to design and realise the evaluation.

The partial exams form part of the continuous evaluation, therefore to be able to take part of them, the assistance to the guest lectura / Keynote speech must be of 90%.

STCW-related practices are mandatory in their entirety.

Practices includes, whenever it was possible, the visit in the sailboats to tanker ships berthed at terminal: oil, gas and chemicals tankers or vessels berthed.

Students with

part-time enrollment and academic grant of attendance

exemption, the 10% of attendance will be distributed proportionally among the rest of the criteria.

The student not admitted to continuous evaluation will be evaluated in face-to-face test with a value of 100%.

Sources of information

Basic	BIBLIOGRAFÍA BÁSICA DA MATERIA: BUQUES TANQUES PETROLEIROS Manual de Carga y Seguridad para Buques Tanques IMO Guía Internacional para Petroleros y Terminales, IMO Lavado con crudo y Empleo del Gas Inerte. Moreno Isaac. Tanker Handbook for Deck. Officers. Batist, G. Supertankers, Anatomy; Operations. Solly Raymond. Practical Petroleum Tables for ship use. ASTM Código para la construcción y equipo de Buques Tanques Petroleros. Tanker Cargo Handling. R Terford. SOLAS IMO. MARPOL. IMO. Safety in Oil Tankers International Chamber of Shipping, Carthusian Court, 12 Carthusian Street, London, ICS/OCIMF/IAPH, International Safety Guide for Oil Tankers and Terminals Witherby and Co. Ltd., 32/36 Aylesbury Street, London International Chamber of Shipping/Oil Companies International Marine Forum, Ship to Ship Transfer Guide (Petroleum) Witherby and Co. Ltd., London (ISBN 0-948691-49-2) International Chamber of Shipping Oil Companies International Marine Forum Seas Guide for Oil Tankers (Retention of oil residues on board) (Witherby and Co. Ltd., London) (ISBN 0-948691-15-8) Guide to Helicopter/Ship Operations Contaminación Marina. Instituto Marítimo Español. 2008. Revista Naval, Carlos Rodríguez Vidal, 2003 Manual de Lavado con crudo y gas inerte. José Luís Chinea López, Vicente Hernández Santaella. COMME. Gas inerte, limpieza de tanques y desgasificación en buques petroleros. David Dios Lustres. El buque tanque. Capitán I.G. Reigadas. >Manual del buque tanque. José Eloy García Tobío. Los buques tanque y su clasificación. Guillermo Ricardo Gadea. > Gestión técnica de superpetrolero tipo. Nuria Vázquez Couso. Gas inerte, limpieza de tanques y desgasificación en buques petroleros
Complementary	- IMO (2018). Model Course 1.41. Passenger ship crowd management training. IMO - IMO (2018). Model Course 1.42. Passenger ship crisis management and human behaviour training. IMO Apuntes del profesor. Apuntes del profesor.

Recommendations

Subjects that it is recommended to have taken before

Naval Hygiene and Risks at Work/631G01104

Chemistry/631G01107

Maritime Safety /631G01211

Subjects that are recommended to be taken simultaneously

Thermodynamics and Engineering Thermodynamics/631G03014



Subjects that continue the syllabus
Other comments
To achieve these certificates:- Basic Training for Oil and Chemical Tanker Cargo Operations. - Basic Training for Liquefied Gas Tanker Cargo Operations. It is necessary to pass the four associated subjets (not compensated)

(*)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.