



Teaching Guide

Teaching Guide				
Identifying Data				2018/19
Subject (*)	Maritime Radiocommunications		Code	631G01307
Study programme	Grao en Náutica e Transporte Marítimo			
Descriptors				
Cycle	Period	Year	Type	Credits
Graduate	2nd four-month period	Third	Obligatory	6
Language	English			
Teaching method	Face-to-face			
Prerequisites				
Department	Ciencias da Navegación e Enxeñaría Mariña			
Coordinador	López López, María Natividad	E-mail	natividad.lopezl@udc.es	
Lecturers	López López, María Natividad	E-mail	natividad.lopezl@udc.es	
Web				
General description	Capacitar a los alumnos en todos los aspectos relacionados con las Comunicaciones Marítimas con el objetivo de que consigan la capacidad ncesaria para manejar todos los equipos siguiendo los procedimientos establecidos.			

Study programme competences

Code	Study programme competences
A10	Redactar e interpretar documentación técnica e publicacións náuticas.
A11	Empregar o inglés, falado e escrito, aplicado á navegación e ao negocio marítimo.
A17	Adoptar as medidas axeitadas en casos de emerxencias.
A18	Responder a sinais de socorro no mar.
A19	Utilizar as frases normalizadas da OMI para as comunicacións marítimas, e emprego do inglés falado e escrito.
A20	Transmitir e recibir información mediante todo tipo de sinais.
A26	Operar os dispositivos de salvamento.
A29	Responder correctamente ás diferentes situacións de emerxencia.
A37	Usar correctamente os diferentes aparatos de navegación e radiocomunicacións.
B1	Aprender a aprender.
B2	Resolver problemas de xeito efectivo.
B3	Aplicar un pensamento crítico, lóxico e creativo.
B4	Comunicarse de xeito efectivo nun ámbito de traballo.
B5	Traballar de forma autónoma con iniciativa.
B6	Traballar de forma colaboradora.
B7	Comportarse con ética e responsabilidade social como cidadán e como profesional.
B11	Capacidade de adaptación a novas situacións.
B12	Uso das novas tecnoloxías TIC, e de Internet como medio de comunicación e como fonte de información.
B18	Dominar a expresión e a comprensión de forma oral e escrita dun idioma estranxeiro.
B19	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.
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.
C9	Posuír e comprender coñecementos que aporten unha base ou oportunidade de ser orixinais no desenvolvemento e/ou aplicación de ideas, a miúdo nun contexto de investigación

Learning outcomes

Learning outcomes	Study programme competences
-------------------	-----------------------------



1. To transmit and to receive information using the equipment of system GMDSS.	A10	B1	C3
	A11	B3	C9
	A17	B4	
	A18	B5	
	A19	B6	
	A20	B7	
	A26	B12	
	A29	B18	
	A37	B19	
2. To guarantee the service of radio communications in emergency.	A10	B2	C3
	A11	B4	
	A17	B12	
	A18		
	A19		
	A20		
	A26		
	A29		
	A37		
3. To use procedures to avoid transmissions involuntary and false alert to mitigate its consequences and effects.	A10	B1	C3
	A11	B2	C9
	A17	B3	
	A18	B4	
	A19	B5	
	A20	B6	
	A26	B7	
	A29	B11	
	A37	B12	
4. To know and to apply to the procedures of radio communications search and rescue.		B18	
		B19	
	A10	B1	C3
	A11	B2	C9
	A17	B3	
	A18	B4	
	A19	B11	
	A20	B12	
	A26	B18	
5. To handle and to work with the new technologies of the information and their application in the systems and equipment used in the communications.	A29	B19	
	A37		
	A10	B1	C3
	A11	B2	C9
	A17	B3	
	A18	B4	
	A19	B5	
	A20	B6	
	A26	B7	
	A29	B11	
	A37	B12	
		B18	
		B19	



6. To make work the rescue devices	A10	B1	C3
	A11	B2	C9
	A17	B3	
	A18	B4	
	A19	B5	
	A20	B6	
	A26	B7	
	A29	B11	
	A37	B12	
		B18	
		B19	

Contents	
Topic	Sub-topic
CHAPTER I. INTRODUCCIÓN TO THE RADIO-TELEPHONE COMMUNICATIONS	1.1 the RADIOELECTRIC PHANTOM OF FREQUENCIES 1.2 LAS FRECUENCIAS OF THE MARINE MOVABLE SERVICE (SMM) 1.3 THE ELECTROMAGNETIC WAVES OF THE RF PHANTOM 1.4 THE REGULATION THE INTERNATIONAL OF THE FREQUENCY SPECTRUM OF RADIO 1.5 DIFFERENT TYPES FROM MODULATION OF THE CARRIER WAVE 1.6 THE DENOMINATION OF THE EMISSIONS
CHAPTER II.LA PROPAGATION OF the ELECTROMAGNETIC WAVES OF RF	2.1 the ATMOSPHERE OF the LAND 2.2 the PROPAGATION OF the WAVES RADIO 2.3 the ENERGY LOSSES OF the CELESTE WAVE 2.4 the IONOSPHERIC VARIATIONS and the DISTURBANCES: Its INFLUENCE IN the RADIO COMMUNICATIONSES. 2.5 THE MODE OF PROPAGATION OF THE WAVES RADIO BASED ON THE FREQUENCY BAND: BRIEF SUMMARY
CHAPTER III. COMPONENTS, FAILURES AND CONTROLS OF RADIOMARITIME EQUIPMENT	3.1 COMPONENTS OF AN RADIOMARITIME EQUIPMENT 3.2 FAILURES MORE COMMON IN RADIOMARITIME EQUIPMENT 3.3 DESCRIPTION OF CONTROLS MORE COMMON IN THE TRANSCEIVERS
CHAPTER IV. THE ANTENNAS OF THE SHIPS	4.1 INTRODUCTION 4.2 FOUNDATIONS OF THE ANTENNA 4.3 THE ANTENNA SYNTONY: LENGTH OF ANTENNA AND FREQUENCY OF RESONANCE 4.4 TYPES OF ANTENNAS OF THE SHIPS FOR GROUND COMMUNICATION LINESES, VHF AND MF/HF 4.5 THE CALCULATION OF THE LENGTH OF AN ANTENNA
CHAPTER V.PROCEDURES OF RADIOTELEPHONY FOR NONSUBJECT SHIPS TO SINGLE CAP IV OF SOLAS [SHIPS NO-GMDSS]	5.1 INTRODUCTION 5.2 THE PROCEDURES DE SOCORRO IN RTF FOR SHIPS NO-GMDSS 5.3 THE EMERGENCY PROCEDURES AND SECURITY IN RTF FOR SHIPS NO-GMDSS 5.4 THE PROCEDURES OF ROUTINE IN RTF FOR SHIPS NO-GMDSS 5.5 PROCEDURES OF ROUTINE IN RTF FOR CALL AND RESPONSE 5.6 THE PERIODS OF SILENCE IN THE RTF FREQUENCIES



CHAPTER VI. INTRODUCTION TO the WORLD-WIDE SYSTEM OF ASSISTANCE AND MARINE SECURITY [System GMDSS]	6.1 INTRODUCTION 6.2 IMPLEMENTATION 6.3 BASIC CONCEPT OF THE GMDSS 6.4 the PREVIOUS SYSTEM AND the NECESSITY TO IMPROVE IT 6.5 THE AREAS OF NAVIGATION OF THE GMDSS 6.6 THE FUNCTIONS OF THE GMDSS 6.7 THE REQUIRED BASIC EQUIPMENT 6.8 the SPANISH NORM OF APPLICATION FOR nonSUBJECT SHIPS To CHAPTER IV OF the SINGLE ones (SHIPS NO-GMDSS)
CHAPTER VII. DIGITAL SELECTIVE RINGING (DIGITAL SELECTIVE CALLING ? DSC-)	7.1 INTRODUCTION 7.2 AS the DSC WORKS 7.3 GENERAL CHARACTERISTICS 7.4 STRUCTURE AND CONTENT OF A DSC CALL 7.5 MMSI (Maritime Mobile Service Identity) 7.6 THE COMPONENTS OF A DSC CALL 7.7 CONSIDERATIONS ABOUT the MARINE AREA IN Which the SHIP SAILS 7.8 THE CHANNELS DE SOCORRO DSC 7.9 THE LISTENING FREQUENCIESOF ASSISTANCE IN DSC 7.10 the CALL OF TEST IN DSC EQUIPMENT 7.11 THE TYPES OF DSC CALLS 7.12 THE COMPONENTS OF DSC EQUIPMENT
CHAPTER VIII. PROCEDURES OF OPERATION OF DSC EQUIPMENT	8.1 INTRODUCTION 8.2 PROCEDURES OF OPERATION FOR the SHIPS THAT COMMUNICATE WITH EQUIPMENT DSC IN the BANDS OF VHF, MF and HF 8.3 SECURITY 8.4 PUBLIC CORRESPONDENCE 8.5 SPECIAL CONDITIONS AND PROCEDURES FOR COMMUNICATIONS BY MEANS OF DSC IN HF 8.6 CANCELLATION OF A FALSE ALERT OF DSC ASSISTANCE
CHAPTER IX. THE NAVTEX	9.1 the INFORMATION ON MARINE SECURITY UNDER the GMDSS 9.2 SYSTEM NAVTEX 9.3 THE FORMAT OF THE MESSAGE 9.4 RECEIVER NAVTEX 9.5 PRACTICAL INSTRUCCIONES FOR the USE OF RECEIVER NAVTEX 9.6 LIST OF VERIFICATION OF RECEIVER NAVTEX
CHAPTER X. THE RADIOTÉLEX	10.1 SYSTEM RADIOTÉLEX 10.2 THE EQUIPMENT 10.3 NUMBERS OF IDENTIFICATION 10.4 WAYS OF OPERATION OF THE RADIOTÉLEX 10.5 CODES OF SERVICES AND COMMANDOS USED IN RADIOTÉLEX 10.6 FORMAT OF THE MESSAGE 10.7 PROCEDURE FROM CALL TO A COAST 10.8 RESCUE TRAFFIC 10.9 EMERGENCY CALLS AND SECURITY



CHAPTER XI.COMMUNICATIONS BY SATELLITE	11.1 INTRODUCTION 11.2 THE LAUNCHING 11.3 PARAMETERS OF the ORBITS 11,. LAWS DE KEPLER 11.5 DISTURBING FORCES 11.6 CLASSIFICATION OF the ORBITS BY ITS HEIGHT 11.7 FREQUENCY BANDS 11.8 ADVANTAGES OF THE SATELLITE COMMUNICATIONSES
CHAPTER XII. INMARSAT	12.1 INTRODUCTION 12.2 THE SATELITE SYSTEM OF INMARSAT 12.3 THE SPACE SEGMENT 12.4 THE TERRESTRIAL SEGMENT 12.5 MOVABLE STATIONS 12.6 SERVICES THAT INMARSAT PROVIDES 12.7 CODES OF TWO NUMBERS USED FOR TELEPHONE AND TELEX WITH INMARSAT
CHAPTER XIII. INMARSAT-B, M and Mini M	13.1 INMARSAT-B 13.2 INMARSAT-B HSD 13.3 ENGINEERING SPECIFICATIONS OF A TERMINAL INMARSAT-B 13.4 INMARSAT-M 13.5 INMARSAT Mini 13.6 DIRECTION OF the ANTENNA 13.7 DISTRESS ALERT SHIP-LAND 13.8 DISTRESS CALLS BY TELEPHONE 13.9 DISTRESS CALLS BY TELEX 13.10 DISTRESS ALERT RECEPTION 13.11 PROCEDURES OF TEST OF the DISTRESS CALLS 13.12 CALLS WITH EMERGENCY PRIORITY AND SECURITY 13.13 CALLS BY TELEPHONE 13.14 COMMUNICATIONS BY FACSIMILE 13.15 CALLS BY TELEX 13.16 CODES OF FAILURE OF CONNECTION IN THE TELEX NETWORKS 13.17 COMMUNICATIONS FOR DATA TRANSMISSION
CHAPTER XIV. INMARSAT-C	14.1 SYSTEM INMARSAT-C 14.2 EQUIPMENT INMARSAT-C 14.3 ENGINEERING SPECIFICATIONS OF ONE MONTH INMARSAT-C 14.4 CLASSES OF TERMINALS INMARSAT-C 14.5 LOGIN AND LOGOUT 14.6 SERVICES 14.7 TRANSMISSION OF AN ALERT AND A DISTRESS MESSAGE 14.8 COMMUNICATIONS WITH A TERMINAL INMARSAT-C 14.9 SERVICES OF MAIL 14.10 RELAYS OF SHORE-TO-SHIP DISTRESS ALERT 14.11 CANCELLATION OF AN DISTRESS ALERT 14.12 CODES OF IT DOES NOT GIVE OF MESSAGES IN INMARSAT-C 14.13 SSAS (Ship Security Alert System) 14.14 PANEL OF ALARMS



CHAPTER XV. MARITIME SAFETY INFORMATION (MSI) SYSTEM	15.1 INTRODUCTION 15.2 INFORMATION ABOUT MARITIME SAFETY (MSI) 15.3 INTENSIFIED CALL TO INMARSAT GROUPS 15.4 SERVICE SAFETYNET 15.5 TYPES OF MESSAGES THAT CAN BE RECEIVED BY SAFETYNET 15.6 AREAS NAVAREA AND METAREA 15.7 WORLD-WIDE SERVICE OF NAVIGATIONAL WARNINGS 15.8 RECEIVERS EGC 15.9 SPREADING OF the INFORMATION ON MARINE SECURITY BY MEANS OF SERVICE SAFETYNET 15.10 RECEPTION OF MESSAGES SAFETYNET 15.11 TYPICAL FORMAT OF A MESSAGE MSI 15.12 MESSAGES RELATED TO the PIRACY 15.13 LIKE HANDLING RECEIVER EGC 15.14 RECEPTION OF MSI BY MEANS OF DIRECT IMPRESSION OF NARROW BAND IN HIGH FREQUENCY (HF IDBE or HF NBDP) 15.15 FLEETNET
CHAPTER XVI. INMARSAT FLEET	16.1 INTRODUCTION 16.2 SOLUTIONS INMARSAT FLEET 16.3 FLEET F77 16.4 INMARSAT FLEET F77 and the GMDSS 16.5 DISTRESS CALLS 16.6 PROCEDURES OF TEST OF the DISTRESS CALLS 16.7 CALLS WITH EMERGENCY PRIORITY AND SECURITY 16.8 CALLS BY TELEPHONE 16.9 COMMUNICATIONS BY FACSIMILE 16.10 COMMUNICATIONS FOR DATA TRANSMISSION 16.11 COMMUNICATIONS To 128K 16.12 OPERATION OF THE EQUIPMENT BY MEANS OF A PC 16.13 WHEN TO USE MPDS OR ISDN 16.14 INMARSAT FLEETPHONE 16.15 RATE TABLE OF the SERVICES OF INMARSAT FLEET 16.16 COMPARISON OF the DIFFERENT SYSTEMS FROM INMARSAT
CHAPTER XVII. INMARSAT FLEETBROADBAND SYSTEM	17.1 INTRODUCTION 17.2 NETWORK FLEETBROADBAND 17.3 TERMINALS FLEETBROADBAND 17.4 SERVICES THAT A TERMINAL FLEETBROADBAND PROVIDES 17.5 SELECTION OF THE TYPE OF CONNECTION IP 17.6 LIMITATIONS OF SYSTEM FLEETBROADBAND 17.7 FLEETBROADBAND LAUNCHPAD 17.8 CALLS BY TELEPHONE AND SHIPMENT OF FAXES 17.9 FLEETBROADBAND TARIFFS 17.10 COMPARISON OF TERMINALS FLEETBROADBAND AND FLEET F77 17.11 TERMINALS VSAT 17.12 SYSTEM IRIDIUM 17.13 SYSTEM GLOBALSTAR 17.14 SYSTEM THURAYA



CHAPTER XVIII. EMERGENCY POSITION INDICATING RADIO BEACONS (EPIRBs)	18.1 DEFINITION 18.2 TYPES OF RADIOBEACONS 18.3 INTRODUCTION To SYSTEM COSPAS-SARSAT 18.4 GENERAL CONCEPT OF SYSTEM COSPAS-SARSAT 18.5 THE SPACE SEGMENT 18.6 THE TERRESTRIAL SEGMENT 18.7 COVER WAYS 18.8 RADIOBEACON OF 121.5 MHZ 18.9 RADIOBEACON OF 406 MHZ 18.10 COMPONENTS OF A RADIOBEACON 18.11 REGISTRY OF the RADIOBEACONS OF 406 MHZ. 18.12 FALSE ALERT 18.14 TESTS AND INSPECTION OF the RADIOBEACONS 18.13 RADIOBEACON OF VHF 18.14 PERSONAL RADIOBEACONS
CHAPTER XIX. SEARCH AND RESCUE TRANSPONDERS AND BIDIRECTIONAL RADIO-TELEPHONE EQUIPMENT	19.1 INTRODUCTION 19.2 TECHNICAL AND OPERATIONAL CHARACTERISTICS OF THE SART 19.3 FACTORS THAT AFFECT To the DETECTION RANGE 19.4 INSPECTION AND TEST OF THE RESPONDER 19.5 EFFECTS OF the ANTENNA HEIGHT AND OBSTRUCTION OF the SIGNAL OF EXIT BY the BOAT OR LIFE RAFT and Their OCCUPANTS IN the RANGE OF DETECTION OF the SART 19.5.1 Effects of the antenna height in the range of detection 19.5.2 Effects of the boat of survival in signal SART 19.6 HANDLING OF MARINE RADARS FOR DETECTION OF SART 19.7 AIS-SART 19.8 BIDIRECTIONAL RADIO-TELEPHONE EQUIPMENT FOR SURVIVAL BOATS 19.9 EQUIPMENT OF VHF FOR COMMUNICATIONS IN EMERGENCY IN THE AERONAUTICAL FREQUENCIES
CHAPTER XX. SEARCH AND RESCUE - AGREEMENT SAR	20.1 INTERNATIONAL TREATY ON MARINE SEARCH AND RESCUE 20.2 THE GMDSS AND OPERATIONS SAR 20.3 MEASURES TO TAKE BY the SHIP IN DANGER 20.4 MEASURES THAT ARE DE TOMAR Los HELPING SHIPS 20.5 SERVICES OF LISTENING 20.6 AREAS SEARCH AND RESCUE (SRR) 20.7 COORDINATION SAR 20.8 SYSTEM OF NOTIFICATION OF SHIPS 20.9 PHASES IN EMERGENCY 20.10 INFORMATION OF NOTIFICATION OF CONTINGENCIES 20.11 THE ORGANIZATION OF SERVICE SAR IN SPAIN



CHAPTER XXI. REGULATION OF RADIO COMMUNICATIONS, TARIFFS AND GENERAL INFORMATION	21.1 AUTHORITY OF THE CAPTAIN 21.2 OBLIGATIONS CAPTAIN TO DISTRESS 21.3 SECRET OF the COMMUNICATIONS 21.4 LICENSE OF the RADIO STATION 21.5 CERTIFICATE OF RADIOELECTRIC SECURITY 21.6 PERSONNEL OF RADIO COMMUNICATIONS 21.7 CALL SYMBOL (CALL SIGN) 21.8 RADIOELECTRIC REGISTRIES 21.9 AUTHORITY IN CHARGE OF the ACCOUNTING 21.10 SERVICE OF ACTIVATION OF TERMINALS INMARSAT 21.11 USED MONETARY UNITS IN the TARIFFS OF SERVICES 21.12 TARIFFS BY THE CALLS OF TELEPHONE BY RADIO 21.13 TARIFFS BY CALLS BY INMARSAT 21.14 DOCUMENTS TO TAKE IN the SHIP 21.15 PLAN OF COMMUNICATIONS OF THE TRIP 21.16 ROUTINE OF OPERATOR GMDSS 21.17 MAINTENANCE OF THE EQUIPMENT OF THE GMDSS 21.18 HOUR SIGNALS 21.19 INFORMATION OF NOTIFICATION OF THE SITUATION
CHAPTER XXII. ENERGY SOURCES	22.1 MAJORITIES 22.2 ENERGY SOURCES 22.3 BATTERIES 22.4 PRINCIPLES OF the LEAD BATTERY 22.5 CONTROL OF THE BATTERY 22.6 DIAGNOSIS OF the FAILURES OF the BATTERIES 22.7 SECURITY PRESCRIPTIONS 22.8 GEL BATTERIES 22.9 NICKEL-CADMIO BATTERIES. 22.10 IRON-NICKEL BATTERIES 22.11 UNINTERRUPTED POWER SUPPLY (UPS)
According to the STCW including the Amendments of Manila of 2010, column 2 (recognitions, understanding and sufficiency) of Picture A-II/1 (Specification of the minimum norms of competition applicable to the commanders of the underway watch in ships of gross registered capacity the same or superior to 500).	Besides the named thing previously: Knowledge of the operation of the radioelectric devices of rescue, satellitarias RLS and RESAR.
he development and overcoming of these contents, along with the corresponding ones to other matters that include the acquisition of specific competitions of the degree, guarantee the knowledge, understanding and sufficiency of the competitions picked up in picture AII/2, of Agreement STCW, related to the level of management of Senior officers of Bridge of Marina Mercante, without limitation of gross registered capacity and Captain of Marina Mercante until a maximum of 3000 GT.	Picture A-II/2 of Agreement STCW. Specification of the minimum norms of competition applicable to the Captains and senior officers of bridge of ships of gross registered capacity the same or superior to 500 GT.



According to the STCW including the Amendments of Manila of 2010, column 2 (recognitions, understanding and sufficiency) of picture A-IV/2.	Besides the stipulated one in the Regulation of Radio communications, knowledge of: 1. radio communications search and rescue, including the procedures of the international Manual of the aeronautical and marine services search and rescue (IAMSAR). 2. average ones to prevent the transmission of false alert of aid and procedures to mitigate the consequences of the alert happiness. 3. systems of notification for ships. 4. radiomédicos services 5. use of the International signal code and the standard Phrases of the OMI for the sea communicationses. 6. English spoken and written to communicate information related to the security of the human life in the sea. Note: This prescription could be more flexible in the case of the title of restricted radio operator.
---	--

Planning				
Methodologies / tests	Competencies	Ordinary class hours	Student?s personal work hours	Total hours
Guest lecture / keynote speech	A10 A11 A17 A18 A19 A20 A26 A29 A37 B1 B2 B3 B4 B5 B6 B7 B11 B12 B18 B19 C3 C9	24	36	60
Objective test	A10 A11 A17 A18 A19 A20 A26 A29 A37 B1 B2 B3 B4 B5 B6 B7 B11 B12 B18 B19 C3 C9	3.5	0	3.5
Laboratory practice	A11 A17 A18 A19 A20 A29 A37 B1 B2 B3 B5 B6 B7 B11 B12 B18 B19 C3 C9	27	40.5	67.5
Introductory activities	A10 A11 A17 A18 A19 A20 A29 A37 B1 B2 B3 B4 B5 B6 B7 B11 B12 B18 B19 C3 C9	1	1	2
Summary	A10 A11 A17 A18 A19 A20 A29 A37 B1 B2 B3 B4 B5 B6 B7 B11 B12 B18 B19 C3 C9	2	0	2
Personalized attention		15	0	15
(*)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	The exhibition of each one of the subjects is formed that conform the program taking like reference basic the Manual of Radio communications recommended. NOTE: With this Methodology, the student acquires the competitions of the degree: A11, A17, A18, A19, A20, A26,A29, C2, C3.
Objective test	The objective test will consist of some questions of conceptual development and short development; in questions type test or both types of test simultaneously. As much the type of test in particular as the relative score of the different types from questions in each examination will inquire opportunely to the students in advance. The content of the questions will turn on the matters distributed in class and on which it will approach sufficient the material student for his overcoming.
Laboratory practice	The students are divided in reduced groups to realise the obligatory practices in the Simulator of Communications YOU COMPROMISE where they take to end scenes that allow to assimilate of practical way the referring theoretical concepts to matter. NOTE: With this Methodology, the student acquires the competitions of the degree: A11, A17, A18, A19, A20,A26, A29, A37, B2, B4, B11, B12, C2, C3.
Introductory activities	The first class of the academic course will dedicate a series of activities in which will appear the matter to the students and it will be to determine the competitions, I interest and motivations that the pupils for the profit of the objectives own to reach.
Summary	Towards the end of the course two actual classes of synthesis of the main contents will be realised. With this resource it is tried to help the pupils to understand of global to matter by means of it review of or studied form, pausing of particular form in those aspects that could give rise to confusion or whose content was not assimilated suitably.

Personalized attention

Methodologies	Description
Guest lecture / keynote speech Laboratory practice	The professor of the subject will additionally take care of any consultation of the students in their schedule of positions of a guardian and, in the dates next to the objective tests, at any other moment at which she is available in his office.

Assessment

Methodologies	Competencies	Description	Qualification
Objective test	A10 A11 A17 A18 A19 A20 A26 A29 A37 B1 B2 B3 B4 B5 B6 B7 B11 B12 B18 B19 C3 C9	O alumno terá a opción de aprobar esta parte da materia por curso sempre que asistise a un 80% das clases presenciais. Aqueles alumnos que teñan o Certificado de Operador Xeral do GMDSS considéraselles aprobada a materia cunha nota de 5.0. Con todo calquera alumno nesta situación pode asistir a clase e presentarse aos exames para subir esta nota mínima. A proba obxectiva consistirá nunha serie de preguntas curtas de concepto (de oito a dez), nunha proba tipo test de 40 a 50 preguntas nese caso para aprobar haberá que superar un 60% das mesmas e por cada catro preguntas mal contestadas descontará o equivalente a unha pregunta acertada ou ben nunha combinación dos dous sistemas de probas anteriormente mencionadas, nese caso, a profesora fixará con antelación os criterios específicos de valoración para cada unha das partes. Para aprobar por curso, será necesario obter unha nota media de 5.0	60
Laboratory practice	A11 A17 A18 A19 A20 A29 A37 B1 B2 B3 B5 B6 B7 B11 B12 B18 B19 C3 C9	SIMULADOR DE COMUNICACIÓNS: Para aprobar esta parte da Materia será necesaria unha asistencia mínima do 80% ás clases de simulación. A cualificación de cada alumno basearase na evolución continua do Profesor na que terá en conta a destreza e interese do alumno en cada un dos exercicios propostos.	40
Others			

Assessment comments



The contemplated criteria of evaluation in pictures A-II/1, La-II/2, La-III/1 and La-III/2 of Code STCW and its amendments related to this matter will consider at the time of designing and realising their evaluation. This matter includes the contents corresponding to the course of General Operating specialty (132h) established in the Section To II/1 and La-II/2 of the STCW 78/95/10, in accordance with the course model OMI 1,25, that are detached next: 1. Introduction [3.5 T] 2. Principles of 27 the Marine Radio communications [T] 3. Systems of 14 Communications GMDSS [T + 40.5 P] 4. Others Equipment GMDSS [T + 3 P] 5. Alert of Socorro (Practical Training) [8 T + 13 P] 6. Other operational abilities and procedures for the 4 communications generally [T + 7 P] 7. Evaluation and discussion of 8 practical exerciseses [Total THEORETICAL 132 hours [60.5 63,5 8 PRACTICES] + Evaluation For the obtaining of the certificate of General Operating specialty it is necessary the overcoming of this matter.

Sources of information

Basic	BIBLIOGRAFÍA BÁSICA DA MATERIA - LOUZÁN LAGO, F.; IGLESIAS BANIOLA, S. (2009). Manual de Comunicaciones Marítimas.- Admiralty List of Radio Signals, Vol 5 Ed. 2012.- BREHAUT, DENISE (2009). GMDSS A User's Handbook 4th Ed. Adlard Coles Nautical, London.- IMO (2011). GMDSS Manual, London.- INMARSAT (2011). The SafetyNET Users Handbook, 5th Ed., London.- IMO (2011). International SafetyNet Manual, London.- IMO (2010). Manual on Maritime Safety Information (MSI Manual). London.- LEES, GRAHAM and WILLIAMSON, WILLIE (2009). Handbook for Marine Radio Communications, 5th Ed. L.L.P. London.- IMO (2010). International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual. London.- IMO (2001). GMDSS Handbook on CD-ROM (v. 2.0), IMO.- IMO (2005). NAVTEX Manual, London. - ORGANIZACIÓN MARITIMA INTERNACIONAL. SOLAS, Edición refundida, 2001 OMI, Londres 2001.- ITU (2011). Manual para uso de los servicios móvil marítimo y móvil marítimo por satélite, ITU.- WAUGH IAN (2007). The Mariner's Guide to Marine Communication, 2nd. Ed. The Nautical Institute.- AISM-IALA. Manual on Radio Aids to Navigation?, 2nd edition, 1993.
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

(*)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.