

		Teaching Guide			
	Identifying D	Data		2023/24	
Subject (*)	Maritime Radiocommunications	Code	631G01307		
Study programme	Grao en Náutica e Transporte Marítir	I			
		Descriptors			
Cycle	Period	Year	Туре	Credits	
Graduate	2nd four-month period	Third	Optional	6	
Language	SpanishGalicianEnglish				
Teaching method	Face-to-face				
Prerequisites					
Department	Ciencias da Navegación e Enxeñaría	a Mariña			
Coordinador	López López, María Natividad	E-mail	natividad.lopez	natividad.lopezl@udc.es	
Lecturers	López López, María Natividad	E-mail	natividad.lopezl@udc.es		
Web		1	I		
General description	To train the students in all aspects re	elated to Maritime Communica	tions with the objectiv	e that they achieve the neces	
	capacity to handle all the equipment following the established procedures.				

	Study programme competences		
Code	Study programme competences		
B40	RA27H?Use of IMO Standard Phrases for maritime communications, and use of written and spoken English.		
B41	RA28H?Transmitting and receiving information by visual signals		
B45	RA38H?Applying leadership and teamwork qualities		
B48	RA43H?Coordinate search and rescue operations		
B57	7 RA58H?Using leadership and management qualities		
B59	RA60H?Transmitting and receiving information using GMDSS subsystems and equipment and complying with GMDSS functional		
	requirements		
B60	RA61H?Providing radio services in emergency situations		
B80	RA81H?Contribute to effective communications on board the ship.		
C15	RA17X-Communicating effectively in a work environment.		
C20	RA25X?Respond to emergencies		
C21	RA26X?Responding to distress signals at sea		
C38	RA107X?Directing emergency intervention		

Learning outcomes		
Learning outcomes	Study progra	amme
	competen	ces
RA17X-Communicating effectively in the workplace		C15
RA25X-Emergency Response		C20
RA26X-Responding to distress signals at sea		C21
RA27H-Use IMO standard phrases for maritime communications and use written and spoken English.	B40	
RA28H-Transmitting and receiving information by visual signals		
RA38H-Apply leadership and teamwork skills	B45	
RA43H-Coordinate search and rescue operations	B48	
RA58H-Use leadership and management skills	B57	
RA60H-Transmitting and receiving information using GMDSS subsystems and equipment and meeting GMDSS functional requirements	B59	
RA61H-Providing radio services in emergency situations	B60	
RA81H-Contributing to effective communications on board the ship	B80	
RA107X-Lead emergency response		C38



Contents
Sub-topic
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
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
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
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
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
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 VII. DIGITAL SELECTIVE RINGING (DIGITAL	7.1 INTRODUCTION		
SELECTIVE CALLING ? DSC-)	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 FREQUENCIES OF ASSISTANCE IN DSC		
	7.10 the CALL OF TEST IN DSC EQUIPMENT		
	7.10 THE CALL OF TEST IN DISC EQUIPMENT 7.11 THE TYPES OF DSC CALLS		
	7.12 THE COMPONENTS OF DSC EQUIPMENT		
CHAPTER VIII. PROCEDURES OF OPERATION OF DSC			
EQUIPMENT	8.2 PROCEDURES OF OPERATION FOR the SHIPS THAT COMMUNICATE WITH		
	EQUIPMENT DSC IN the BANDS OF VHF, MF and HF		
	8.3 SECURITY		
	8.5 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 INTRUCCIONES 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 RADIOTELEX		
	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		
	13.11 PROCEDURES OF TEST OF the DISTRESS CALLS		
	13.12 CALLS WITH EMERGENCY PRIORITY AND SECURITY		
	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)	15.1 INTRODUCTION
SYSTEM	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



CHAPTER XVIII. EMERGENCY POSITION INDICATING	18.1 DEFINITION
RADIO BEACONS (EPIRBs)	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	19.1 INTRODUCTION
AND BIDIRECTIONAL RADIO-TELEPHONE EQUIPMENT	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	21.1 AUTHORITY OF THE CAPTAIN		
COMMUNICATIONS, TARIFFS AND GENERAL	21.2 OBLIGATIONS CAPTAIN TO DISTRESS		
INFORMATION	21.3 SECRET OF the COMMUNICATIONS		
	21.3 SECRET OF the COMMUNICATIONS 21.4 LICENSE OF the RADIO STATION		
	21.5 CERTIFICATE OF RADIOELECTRIC SECURITY		
	21.5 CERTIFICATE OF RADIOELECTRIC SECORT T		
	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	Besides the named thing previously:		
of 2010, column 2 (recognitions, understanding and	Knowledge of the operation of the radioelectric devices of rescue, satelitarias RLS and		
sufficiency) of Picture A-II/1 (Specification of the minimum	RESAR.		
norms of competition applicable to the commanders of the			
underway watch in ships of gross registered capacity the			
same or superior to 500).			
he development and overcoming of these contents, along with	Picture A-II/2 of Agreement STCW.		
the corresponding ones to other matters that include the	Specification of the minimum norms of competition applicable to the Captains and		
acquisition of specific competitions of the degree, guarantee	senior officers of bridge of ships of gross registered capacity the same or superior to		
the knowledge, understanding and sufficiency of the	500 GT.		
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			



According to the STCW including the Amendments of Manila	Besides the stipulated one in the Regulation of Radio communications, knowledge of:
of 2010, column 2 (recognitions, understanding and	1. radio communications search and rescue, including the procedures of the
sufficiency) of picture A-IV/2.	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	I		
Methodologies / tests	Competencies	Ordinary class	Student?s personal	Total hours
		hours	work hours	
Guest lecture / keynote speech	B80 B60 B59 B57	24	36	60
	B48 B45 B41 B40			
	C15 C20 C21 C38			
Objective test	B80 B60 B59 B57	3.5	0	3.5
	B48 B45 B41 B40			
	C15 C20 C21 C38			
Laboratory practice	B40 B41 B45 B48	27	40.5	67.5
	B57 B59 B60 B80			
	C15 C20 C21 C38			
Introductory activities	B40 B45 C15	1	1	2
Summary	B40 B48 B57 B59	2	0	2
	C20 C21 C38			
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 /	The exhibition of each one of the subjects is formed that conform the program taking like reference basic the Manual of Radio		
keynote speech	communications recommended.		
	NOTE: With this Methodology, the student acquires the competitions of the degree:		
	RA17X,RA25X,RA26X,RA27H,RA28H,RA38H,RA43H,RA58H,RA60H,RA61H,RA81H,RA107X.		
Objective test	The objective test will consist of either concept development questions and short development questions; multiple choice		
	questions or both types of test. Students will be informed in advance of the type of test and the relative score of the different		
	types of questions in each exam. The content of the questions will deal with the subjects taught in class and on which the		
	student will be provided with sufficient material to pass.		
	A series of tasks will have to be carried out in relation to the given subject, whose mark will be added to that of the objective		
	test.		



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:
	RA17X,RA25X,RA26X,RA27H,RA28H,RA38H,RA43H,RA58H,RA60H,RA61H,RA81H,RA107X.
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 one actual class 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 /	The teacher of the subject will attend any consultation of the students in their tutorial schedule and additionally, in the dates
keynote speech	near the objective tests, at any other time that is available in the email, moodle and / or teams.
Laboratory practice	

Methodologies	Competencies	Description	Qualification
Objective test	B80 B60 B59 B57	The student will have the option of passing this part of the course provided that he or	80
	B48 B45 B41 B40	she attends 80% of the master classes.	
	C15 C20 C21 C38	Those students who have the GMDSS General Operator's Certificate are considered	
		to have passed the subject with a grade of 5.0. However, any student in this situation	
		can attend the class and take the exams to raise this minimum grade.	
		The objective test will consist of a series of short concept questions, a multiple choice	
		test, or a combination of the two test systems mentioned above, in which case the	
		teacher will set the specific assessment criteria for each of the parties in advance.	
		It will be necessary to carry out different tasks related to the subject, the mark	
		achieved will be added to the mark achieved in the objective test.	
		To pass by course, it will be necessary to obtain an average mark of 5.0	
Laboratory practice	B40 B41 B45 B48	COMMUNICATIONS SIMULATOR: In order to pass this part of the course, a	20
	B57 B59 B60 B80	minimum attendance of 100% of the simulation classes will be required. The	
	C15 C20 C21 C38	qualification of each student will be based on the continuous evaluation of the Teacher	
		in what he will take into account the skill and interest of the student in each of the	
		proposed exercises.	
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. For the obtaining of the certificate of General Operating specialty it is necessary the overcoming of this matter. Evaluation observations:

For full-time students, part-time students, requirements to pass the subject, conditions of the evaluation at the 2nd opportunity, etc.)

Continuous evaluation: a "pre-final exam" will be done, agreed with the students, for the realization of the @dito test it is essential to deliver the proposed tasks

1st opportunity: continuous evaluation as indicated in section 4 (adding practices+tasks+test)

2nd opportunity: practices that will count 20% (having to deliver a task that is proposed to more than the practices that could be performed in the simulator) and the test that will count the remaining 80%.

The) students with full dedication:

attendance/participation in the tasks corresponding to the practices minimum 80%

B) students with recognition of part-time dedication and academic dispensation from attendance, secondly, establishes the "RULE REGULATING THE DEDICATION REGIME FOR GRADUATE STUDENTS AT THE UDC (arts. 2.3;3. b and 4.5)(29/5/212):

assistance/participation in tasks corresponding to the internship minimum 80%. Passing the objective test. If they are unable to attend the lectures, arrangements will be made with the tutor.

"The fraudulent performance of the evaluation tests or activities, once verified, will directly imply the qualification of failing "0" in the subject in the corresponding call, thus invalidating any qualification obtained in all the evaluation activities for the extraordinary call".

Sources of information

Basic	BIBLIOGRAFÍA BÁSICA DA MATERIA - LOUZÁN LAGO, F.; IGLESIAS BANIELA, 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.
0	

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.