COURSE OF STUDY Scienze e Gestione delle Attività Marittime *(First Level)*

ACADEMIC YEAR 2023/2024

ACADEMIC SUBJECT Telecommunication

General information	
Year of the course	2023/2024
Academic calendar (starting and ending date)	I Semester
Credits (CFU/ETCS):	6
SSD	ING-INF/03
Language	Italian
Mode of attendance	In class room/e-learning: Lecture- workshops

Professor/ Lecturer	
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Department and address	
Virtual room	
Office Hours (and modalities: e.g., by appointment, on line, etc.)	Appointment with previous email/phone

Work schedule			
Hours			
Total	Lectures	Hands-on (laboratory, workshops, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
150	**48**		**102**
CFU/ETCS			
6			

Learning Objectives	Making known at learners, the overview of the phenomena related to radiocommunications and the systems that in general allow the realization of Telecommunications. To acquire the necessary fundamentals for an easy use of the various communication systems that learners will find at future employment destinations. Also to acquire, in particular, the skills for the use of the actual standard of Maritime Radiocommunication systems (GMDSS).
Course prerequisites	None

Teaching strategie	The course develops through frontal lessons related to the relevant aspects of the discipline, essential for achieving the

	specific and global training objectives of the course. Frontal teaching will be supported by seminars and telecommunications tutorials and will follow, where possible, an interaction with learners, through discussion groups on the e-learning platform or in the classroom During the lessons will be used various tools for the improvement of teaching such as, for example, *Powerpoint* presentations projected in the classroom, schemes, bibliographic references and anything else deemed useful for the improvement of teaching effectiveness.
Expected learning outcomes in terms of	
Knowledge and understanding on:	Acquisition of the methodology necessary for the knowledge and understanding of the telecommunications topics indicated in the program;
Applying knowledge and understanding on:	The acquisition of the methodology necessary for the application of the knowledge and understanding of the telecommunications topics indicated in the program during the various operational activities that the learners will have to carry out, also through the analysis of the typical problems of Radiocommunication on board a Naval Unit.
Soft skills	• *Making informed judgments and choices* The acquisition and development of the ability to study critically the operational topics indicated in the teaching program, including through the careful study of the most significant regulations and operating procedures relating to the individual subjects under study, including through teaching activities of a seminar type. • *Communicating knowledge and understanding* The acquisition of the ability to argue the topics of the program, so as to know how to present them with mastery and in a critical way in moments of sharing, discussion and discussion in the classroom, either individually or in groups. • *Capacities to continue learning* The acquisition of the methodology necessary for learning and the critical study of the most significant literature, existing on the subjects under study, and of the most innovative regulation.
Syllabus	
Content knowledge	The course refers to the teaching of Telecommunications for the learning of the aspects of the discipline essential for the achievement of the overall educational objectives of the course

	of study. Specifically, the course aims to raise awareness of the phenomena related to telecommunications and systems that generally allow it to be implemented; to provide learners with the necessary basis for an easy use of the various communication systems that will be used at future employment destinations; to acquire, in particular, the skills for the use of Maritime Radiocommunication systems (GMDSS). • Notes on the principles of Radio-propagation of radio waves in the atmosphere (Ionosphere, Stratosphere and Troposphere); • Example of a typical terrestrial, satellite, radio link; • Overview of Modulations used in Telecommunications; • Overview of Transmission Lines and Antennas; • Satellite communications; • Overview of the content of SOLAS Standards for GMDSS - Global Maritime Distress and Safety Systems; • The GMDSS system - Global Maritime Distress and Safety Systems, and its functions (for the Safety of Life at Sea); • GMDSS subsystems: DSC, Cospas Sarsat, Inmarsat; AIS, VTS, SART, NAVTEX; • Systems for the dissemination of notices for navigation safety (MSI, NAVTEX); • Distress, Urgency and Safety procedures and radio frequencies; • Radiocommunication order of precedence; • Notes on the procedures of Search and Rescue at Sea with the help of helicopters and SAR Airplanes and notes on the Organization of the SAR - National and International Search and Rescue; • Radio buoys and the COSPAS_SARSAT system; • Hints on GADSS and Iridium System • INMARSAT within the GMDSS; • Typical Radio procedures in an emergency context; • Inspection visits for Radio Safety purposes (Radio Safety certificate); • IMC STCW procedures for issuing certificates for GMDSS stations.
Texts and readings	
Notes, additional materials	
Repository	The platform supply from the Study Office

Assessment	
Assessment methods	Written and Oral
Assessment criteria	The criteria for the evaluation of the oral test take into account the correctness of the contents, the clarity of argument and the ability of critical analysis and re-elaboration
Final exam and grading criteria	The final exam related to teaching takes place in written and / or oral form; the relative evaluation is expressed with a score in

	thirtieths, with possible praise
Further information	Further verification of the profit (interviews) are scheduled during the course. They are related to the topics covered in class and are organized in the form of questionnaires, characterized by open questions and / or multiple answers. They can be taken into account in the final evaluation.