**MARITIME FACULTY**

**Maritime Transportation Engineering**

**Course Catalogue Form**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Issue date:** | | | | **Revision date:** | | | | **Revision No:**00 | | | | | | | | **DF Board Decision No: -** | | | | |
| **Course Name** : **MARITIME COMMUNICATION** | | | | | | | | | **Degree:** Bachelor | | | | | | | | | | | |
| **Code** | **Year/Semester** | | | | **Local Credits** | **ECTS Credits** | | | **Course Implementation, Hours/Week** | | | | | | | | | | | |
| **Course** | | | | | **Tutorial** | | | | | **Laboratory** | |
| **MTE 010S** | **3/1 (Autumn)** | | | | **2** | **5** | | | **1** | | | | | - | | | | | **1** | |
| **Department** | | | | | Maritime Transportation Engineering | | | | | | | | | | | | | | | |
| **Instructors** | | | | |  | | | | | | | | | | | | | | | |
| **Contact Information** | | | | |  | | | | | | | | | | | | | | | |
| **Office Hours** | | | | |  | | | | | | | | | | | | | | | |
| **Web page** | | | | | <https://www.marplat.eu> | | | | | | | | | | | | | | | |
| **Course Type** | | | | | Elective | | | | **Course Language** | | | | | English | | | | | | |
| **Course Prerequisites** | | | | | At discretion of each partner university | | | | | | | | | | | | | | | |
| **Course Category by Content, %** | | | | | **Basic Sciences** | | **Engineering Science** | | | | **Engineering Design** | | | | | | | **Humanities** | | |
| 20 | | 50 | | | | 0 | | | | | | | 30 | | |
| **Course Description** | | | | | This course forms part of the proposed Modular Framework for vocational and professional qualification based on a degree program in Maritime Transportation Engineering. Trainees who successfully pass the course will acquire comprehensive and contemporary knowledge on Maritime Communications. Furthermore; The Programme gives to trainees expertise on radio communication basics, national and international regulations, terrestrial and satellite communication systems, distress, urgency, safety and routine communication procedures, Radio communication supplementary equipment and International Code of Signals, MSI service, Homing-Locating and IAMSAR communication. | | | | | | | | | | | | | | | |
| **Course Objectives** | | | | | 1. Explain Communication equipment which is required for seaworthiness of ships  2. Learn Global Maritime Distress and Safety System (GMDSS), an on-site radio station to use the terrestrial and the satellite communication systems  3. The voice, written and data communication via terrestrial and satellite equipment  4. Learn and explain safety communication in emergencies and distress  5. Learn and explain radio watch-keeping procedures, training onboard and communication equipment tests | | | | | | | | | | | | | | | |
| **Course Learning Outcomes** | | | | | Trainees passing the course successfully will acquire knowledge and skills as listed below and will be able to:  1. Recognize Communication equipment on board  2. Use GMDSS equipment according to regulations and procedures  3. Establish voice, data and written communication via terrestrial and satellite systems  4. Establish safety communication in distress and emergency.  5. Keep radio watch on board, conduct training and apply tests. | | | | | | | | | | | | | | | |
| **Instructional Methods and Techniques** | | | | | Lecturing and Simulator Studies | | | | | | | | | | | | | | | |
| **Tutorial Place** | | | | | Classroom and Simulator | | | | | | | | | | | | | | | |
| **Co-term Condition** | | | | | - | | | | | | | | | | | | | | | |
| **Textbook** | | | | | - STCW II/A-1 1.6. Respond to a distress signal at sea 1.7 use the IMO Standard Maritime Communication Phrases and use English a written and oral, 1.8 Transmit and receive information by visual signalling.  - IMO Model Course1.25  - Trainee Simulator Manual  T1 ITU Manual for Use by the Maritime Mobile and Maritime Mobile-Satellite Services  T2 ITU List of Coast Stations and Special Service Stations (List IV)  T3 ITU List of Ship Stations and Maritime Mobile Service Identity Assignments (List V)  T4 INMARSAT Maritime Communications Handbook  T5 Harmonization of GMDSS requirements for radio installations on board  SOLAS-ships (COMSAR/Circ. 32)  T6 EPIRB and SART User Manual  T7 IMO International SafetyNET Manual  T8 INMARSAT’s SafetyNET Users’ Handbook  T9 Admiralty List of Radio Signals, Volume 5, as amended-GMDSS Manual  T10 NAVTEX Panel Manual | | | | | | | | | | | | | | | |
| **Other References** | | | | | R1 GMDSS Manual  R2 IAMSAR Manual  R3 Standard Marine Communication Phrases (SMCP)  R4 International Code of Signals – (INTERCO)  R5 Master Plan of the shore-based facilities for the GMDSS  R6 International Convention for the Safety of Life at Sea 1974, as amended  R7 Radio Regulations (RR), as amended | | | | | | | | | | | | | | | |
| **Homework & Projects** | | | | | - Class presentations according to topics on weekly lesson plan.  - Homework based on cases for the consolidation of the training. | | | | | | | | | | | | | | | |
| **Laboratory Work** | | | | | GMDSS Simulator applications | | | | | | | | | | | | | | | |
| **Computer Use** | | | | | GMDSS simulator, Stand Alone Computers, power-point presentations and training videos. | | | | | | | | | | | | | | | |
| **Other Activities** | | | | | 5 video tutorials shall be recorded in the simulator/lab from the selected practical training activities, Group discussions | | | | | | | | | | | | | | | |
| **Assessment Criteria** | | | **Activities** | | | | | | | | | **Quantity** | | | **Effects on Grading, %** | | | | |
| Attendance | | | | | | | | |  | | |  | | | | |
| Midterm | | | | | | | | | **1** | | | **10** | | | | |
| Quiz | | | | | | | | | **2** | | | **10** | | | | |
| Homework | | | | | | | | | **2** | | | **10** | | | | |
| Term Paper/Project | | | | | | | | |  | | |  | | | | |
| Laboratory Work | | | | | | | | |  | | |  | | | | |
| Practices | | | | | | | | | **1** | | | **20** | | | | |
| Tutorial | | | | | | | | |  | | |  | | | | |
| Seminar | | | | | | | | |  | | |  | | | | |
| Presentation | | | | | | | | |  | | |  | | | | |
| Field Study | | | | | | | | |  | | |  | | | | |
| Final Exam | | | | | | | | | **1** | | | **50** | | | | |
| **TOTAL** | | | | | | | | |  | | | **100** | | | | |
| Effects of Midterm on Grading, % | | | | | | | | |  | | | **50** | | | | |
| Effects of Final on Grading, % | | | | | | | | |  | | | **50** | | | | |
| **TOTAL** | | | | | | | | |  | | | **100** | | | | |
| **ECTS/**  **WORKLOAD TABLE** | | | **Activities** | | | | | | | | **Count** | | | **Hours** | | | | **Total**  **Workload** | | | | |
| Lecture | | | | | | | | **7** | | | **2** | | | | **14** | | | | |
| Midterm | | | | | | | | **1** | | | **10** | | | | **10** | | | | |
| Quiz | | | | | | | | **2** | | | **5** | | | | **10** | | | | |
| Homework | | | | | | | | **2** | | | **10** | | | | **20** | | | | |
| Term Paper/Project | | | | | | | |  | | |  | | | |  | | | | |
| Laboratory Work | | | | | | | |  | | |  | | | |  | | | | |
| Practices | | | | | | | | **7** | | | **6** | | | | **42** | | | | |
| Tutorial | | | | | | | | **7** | | | **2** | | | | **14** | | | | |
| Seminar | | | | | | | |  | | |  | | | |  | | | | |
| Presentation | | | | | | | |  | | |  | | | |  | | | | |
| Field Study | | | | | | | |  | | |  | | | |  | | | | |
| Final Exam | | | | | | | | **1** | | | **20** | | | | **20** | | | | |
| **Total Workload** | | | | | | | |  | | |  | | | | **130** | | | | |
| **Total Workload/25** | | | | | | | |  | | |  | | | | **130/25** | | | | |
| **Course ECTS Credits** | | | | | | | |  | | |  | | | | **5** | | | | |

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| **Week** | **Topics** | **Course Outcomes** |
| **1** | **Introduction and general overview**  a. Radio Communication  b. Maritime Frequency Bands | I |
| **2** | **Basic Concepts**  a. Basic concepts used in radio emission  b. Emission | I |
| **3** | **Basic Concepts**  a. Defining the Rules of Procedure and International conventions maritime communications  b. GMDSS General Concept | II |
| **4** | **Properties of the Services**  a. Properties of Maritime Mobile Service  b. Properties of Maritime Mobile Satellite Service | II |
| **5** | **GMDSS Communication**  a. Fulfilment of the condition of the GMDSS  b. Related Acronyms in Maritime Communications | II-III |
| **6** | **Voice and written communications**  Speaking and writing skills in routine communications | III |
| **7** | **Communication Systems**  Terrestrial communication system | IV |
| **8** | **Communication Systems**  a. Satellite System  b Supplementary Radio System equipment | IV |
| **9** | **Distress Communications**  a. Distress communication frequencies in GMDSS  b. Distress communication by content of types | V |
| **10** | **Distress Communications**  a. Distress communication procedure using terrestrial system  b. Distress communication procedure using satellite system | V |
| **11** | **SAR Communications**  a. Search and Rescue (SAR) operations  b. Guard of distress frequencies and avoidance false alert | V |
| **12** | **Satellite Communications**  a. COSPAS – SARSAT Satellite System  b. INMARSAT System  c. Iridium and VDES | VI |
| **13** | **Maritime Safety**  a. Use of terrestrial systems (VHF, MF, and HF DSC) in distress communication  b. Maritime Safety Information (MSI) | VI |
| **14** | **Maintenance and tests**  a. Periodic testing and inspections  b. Use of equipment manual and measurement devices  c. Possible error detection and correction | VII |

Relationship between the Course and Programme Curriculum

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Program Outcomes** | **Level of Contribution** | | |
| **1** | **2** | **3** |
| **a** | An ability to apply knowledge of mathematics, science, and engineering | X |  |  |
| **b** | An ability to design and conduct experiments, as well as to analyze and interpret data |  | X |  |
| **c** | An ability to design a system, component or process to meet desired needs |  |  | X |
| **d** | Ability to function on multi-disciplinary teams |  |  | X |
| **e** | An ability to identify, formulate, and solve engineering problems | X |  |  |
| **f** | An understanding of professional and ethical responsibility |  |  | X |
| **g** | An ability to communicate effectively |  |  | X |
| **h** | The broad education necessary to understand the impact of engineering solutions in a global and societal context |  |  | X |
| **i** | A recognition of the need for, and an ability to engage in life-long learning |  |  | X |
| **j** | A knowledge of contemporary issues |  | X |  |
| **k** | An ability to use the techniques, skills and modern engineering tools necessary for engineering practice |  |  | X |
| **l** | An ability to apply legal, societal and environmental knowledge in maritime transport and in all respective modes of transport operations. |  |  | X |
| **m** | An ability to interpret and analysis of the data regarding maritime management and operations, recognition and solution of problems for decision making process. |  | X |  |

**1: Small, 2: Partial, 3: Full**

**Programme Outcomes & Course Outcomes Connectivity Matrix**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Course**  **Outcomes** | **I** | **II** | **III** | **IV** | **V** | **VI** | **VII** |
| **Programme Outcomes** |
| **a** |  |  |  |  |  |  |  |
| **b** |  |  |  |  |  |  |  |
| **c** |  |  |  |  |  |  |  |
| **d** |  |  |  | X | X |  | X |
| **e** | X | X | X | X | X | X | X |
| **f** | X | X |  |  |  |  |  |
| **g** | X | X | X | X | X |  | X |
| **h** |  |  |  |  |  |  |  |
| **i** | X | X | X | X | X | X | X |
| **j** |  |  | X | X | X | X | X |
| **k** |  |  |  |  |  |  |  |
| **l** |  | X | X |  |  |  | X |
| **m** |  |  | X | X | X | X | X |

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| --- | --- | --- |
| ***Prepared by*** | **Date** | Signature |