**MARITIME FACULTY**

**Maritime Transportation Engineering**

**Course Catalogue Form**

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| **Issue Date :** | **Revision Date: -** | **Revision Number: -** | **Faculty Board Decision Number:** |

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| **Course Name**: **SEARCH AND RESQUE** | | | | | **Degree:** Bachelor | | | | |
| **Code** | **Year/Semester** | **Local Credits** | **ECTS Credits** | | **Course Implementation, Hours/Week** | | | | |
| **Course** | | **Tutorial** | | **Workshop** |
| **MTE 008S** | **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 | | - | | 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 Search and Rescue Operation as coordination and/or taking roles. The Programme gives trainees in-depth expertise in managing a naval vessel as a Deck Officer and ultimately as the captain of the vessel. The emphasis is upon how to conduct and co-ordinate search and rescue operations. | | | | | | | |
| **Course Objectives** | | 1.Explain the obligations and responsibilities for assistance at sea and the action to be taken to render assistance  2. Learn how to plan and prepare a search  3. Learn Conduct a search  3. Learn Conduct a rescue  5. Terminate SAR operations | | | | | | | |
| **Course Learning Outcomes** | | Trainees passing the course successfully will acquire knowledge and skills as listed below and will be able to.  1.Understand the obligations and responsibilities for assistance at sea and the action to be taken to render assistance  2. Plan and prepare a search  3. Conduct a search operation  3. Conduct a rescue operation  5 Apply methods to terminate SAR operations | | | | | | | |
| **Instructional Methods and Techniques** | | Lecturing and Simulator Studies | | | | | | | |
| **Tutorial Place** | | Classroom and Simulator | | | | | | | |
| **Co-term Condition** | | **---** | | | | | | | |
| **Textbook** | | - Unit Handout, Power Point Slides  - Emergency Response and Communication I and II Course Books, Glasgow College of Nautical Studies | | | | | | | |
| **Other References** | | 1. STCW Table A-II/1 Competence: 1.2. Maintain a Safe Navigational Watch, 1.9 Manoeuvre the ship 1..5 Respond to Emergencies 2. Bridge Procedures Guide 3. IMO IAMSAR Manual Vol. III 4. ISM Code, 5. ISPS Code 6. IMO Model course 3.13; 3.14 and 3.15. | | | | | | | |
| **Homework & Projects** | | Each group will prepare simple search and rescue plan which will be used during simulator exercise as directed by the lecturer. | | | | | | | |
| **Laboratory Work** | | Simulator Exercise | | | | | | | |
| **Computer Use** | | Bridge simulator and Stand Alone Computers (for LO 4 and 5), PowerPoint | | | | | | | |
| **Other Activities** | | 5 video tutorials shall be recorded in the simulator/lab from the selected practical training activities, Group Discussions | | | | | | | |

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| **Assessment Criteria** | **Activities** | **Quantity** | **Effects on Grading, %** |
| Attendance |  |  |
| Midterm | **1** | **30** |
| Quiz | **2** | **20** |
| Homework |  |  |
| Term Paper/Project |  |  |
| Laboratory Work |  |  |
| Practices |  |  |
| 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** |

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| **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** | **5** | **35** |
| Tutorial | **7** | **2** | **14** |
| Seminar |  |  |  |
| Presentation | **7** | **2** | **14** |
| Field Study |  |  |  |
| Final Exam | **1** | **10** | **10** |
| **Total Workload** |  |  | **127** |
| **Total Workload/25** |  |  | **127/25** |
| **Course ECTS Credits** |  |  | **5** |

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| **Week** | **TOPICS** | **Course Outcomes** |
| **1** | **The obligations and responsibilities for assistance at sea and the action to be taken to render assistance**   * IAMSAR Manual * Annual Summary of Admiralty Notices to Mariners - Notice 4 * Consultation with other stations answering the distress | I |
| **2** | **The obligations and responsibilities for assistance at sea and the action to be taken to render assistance**   * Legal obligations * Exemptions from answering a distress * Logbook entries | I |
| **3** | **Plan and prepare a search**   * Categories of distress incidents: Coastal and ocean * Abbreviations, terms and definitions * Communications: internal and external | II |
| **4** | **Plan and prepare a search**  Search patterns taking into account drift, leeway, visibility and type of assistance available   * Co-ordination of search and rescue operations * Designation of SMC and OSC and their responsibilities * Responsibility of other craft in the co-ordinated search | II |
| **5** | **Plan and prepare a search**   * Drift patterns of disabled vessels with relation to wind and currents * Rendezvous * Establish a datum point before commencing search pattern * Contingency planning and training | II |
| **6** | **Detect ships in distress, discover aircraft or people overboard**  **Planning SAR Operation**   * Proceeding to the area of distress * On board preparation | III |
| **7** | **Conduct a search (Continued)**   * Action by assisting ships * Approaching the scene, radar search | III |
| **8** | **Conduct a search (Continued)**   * Arrival on scene, implement search plan * Assistance by SAR aircraft * Homing on radio signals * Aircraft casualties | III |
| **9** | **Conduct a rescue**   * When survivors in the water/boats/rafts | IV |
| **10** | **Conduct a rescue**   * From ditched aircraft | IV |
| **11** | **Conduct a rescue**   * Heavy weather * Fire | IV |
| **12** | **Conduct a rescue**   * Evacuation by helicopter | IV |
| **13** | **Terminate SAR operations**   * Care for and questioning of survivors * Decision to terminate, factors to consider | V |
| **14** | **Terminate SAR operations**   * Reports to authorities * Prevention of pollution of the marine environment and anti-pollution procedures | V |

**Relationship between the Course and the Curricula of Maritime Transportation Engineering**

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|  | **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 analyse 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 |  |  |  |
| **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 |  |  |  |
| **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 the decision-making process. | X |  |  |

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

**Program Outcomes & Course Outcomes Connectivity Matrix**

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

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