**MARITIME FACULTY**

**Maritime Transportation Engineering Department**

**Course Catalogue Form**

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

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| **Course Name**: **NAVIGATIONAL WATCH** | | | | | | | | | |
| **Code** | **Year/Semester** | **Local Credits** | **ECTS Credits** | | **Course Implementation, Hours/Week** | | | | |
| **Course** | | **Tutorial** | | **Workshop** |
| **MTE 001S** | **2/1 (Spring)** | **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. 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 ship handling procedures and collision prevention for a safe voyage planning and execution at sea. | | | | | | | |
| **Course Objectives** | | 1. Interpret and explain basic ship handling procedures for how to apply regulations for the safe movement of vessels  2. Explain bridge watch-keeping procedures  3. Explain the factors affecting turning circles, stopping distances, and how to make maneuvers  4. Interpret and apply the International Regulations for Preventing Collisions at Sea and application these regulations  5. Interpret and apply to navigate in restricted waters with specific emphasis on the IALA Buoyage, Systems A and B | | | | | | | |
| **Course Learning Outcomes** | | Trainees passing the course successfully will acquire knowledge and skills as listed below and will be able to.  1. Familiarize basic ship handling procedures  2. Understand and apply functions and working procedures of the Bridge Team  3. Apply maneuvers to understand relative movement at sea (turning circles, stopping distances, etc.)  4. Apply maneuvers to expedite on the planned route and evade collision for the safe movement of vessels (COLREG)  5. Apply safe navigation procedures in restricted waters | | | | | | | |
| **Instructional Methods and Techniques** | | Lecturing and Simulator Practices | | | | | | | |
| **Tutorial Place** | | Classroom and Simulator | | | | | | | |
| **Co-term Condition** | | **---** | | | | | | | |
| **Textbook** | | Unit Handout, Power Point Slides  Bowditch, N. The American Practical Navigator. Defence Mapping Agency | | | | | | | |
| **Other References** | | 1. STCW Table A-II/1 Competence: 1.2. Maintain a Safe Navigational Watch, 1.9 Manoeuvre the ship 2. Bridge Procedures Guide 3. COLREG 4. IALA Buoyage, System   5. Bull, M. (2021). Bridge Watchkeeping, 3rd Ed., London, UK ISBN 978 1906915 92 6  6. ICS (2022) Bridge Procedure Guide BPG, 6th Ed, London, UK., ISBN: 978-1-913-3997-07-06 | | | | | | | |
| **Homework & Projects** | | Each group will prepare simple passage planning which will be used during simulator exercise as directed by the lecturer. | | | | | | | |
| **Laboratory Work** | | Simulator Exercise | | | | | | | |
| **Computer Use** | | Bridge and ARPA Radar simulators and Stand Alone Computers simulator (for LO 4 and 5), PowerPoint for lecturing | | | | | | | |
| **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** | **10** |
| Homework | **2** | **10** |
| 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 | **5** | **2** | **10** |
| Field Study |  |  |  |
| Final Exam | **1** | **10** | **10** |
| **Total Workload** |  |  | **123** |
| **Total Workload/25** |  |  | **123/25** |
| **Course ECTS Credits** |  |  | **5** |

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| **Week** | **TOPICS** | **Course Outcomes** |
| **1** | **Interpret and explain basic ship handling procedures**   * how to apply regulations for the safe movement of vessels | I |
| **2** | **Interpret and explain basic ship handling procedures (continued)**   * how to apply regulations for the safe movement of vessels | I |
| **3** | **Explain bridge watch-keeping** **procedures**   * identify and describe bridge watchkeeping procedures | II |
| **4** | **Explain bridge watch-keeping procedures**   * use communication procedures * identify procedures adopted when in the proximity of ice and areas where ice accretion may occur | II |
| **5** | **Explain the factors affecting turning circles, stopping distances, and how to make maneuvers**   * identify and describe the factors that affect a vessel’s turning circles and stopping distances | III |
| **6** | **Explain the factors affecting turning circles, stopping distances, and how to make maneuvers**   * describe the range of types of vessel maneuvers | III |
| **7** | **Explain the factors affecting turning circles, stopping distances, and how to make maneuvers**   * conduct maneuver in a selected area | III |
| **8** | **Interpret and apply the International Regulations for Preventing Collisions at Sea and application these regulations**   * describe the procedures necessary to prevent a collision at sea for given situations | IV |
| **9** | **Interpret and apply the International Regulations for Preventing Collisions at Sea and application these regulations**   * conduct COLREG exercise at the Bridge and ARPA Radar simulators | IV |
| **10** | **Interpret and apply the International Regulations for Preventing Collisions at Sea and application these regulations (continue)**   * conduct COLREG exercise at the Bridge and ARPA Radar simulators | IV |
| **11** | **Interpret and apply to navigate in restricted waters with specific emphasis on the IALA Buoyage, Systems A and B**   * familiarization | V |
| **12** | **Interpret and apply to navigate in restricted waters with specific emphasis on the IALA Buoyage, Systems A and B**   * skills development | V |
| **13** | **Interpret and apply to navigate in restricted waters with specific emphasis on the IALA Buoyage, Systems A and B**   * conduct maneuver in a selected area | V |
| **14** | **A combined simulator Exercise in a restricted area and an estuary** | IV-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 |  |  |  |
| **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 Matri**

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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 |