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| Course Title | **Navigation Fundamentals** | | | | | | |
| Course Code | MANS-111 | | | | | | |
| Course Type | Required | | | | | | |
| Level | 1st Cycle | | | | | | |
| Year / Semester | 1st Year, Fall Semester | | | | | | |
| Teacher’s Name |  | | | | | | |
| ECTS | 5 | Theory | | Laboratory | Simulation | | Tutorial |
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| Course Purpose and Objectives | The main objectives of the course are to:   * exhibit the planning of a safe passage considering all the related parameters * demonstrate safe practices that ensure a proper and accurate course keeping * display the ways the ship’s position is defined * describe the magnetic compass’s working principles and its errors * present the basic modern navigational instruments | | | | | | |
| Learning Outcomes | After completion of the course students are expected to be able to:   * execute the passage plan under all prevailing conditions * navigate in narrow waters and in areas covered by VTS schemes * plot the ship’s fixed position with all the available means on board * employ surface observations to fix the ship’s position * compute the magnetic compass’s error * extract navigational data from the bridge’s electronic means of navigation | | | | | | |
| Prerequisites | None | | Required | | | None | |
| Course Content | * Earth and coordinate systems * Direction, speed, distance and depth calculations * Visual and acoustic aids to navigation * Electronic navigational equipment * Nautical publications * Chart projections * Navigation following the passage plan * Position lines of different types * Fixing the ship’s position * Entering, navigating through and exiting a VTS scheme * Zone time, nautical chronometers * Magnetic compasses description * Magnetic compass’s error | | | | | | |
| Teaching Methodology | Lectures, in-class assignments, sound and video equipment, computer, projector, simulation or other equivalent exercise environment | | | | | | |
| Bibliography | **Required Textbooks/Reading:**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Authors** | **Title** | **Publisher** | **Year** | **ISBN** | | Nautical Institute | Admiralty Manual of Navigation | Nautical Institute | 2011 | 9781870077651 |   **Recommended Textbooks/Reading:**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Authors** | **Title** | **Publisher** | **Year** | **ISBN** | | Wootenunder Edge | An introduction to coastal navigation | Morgan’s technical books | 1985 | 0-948254-02-5 | | Frost, A. | The Principles and Practice of Navigation | Glasgow, Brown, Son & Ferguson | 1988 | 0-85174-444-3 | | | | | | | |
| Assessment | Homework, in-class assignments, projects, exams, final exam. | | | | | | |
| Language | English | | | | | | |