

Course Title	Navigation Fundamentals				
Course Code	MANS-111				
Course Type	Required				
Level	1 st Cycle				
Year / Semester	1 st Year, Fall Semester				
Teacher's Name	Mr. Panayiotis Tafanides				
ECTS	7	Theory	Laboratory	Simulation	Tutorial
		3	1	---	----
Course Purpose and Objectives	<p>The main objectives of the course are to:</p> <ul style="list-style-type: none"> • 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	<p>After completion of the course students are expected to be able to:</p> <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Earth and coordinate systems • Direction, speed, distance and depth calculations • Visual and acoustic aids to navigation • Electronic navigational equipment 				

	<ul style="list-style-type: none"> • 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	<p>Required Textbooks/Reading:</p> <table border="1"> <thead> <tr> <th>Authors</th> <th>Title</th> <th>Publisher</th> <th>Year</th> <th>ISBN</th> </tr> </thead> <tbody> <tr> <td>Nautical Institute</td> <td>Admiralty Manual of Navigation</td> <td>Nautical Institute</td> <td>2011</td> <td>9781870077651</td> </tr> </tbody> </table> <p>Recommended Textbooks/Reading:</p> <table border="1"> <thead> <tr> <th>Authors</th> <th>Title</th> <th>Publisher</th> <th>Year</th> <th>ISBN</th> </tr> </thead> <tbody> <tr> <td>Wootenunder Edge</td> <td>An introduction to coastal navigation</td> <td>Morgan's technical books</td> <td>1985</td> <td>0-948254-02-5</td> </tr> <tr> <td>Frost, A.</td> <td>The Principles and Practice of Navigation</td> <td>Glasgow, Brown, Son & Ferguson</td> <td>1988</td> <td>0-85174-444-3</td> </tr> </tbody> </table>	Authors	Title	Publisher	Year	ISBN	Nautical Institute	Admiralty Manual of Navigation	Nautical Institute	2011	9781870077651	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
Authors	Title	Publisher	Year	ISBN																						
Nautical Institute	Admiralty Manual of Navigation	Nautical Institute	2011	9781870077651																						
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																									