

Course Title	Applied Navigation				
Course Code	MANS-211				
Course Type	Required				
Level	1 st Cycle				
Year / Semester	2 nd Year, Fall Semester				
Teacher's Name	Mr. Tafanides Panayiotis				
ECTS	6	Theory	Laboratory	Simulation	Tutorial
		4	2	---	-----
Course Purpose and Objectives	<p>The main objectives of the course are to:</p> <ul style="list-style-type: none"> • explain the role of time in celestial navigation • introduce the altitudes corrections • describe the use of the rising and setting of heavenly bodies in navigation • define the twilight and its use to navigation • give details about the latitude at noon and latitude by Polaris observations • exhibit the utilization of two or more position lines in position fixing • display the procedure of the recognition of heavenly bodies • elaborate on issues of oceanographic phenomena • analyze the navigation of life boats procedures • clarify the reception procedures of the notices to mariners 				
Learning Outcomes	<p>After completion of the course students are expected to be able to:</p> <ul style="list-style-type: none"> • consider time in their position fixing process • correct properly the sextant altitudes • observe the true rising and setting of heavenly bodies as a means of establishing the compass error • calculate the local times of morning and evening twilight • extract the latitude out of a body's meridian passage or out of a Polaris observation • fix their position utilizing two or more position lines • define the sea's level using data provided by the tide tables 				

	<ul style="list-style-type: none"> • safely navigate a life boat after abandoning the vessel • receive and immediately install the corrections provided by the notices to mariners 																												
Prerequisites	MANS-114	Required	None																										
Course Content	<ul style="list-style-type: none"> • Time types, equation of time, solar and sidereal time • Altitude corrections • Rising and setting of heavenly bodies, twilights and relevant applications • Compass error at true rise or set • Compass error using time • Latitude at sun's meridian passage • Polaris observations • Evaluating a celestial position line • Development of two or more celestial position lines • Identification of heavenly bodies • Tides, oceanographic phenomena • Notices to mariners management 																												
Teaching Methodology	Lectures, in-class assignments, sound and video equipment, computer, projector, relevant software, Bridge simulator																												
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>Bowditch, N.</td> <td>The American Practical Navigator</td> <td>Paradise Cay Publications</td> <td>2004</td> <td>0939837544</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>Sybramianiam, H.</td> <td>Practical Navigation</td> <td>Vijaya Publications</td> <td>1978</td> <td></td> </tr> <tr> <td>Cutler, T.,J.</td> <td>Dutton's nautical navigation</td> <td>US Naval Institute</td> <td>2003</td> <td>9781557502483</td> </tr> </tbody> </table>				Authors	Title	Publisher	Year	ISBN	Bowditch, N.	The American Practical Navigator	Paradise Cay Publications	2004	0939837544	Authors	Title	Publisher	Year	ISBN	Sybramianiam, H.	Practical Navigation	Vijaya Publications	1978		Cutler, T.,J.	Dutton's nautical navigation	US Naval Institute	2003	9781557502483
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Assessment	Homework, in-class assignments, projects, exams, final exam.																												
Language	English																												