

Course Title	MARPOL – Ballast Water Management				
Course Code	MANS-335				
Course Type	Required				
Level	1 st Cycle				
Year / Semester	3 rd Year, Spring Semester				
Teacher's Name	Captain. Dr. Frangos Andreas				
ECTS	4	Theory	Laboratory	Simulation	Tutorial
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Course Purpose and Objectives	<p>The main objectives of the course are to:</p> <ul style="list-style-type: none"> • present the basic provisions of MARPOL 73/78 • demonstrate the proper filling in of the Oil Record Book, the Garbage book and the Cargo book • display the international certificates required by MARPOL • introduce the basic provisions of the major conventions, relevant to the protection of the marine environment • explain the reasons that force the implementation of the Ballast Water Management • discuss about the pollution agents • exhibit the most effective means of prevention • present the best practices for managing the ballast water • elaborate on the Green maritime industry 				
Learning Outcomes	<p>After completion of the course students are expected to be able to:</p> <ul style="list-style-type: none"> • comprehend the basic provisions of MARPOL 73/78 • fill in as required the Oil Record book, the Garbage book and the Cargo book • identify all the international certificates required by MARPOL • implement basic provisions of the major conventions, relevant to the protection of the marine environment • recognize the necessity to implement Ballast Water Management procedures • realize the effect of the pollution agents carried by the ballast water 				

	<ul style="list-style-type: none"> analyze the most effective means of prevention value the different ways of managing the ballast water perceive the basic characteristics of the Green maritime industry 																	
Prerequisites	None	Required	None															
Course Content	<ul style="list-style-type: none"> MARPOL convention and the 1978 protocol Annex I. Prevention of marine pollution by oil Annex II. Prevention of marine pollution by hazardous liquid substances Annex III. Prevention of marine pollution by liquid substances carried containerized by sea Annex IV. Prevention of marine pollution by ship sewage Annex V. Prevention of marine pollution by ship garbage Annex VI. Prevention of air pollution by ships Other international conventions for the protection of the marine environment Compensations Ballast Water Management BWM terms BWM explanations BWM check lists Different ways to perform BWM Environmental awareness Environmental effect of pollution Economic impact of pollution Personal responsibility to protect the marine environment 																	
Teaching Methodology	Lectures, in-class assignments, sound and video equipment, computer, projector																	
Bibliography	Required Textbooks/Reading: <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>IMO</td> <td>BWM convention and the guidelines for its implementation</td> <td>IMO</td> <td>2009</td> <td>97892-801-15031</td> </tr> <tr> <td>IMO</td> <td>MARPOL, how to do it</td> <td>IMO</td> <td>2002</td> <td>978-92-801-41528</td> </tr> </tbody> </table>			Authors	Title	Publisher	Year	ISBN	IMO	BWM convention and the guidelines for its implementation	IMO	2009	97892-801-15031	IMO	MARPOL, how to do it	IMO	2002	978-92-801-41528
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	Recommended Textbooks/Reading:				
	Authors	Title	Publisher	Year	ISBN
	Khee-Jin Tan, A.	Vessel – source marine pollution	Cambridge university press	2005	0-521-85342-7
Assessment	Homework, in-class assignments, projects, exams, final exam.				
Language	English				