

Course Title	ARPA – Watch Keeping				
Course Code	MANS-411				
Course Type	Required				
Level	1 <sup>st</sup> Cycle				
Year / Semester	4 <sup>th</sup> Year, Spring Semester				
Teacher's Name	Captain. Dr. Andreas Frangos (Supervisor)				
ECTS	3	Theory	Laboratory	Simulation	Tutorial
		1	---	3	---
Course Purpose and Objectives	<p>The main objectives of the course are to:</p> <ul style="list-style-type: none"> <li>introduce the Regulations for avoiding collisions at sea</li> <li>describe the COLREGs field of application</li> <li>display the use of RADAR / ARPA in collision avoidance</li> <li>demonstrate the target plotting procedure</li> <li>discuss about the use of RADAR / ARPA in accordance with the COLREGs provisions</li> <li>present the navigation procedures in Vessel Traffic Separation Schemes</li> </ul>				
Learning Outcomes	<p>After completion of the course students are expected to be able to:</p> <ul style="list-style-type: none"> <li>recognize the lights, shapes, sounds and the related COLREGS procedures</li> <li>realize the rules' field of application</li> <li>comprehend the role of RADAR / ARPA in collision avoidance</li> <li>execute in detail the target plotting procedure</li> <li>implement the appropriate use of RADAR /ARPA according to the COLREGs provisions</li> <li>apply the required procedures when navigating close or in a Vessel Traffic Separation Scheme</li> </ul>				
Prerequisites	MANS-214	Required		None	
Course Content	<ul style="list-style-type: none"> <li>Description of ARPA devices</li> <li>IMO standards</li> </ul>				

	<ul style="list-style-type: none"> <li>• Target acquisition (auto and manual)</li> <li>• Warning alarms (operational and system's)</li> <li>• Trial maneuver</li> <li>• Factors affecting the system's accuracy</li> <li>• Errors, limitation precautions</li> <li>• ARPA initiation procedure</li> <li>• ARPA overreliance dangers</li> <li>• Watch keeping</li> <li>• Definition, explanation, and application of the COLREGs rules</li> <li>• Detailed explanation and application of VTS procedures</li> <li>• Distress signals</li> <li>• Marine accident case studies</li> <li>• The failure to comply with the COLREGs rules as a cause for accidents</li> </ul>																									
Teaching Methodology	ARPA simulation and theory at BSM Maritime Training Centre																									
Bibliography	<p><b>Required Textbooks/Reading:</b></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>Bole, A., Wall, A., Norris, A.</td> <td>RADAR and ARPA manual</td> <td>Elsevier</td> <td>2014</td> <td>978-0-08-097752-2</td> </tr> </tbody> </table> <p><b>Recommended Textbooks/Reading:</b></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>Cahill, R.A.</td> <td>Collisions and their causes</td> <td>Nautical institute</td> <td>2002</td> <td>1-87077-60-1</td> </tr> <tr> <td>IMO</td> <td>Ships' routing</td> <td>IMO</td> <td>2013</td> <td>978-92-801-15543</td> </tr> </tbody> </table>	Authors	Title	Publisher	Year	ISBN	Bole, A., Wall, A., Norris, A.	RADAR and ARPA manual	Elsevier	2014	978-0-08-097752-2	Authors	Title	Publisher	Year	ISBN	Cahill, R.A.	Collisions and their causes	Nautical institute	2002	1-87077-60-1	IMO	Ships' routing	IMO	2013	978-92-801-15543
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Assessment	Examination on ARPA simulator and provision of Certificate by approved and certified training center – BSM Maritime Training Centre																									
Language	English																									