



DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
MERCHANT SHIPPING SECRETARIAT
Ministry of Ports & Civil Aviation

No.79, Technical Junction, Maradana Road, Colombo 10, Sri Lanka
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DETAILED SYLLABUS

Competence	Ref. No.	Knowledge, understanding and proficiency	DURATION	Course Notes ref. no
1. Steering the ship and also comply with helm orders in the English language	1	Introduction and general information about ships		
	1.1	describes the different types of ships		07
	1.2	explains the functions of different types of ships		
	1.3	explains briefly the structural difference and special characteristics of different types of ships		
	1.2	Equipment and instrument available in the bridge		
	1.2.1	Use of magnetic and gyro-compasses		18
	1.2.1.1	describes the principle and function of Magnetic compass		
	1.2.1.2	states how a Gyro compass works		19
	1.2.1.3	describes the difference of True course and compass course		19
	1.2.1.4	describe the purpose of the lubber line		19
	1.2.1.5	explain the procedure and the purpose of comparing compasses		20
	1.3	Executing Helm orders		31
	1.3.1	states the importance of listening carefully, understanding without doubt and acknowledgement of helm orders		31
	1.3.2	explains the procedure of execution of common helm orders		32
	1.3.3	explains the necessity of paying attention and usefulness of the rudder angle indicator		31
	1.3.4	demonstrates the execution of helm orders.		31
1.3.5	Explain the procedure of handing over and taking over the helm		31	
	1.4	Change-over from automatic pilot to hand steering and vice versa		27



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	1.4.1	explains the modes of steering used to steer a vessel		27
	1.4.2	explains the advantages and disadvantages of hand steering and automatic pilot		28
	1.4.3	explains when hand steering is used		27
	1.4.4	explains when automatic pilot is used		27
	1.4.5	describes the changing - over procedure from hand steering to automatic pilot		27
	1.4.6	describes the changing - over procedure from automatic pilot to hand steering		28
	1.5	Steering Failure/ Emergency steering /NUF		29
	1.5.1	Explains the action to be taken in case of steering failure		29
	1.5.2	describe how emergency steering is established		29
	1.5.3	Describe the function of NUF mode		27
2. Keep a proper lookout by sight and hearing	2.1	Keep a proper look-out by sight and hearing		22
	2.1.1	Responsibilities of a look-out		22
	2.1.1.1	describes the responsibility of a look - out		22
	2.1.1.2	state the importance of consulting officer of the watch when in doubt		22
	2.2	Identify compass points		21
	2.2.1	explains how the compass is boxed into 32 points		21
	2.2.2	State that one point is equal to 11.25 degrees		21
	2.3	Reporting the approximate bearing of a sound signal, light or other object in degrees or points		23
	2.3.1	describes the importance of reporting, sound signals light or other object with direction		23
	2.3.2	explain the procedure of reporting, sound signal, light or other object forward of the beam or abaft the beam to the nearest whole point		23
	2.4	Basic knowledge of COLREGS		



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2.4.1	Lights and shapes		37
2.4.1.1	explain the arcs of navigational lights as per International Regulations for Preventing Collisions at sea		38
2.4.1.2	describe the lights and shapes and sound signals used by vessels in following situations as per International Regulation for Preventing Collisions at sea: <ul style="list-style-type: none">• Vessel underway 50 m or more in length• Vessel underway less than 50 m in length• Vessel under oars• Fishing other than trawling• Trawling• NUC• RAM• Pilot vessel• Vessels at anchor• WIG		Lights 39 Sound 43
	Collision avoidance		
2.4.2	Briefly explain the actions to be taken during following situations: <ul style="list-style-type: none">• Head on situation• Crossing situations• Overtaking• Briefly explain the responsibilities of a vessel under way in rule 18		36
	Buoys and buoyage systems		
2.4.3	describes the usage of buoyage systems		45



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	2.4.3.1 2.4.3.2	explains the IALA system of buoyage		
	2.5 2.5.1 2.5.2 2.5.3 2.5.4	Basic knowledge on Meteorology State the importance of understanding the Beaufort scale State the importance of observing the direction of wind, sea and swell State the importance of assessing rainy weather by appearance of clouds State the importance of weather forecasting		52
3. Contribute to handling of cargoes and stores	3.1 3.1.1 3.1.1.1 3.1.1.2	General information Names and functions of various parts of a ship draws a sketch of a ship and name parts explains the functions of various parts		02
	3.2 3.2.1 3.2.2	Nautical terms and definitions defines the common nautical terms and shipboard terms explains in detail the meaning and usage of common nautical terms and shipboard terms		10
	3.3 3.3.1 3.3.1.1 3.3.1.2 3.3.1.3 3.3.1.4 3.3.2	Use of appropriate internal communication and alarm systems Onboard communications describes the use of onboard intercom system describes the use of hand-held communication equipment state the importance of a common language states the importance of loud and clear verbal communication Onboard alarm systems		29 29 30 30 30 30 32



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	3.5.1	explains the procedure to seek relief, and also when to seek relief		55
	3.5.2	Explain the procedure of taking and handing over the watch		56
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	3.5.6	explain the duties of a helmsman		58
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	3.6.2	states the importance of knowing the bridge lay-out		59
	3.6.3	states the importance of knowing the use of relevant equipment		59
	3.6.4	states the importance of the knowledge of the forecasted weather		60
	3.6.5	states the knowledge of traffic density and expected situations help maintain a safe watch		60
	3.7	Basic environmental protection procedures		60
	3.7.1	states the importance of monitoring the water surface on the ship side for any oil slick or debris		60
	3.7.2	explains the precautions to be observed when taking bunkers		61
	3.7.3	States the importance of monitoring any leakages of cargo, pipe line damages etc		61
	3.7.4	State the importance of monitoring funnel exhaust for any black smoke		61
	3.8	Watch keeping at anchor & in piracy prone areas		
	3.8.1	explains the procedure that is to be followed prior to commencement of watch, at anchor		61
	3.8.2	explains the necessity of understanding orders of the officer of the watch		62



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	3.8.5	states the importance of consulting officer of the watch when in doubt		62
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	3.8.7	explains the additional security measures to be followed in piracy prone areas		146
4. Operate emergency equipment and apply emergency procedures	4.1	Knowledge of emergency duties and alarm signals		
	4.1.1	describe the purpose/contents of muster list and explain the different types of duties therein		64
	4.1.2	state that all alarms used on the vessel are listed there		
	4.1.3	explain the purpose and the signal of the General Emergency Alarm and all other alarms used on ships		65
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	4.2.1	Describe the different types of pyrotechnics used on ships , their characteristics and locations		68
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	4.6.2	state dangers may vary depending on class		84
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	4.10.5	states the importance of consulting officer of the watch when in doubt		
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4.12.2.5	practices seizing and parceling		99
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4.16.1	states how to prepare surfaces for painting		123
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4.16.4	describes the types of paint brushes and care		123
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4.17.1	Describe the below safe working practices:		
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	• Explain the consequences of wearing the safety gear improperly and also not wearing safety gear at all		124
	• Permit to work system		125
	• Movement about the ship		125



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		<ul style="list-style-type: none"> • Entering enclosed or confined spaces • Manual lifting and carrying • Painting • Working aloft and outboard • Anchoring Mooring and casting off • Lifting and mechanical handling appliances • Hatches • Working in cargo space • Work in ships' laundries • General cargo ships • Carriage of containers • Tankers and product carriers 		<p style="text-align: right;">127</p> <p style="text-align: right;">128</p> <p style="text-align: right;">127</p> <p style="text-align: right;">130</p> <p style="text-align: right;">130</p> <p style="text-align: right;">131</p> <p style="text-align: right;">132</p> <p style="text-align: right;">134</p> <p style="text-align: right;">134</p> <p style="text-align: right;">134</p> <p style="text-align: right;">135</p> <p style="text-align: right;">135</p> <p style="text-align: right;">136</p>
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	4.20	Importance of marine environmental protection		
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	4.21.2	describes damage which may result from oil pollution		139
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	4.22.3	states that the ship is bound by the laws of the flag state		140
	4.22.4	explains the need for shore reception facilities		140
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