Part D
Instructor's Guide

Instructions: *The Instructor's Guide (I.G.) also known as lesson plan is developed by the instructor which serves as a road map of what the trainees need to learn and how it will be done effectively. The format below shall be used to ensure uniformity. However, the MTI is required to specify teaching and learning activities, and develop appropriate Instructional Materials suitable for the learning outcomes.*

<table>
<tr><td colspan="3" rowspan="3">Course: Management Level Course for Marine Deck Officers
(Function 1)</td><td colspan="3">Competence: Plan a Voyage and Conduct Navigation</td></tr>
<tr><td colspan="3">Knowledge, Understanding and Proficiency: Voyage planning and navigation for all conditions by acceptable methods of plotting ocean tracks, taking into account, e.g.:
.1 restricted waters
.2 meteorological conditions
.3 ice,
.4 restricted visibility
.5 traffic separation schemes
.6 vessel traffic service (VTS) areas
.7 areas of extensive tidal effects</td></tr>
<tr><td colspan="3">Topics:
Course Introduction
1. Voyage planning and navigation for all conditions</td></tr>
<tr><td colspan="3">No. of Trainees: Twenty-Four (24) Trainees</td><td colspan="3">Learning Outcome/s: At the end of the session, the trainees should be able to:
Refer to Part C Course Syllabus for the Intended Learning Outcomes</td></tr>
<tr><td colspan="3">Class Layout: Lay-out suitable for theoretical part</td><td colspan="3">Formative Assessment: Written Test and Practical Test</td></tr>
<tr><th>Time</th><th>Phase</th><th>Content</th><th>Instructor-led Activity</th><th>Trainee's Learning Activity</th><th>Instructional Materials Used</th></tr>
<tr><td>30 minutes</td><td>Introduction</td><td>Course Introduction
• Requirements under Regulation II/2, Section A-II/2 Function 1 of the STCW Convention and Code
• Training outcomes and course requirements</td><td>• Class orientation/ briefing
• Lecture/Discussion or other teaching methods suitable for theoretical aspect</td><td>Listening, note taking, inquiring, answering questions, interactive discussion</td><td>Visual presentation</td></tr>
</table>

		• Intended Learning Outcomes (ILOs) • Introduction to Leadership skill that a management level officer should possess	• Presentation of the ILOs or other activities to motivate the trainees		
1 hour and 25 minutes	**Core Elements**	**1. Voyage planning and navigation for all conditions** .1 voyage planning and navigation for all conditions in accordance with the established procedure	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
1 hour and 30 minutes	**Core Elements**	***Practical Exercise 1*** Evaluate the planned route	***Practical Exercise 1*** The MTI is required to specify suitable activities for the conduct of the practical exercise in evaluating the planned route with due consideration to the following, in a given scenario: • restricted waters; • meteorological conditions; • ice; • restricted visibility; • traffic separation schemes; • vessel traffic service (VTS) areas; and • areas of extensive tidal effects.	***Practical Exercise 1*** Participating in the practical exercises on evaluating the planned route with due consideration to the following, in a given scenario: • restricted waters; • meteorological conditions; • ice; • restricted visibility; • traffic separation schemes; • vessel traffic service (VTS) areas; and • areas of extensive tidal effects.	• Exercise Sheet A6.1 • Full Mission Bridge Simulator and Mini Bridge Simulator Workstations
5 minutes	**Conclusion**	Voyage planning and navigation for all conditions	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following:	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

			- Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning		

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Plan a Voyage and Conduct Navigation
	Knowledge, Understanding and Proficiency: Routeing in accordance with the General Provisions on Ships' Routeing
	Topic: 2. Routeing in accordance with the General Provisions on Ships' Routeing
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Voyage planning and navigation for all conditions • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
1 hour and 20 minutes	**Core Elements**	**2. Routeing in accordance with the General Provisions on Ships' Routeing** .1 waypoints, courses, distances and time (in hours) calculations are within accepted standards for navigational equipment. .2 all potential navigational hazards in accordance with the General Provisions on Ships' Routeing.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
5 minutes	**Conclusion**	Routeing in accordance with the General Provisions on Ships' Routeing	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

			• Other activities to check the retention of learning		

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Plan a Voyage and Conduct Navigation
	Knowledge, Understanding and Proficiency: Reporting in accordance with the General principles for Ship Reporting Systems and with VTS procedures
	Topic: 3. Reporting in accordance with the General principles for Ship Reporting Systems and with VTS procedures
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test and Practical Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Routeing in accordance with the General Provisions on Ships' Routeing • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
1 hour and 20 minutes	**Core Elements**	**3. Reporting in accordance with the General principles for Ship Reporting Systems and with VTS procedures** .1 reporting requirements for particular reporting and VTS systems .2 developed reports in accordance with published procedures and criteria	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
1 hour and 30 minutes	**Core Elements**	***Practical Exercise 2*** Apply the approved reports	***Practical Exercise 2*** The MTI is required to specify suitable activities for the conduct of the practical exercise in applying the approved reports in accordance with the published procedures and criteria.	***Practical Exercise 2*** Participating in the practical exercise on applying the approved reports in accordance with the published procedures and criteria.	• Exercise Sheet A6.2 • Full Mission Bridge Simulator and Mini Bridge Simulator Workstations

					• Two-Way Handheld Radio
5 minutes	**Conclusion**	Reporting in accordance with the General principles for Ship Reporting Systems and with VTS procedures	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Determine position and the accuracy of resultant position fix by any means **Knowledge, Understanding and Proficiency:** Position determination in all conditions .1 by celestial observations by terrestrial observations .2 by terrestrial observations, including the ability to use appropriate charts, notices to mariners and other publications to assess the accuracy of the resulting position fix .3 using modern electronic navigational aids, with specific knowledge of their operating principles, limitations, sources of error, detection of misrepresentation of information and methods of correction to obtain accurate position fixing **Topic:** 4. Position determination in all conditions
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Practical Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Reporting in accordance with the General principles for Ship Reporting Systems and with VTS procedures • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
1 hour and 20 minutes	**Core Elements**	**4. Position determination in all conditions** ***Practical Exercise 3*** Determine the most appropriate ship's position-fixing method to the prevailing circumstances and conditions	***Practical Exercise 3*** The MTI is required to specify suitable activities for the conduct of the practical exercise in determining the most appropriate ship's position-fixing method to the prevailing circumstances and conditions in a given scenario: • celestial observation;	***Practical Exercise 3*** Participating in the practical exercise on determining the most appropriate ship's position-fixing method to the prevailing circumstances and conditions in a given scenario: • celestial observation;	• Exercise Sheet A6.3 • Full Mission Bridge Simulator and Mini Bridge Simulator Workstations • Two-Way Handheld Radio

			• terrestrial observation; and • electronic navigational aids.	• terrestrial observation; and • electronic navigational aids.	
5 minutes	**Conclusion**	Position determination in all conditions	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Determine and allow for compass errors
	Knowledge, Understanding and Proficiency: Ability to determine and allow for errors of the magnetic and gyro-compasses
	Topic: 5. Errors of the magnetic and gyro-compasses
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test and Practical Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Position determination in all conditions • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
1 hour and 20 minutes	**Core Elements**	**5. Errors of the magnetic and gyro-compasses** .1 evaluate the computed magnetic errors of a ship corresponding to different headings at a given navigational area. .2 evaluate the Gyro-Error by comparing the ship's heading to bearing of range or leading marker/lights of a terrestrial object within an acceptable limit of +/- 1.0 degree to get the true bearing. .3 evaluate the True Bearing of an object by applying the errors appropriate to the ship's magnetic and gyro	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic

		compasses, within an acceptable limit of +/- 1 degree. .4 evaluate the True Course of a ship by applying the errors appropriate to her magnetic and gyro compasses, within an acceptable limit of +/- 1 degree.			
1 hour and 30 minutes	**Core Elements**	***Practical Exercise 4*** Apply the true course/direction of own ship and frequently check magnetic and gyro compass errors in the prevailing circumstances and conditions	***Practical Exercise 4*** The MTI is required to specify suitable activities for the conduct of the practical exercise in applying the true course/direction of own ship and frequently check magnetic and gyro compass errors in the prevailing circumstances and conditions in a given scenario.	***Practical Exercise 4*** Participating in the practical exercise on applying the true course/direction of own ship and frequently check magnetic and gyro compass errors in the prevailing circumstances and conditions in a given scenario.	• Exercise Sheet A6.4 • Full Mission Bridge Simulator and Mini Bridge Simulator Workstations • Two-Way Handheld Radio
5 minutes	**Conclusion**	Errors of the magnetic and gyro-compasses	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)			**Competence:** Determine and allow for compass errors		
			Knowledge, Understanding and Proficiency: Knowledge of the principles of magnetic and gyro-compasses.		
			Topic: 6. Principles of magnetic and gyro compasses		
No. of Trainees: Twenty-Four (24) Trainees			**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes		
Class Layout: Lay-out suitable for theoretical part			**Formative Assessment:** Written Test		
Time	**Phase**	**Content**	**Instructor-led Activity**	**Trainee's Learning Activity**	**Instructional Materials Used**
5 minutes	**Introduction**	• Errors of the magnetic and gyro-compasses • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**6. Principles of magnetic and gyro compasses** .1 fundamental principles governing magnetic and gyro compass systems, including their operational mechanisms, errors, and corrective measures .2 factors affecting magnetic and gyro compass performances	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
5 minutes	**Conclusion**	Principles of magnetic and gyro compasses	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

			• Other activities to check the retention of learning		

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Determine and allow for compass errors
	Knowledge, Understanding and Proficiency: An understanding of systems under the control of the master gyro and knowledge of the operation and care of the main types of gyro-compass.
	Topic: 7. Systems under the control of the master gyro, and operation and care of the main types of gyro-compass
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Principles of magnetic and gyro compasses • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
1 hour and 20 minutes	**Core Elements**	7. **Systems under the control of the master gyro, and operation and care of the main types of gyro-compass** .1 operation and handling of the main types of gyro-compasses to distinguish key features and functionalities. .2 importance of routine checks, calibration procedures, and adherence to manufacturer's guidelines to ensure optimal performance. .3 common problems and potential issues related to gyro-compass functionality that may arise during	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic

		navigation in accordance with operations manual.			
5 minutes	**Conclusion**	Systems under the control of the master gyro, and operation and care of the main types of gyro-compass	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Coordinate search and rescue operations
	Knowledge, Understanding and Proficiency: A thorough knowledge of and ability to apply the procedures contained in the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual
	Topic: 8. Procedures contained in the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test and Practical Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Systems under the control of the master gyro, and operation and care of the main types of gyro-compass • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
2 hours and 20 minutes	**Core Elements**	**8. Procedures contained in the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual** .1 appropriate search and rescue procedures which in accordance with international guidance and standards. .2 sample established radiocommunications to ensure that correct communication procedures will be followed at all stages of the search and rescue operations	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic

2 hours and 30 minutes	**Core Elements**	***Practical Exercise 5*** Apply the search and rescue operation coordination procedure of IAMSAR	***Practical Exercise 5*** The MTI is required to specify suitable activities for the conduct of the practical exercise in applying the search and rescue operation coordination procedure of IAMSAR in a given scenario.	***Practical Exercise 5*** Participating in the practical exercise on applying the search and rescue operation coordination procedure of IAMSAR in a given scenario.	• Exercise Sheet A6.5 • Full Mission Bridge Simulator and Mini Bridge Simulator Workstations • Two-Way Handheld Radio
5 minutes	**Conclusion**	Procedures contained in the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)			**Competence:** Establish watchkeeping arrangements and procedures		
			Knowledge, Understanding and Proficiency: Thorough knowledge of content, application and intent of the International Regulations for Preventing Collision at Sea, 1972, as amended.		
			Topic: **9.** Content, application and intent of the International Regulations for Preventing Collisions at Sea, 1972, as amended		
No. of Trainees: Twenty-Four (24) Trainees			**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes		
Class Layout: Lay-out suitable for theoretical part			**Formative Assessment:** Written Test		
Time	**Phase**	**Content**	**Instructor-led Activity**	**Trainee's Learning Activity**	**Instructional Materials Used**
5 minutes	**Introduction**	• Procedures contained in the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
2 hours and 50 minutes	**Core Elements**	9. **Content, application and intent of the International Regulations for Preventing Collisions at Sea, 1972, as amended** .1 application of the different parts, sections, rules and annexes of the COLREGs in establishing watchkeeping arrangement and procedures.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
5 minutes	**Conclusion**	Content, application and intent of the International Regulations for Preventing Collisions at Sea, 1972, as amended	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

			- Assignment • Other activities to check the retention of learning		

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Establish watchkeeping arrangements and procedures
	Knowledge, Understanding and Proficiency: Thorough knowledge of the content, application and intent of the Principles to be observed in keeping a navigational watch.
	Topic: **10.** Content, application and intent of the Principles to be observed in keeping a navigational watch
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Content, application and intent of the International Regulations for Preventing Collisions at Sea, 1972, as amended • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
1 hour and 20 minutes	**Core Elements**	**10. Content, application and intent of the Principles to be observed in keeping a navigational watch** .1 international regulations and guidelines for ensuring fitness for duty is in compliance with the requirements of Chapter VIII, Standards regarding watchkeeping, Section A-VIII/1. .2 sample watchkeeping arrangement and principles to be observed in compliance with the requirements of Chapter VIII, Standards	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic

		regarding watchkeeping, Section A-VIII/2.			
5 minutes	**Conclusion**	Content, application and intent of the Principles to be observed in keeping a navigational watch	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Maintain safe navigation through the use of information from navigation equipment and systems to assist command decision making
	Knowledge, Understanding and Proficiency: An appreciation of system errors and thorough understanding of the operational aspects of navigational systems.
	Topic: **11.** System errors and operational aspects of navigational systems
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Practical Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Content, application and intent of the Principles to be observed in keeping a navigational watch • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**11. System errors and operational aspects of navigational systems** ***Practical Exercise 6*** • Analyze the operational aspects of the Radar/ARPA and other navigational systems • Analyze the possible system errors that might occur while using the Radar/ARPA and other navigational systems	***Practical Exercise 6*** The MTI is required to specify suitable activities for the conduct of the practical exercise in the following: • analyzing the operational aspects of the Radar/ARPA and other navigational systems in respect to the information obtained taking into account the limitation of equipment and prevailing circumstances and conditions in a given scenario. • analyzing the possible system errors that might occur while using the	***Practical Exercise 6*** Participating in the practical exercise on the following: • analyzing the operational aspects of the Radar/ARPA and other navigational systems in respect to the information obtained taking into account the limitation of equipment and prevailing circumstances and conditions in a given scenario. • analyzing the possible system errors that might occur while	• Exercise Sheet A6.6 • Full Mission Bridge Simulator and Mini Bridge Simulator Workstations • Two-Way Handheld Radio

			Radar/ARPA and other navigational systems, and measures to correct them in accordance with the operations manual in a given scenario.	using the Radar/ARPA and other navigational systems, and measures to correct them in accordance with the operations manual in a given scenario.	
5 minutes	**Conclusion**	System errors and operational aspects of navigational systems	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)			**Competence:** Maintain safe navigation through the use of information from navigation equipment and systems to assist command decision making		
			Knowledge, Understanding and Proficiency: Blind pilotage planning		
			Topic: **12.** Blind pilotage planning		
No. of Trainees: Twenty-Four (24) Trainees			**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes		
Class Layout: Lay-out suitable for theoretical part			**Formative Assessment:** Written Test and Practical Test		
Time	**Phase**	**Content**	**Instructor-led Activity**	**Trainee's Learning Activity**	**Instructional Materials Used**
5 minutes	**Introduction**	• System errors and operational aspects of navigational systems • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
1 hour and 20 minutes	**Core Elements**	**12. Blind pilotage planning** .1 navigation of the ship in blind pilotage/zero visibility in accordance with established watchkeeping procedures.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
1 hour	**Core Elements**	***Practical Exercise 7*** Perform blind pilotage	***Practical Exercise 7*** The MTI is required to specify suitable activities for the conduct of the practical exercise in performing the blind pilotage safely in accordance with established watchkeeping procedures in a given scenario.	***Practical Exercise 7*** Participating in the practical exercise on performing the blind pilotage safely in accordance with established watchkeeping procedures in a given scenario.	• Exercise Sheet A6.7 • Full Mission Bridge Simulator and Mini Bridge Simulator Workstations • Two-Way Handheld Radio
5 minutes	**Conclusion**	Blind pilotage planning	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following:	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

			- Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning		

Course: Management Level Course for Marine Deck Officers (Function 1)			**Competence:** Maintain safe navigation through the use of information from navigation equipment and systems to assist command decision making		
			Knowledge, Understanding and Proficiency: • Evaluation of navigational information derived from all sources, including radar and ARPA, in order to make and implement command decisions for collision avoidance and for directing the safe navigation of the ship • The interrelationship and optimum use of all navigational data available for conducting navigation		
			Topics: **13.** Navigational information derived from all sources **14.** The interrelationship and optimum use of all navigational data available for conducting navigation		
No. of Trainees: Twenty-Four (24) Trainees			**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes		
Class Layout: Lay-out suitable for theoretical part			**Formative Assessment:** Written Test and Practical Test		
Time	**Phase**	**Content**	**Instructor-led Activity**	**Trainee's Learning Activity**	**Instructional Materials Used**
5 minutes	**Introduction**	• Blind pilotage planning • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
1 hour and 20 minutes	**Core Elements**	**13. Navigational information derived from all sources** .1 navigational information derived from applicable navigational equipment, including radar/ARPA, and other navigational information sources to avoid a close-quarter situations with other ships.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
1 hour	**Core Elements**	***Practical Exercise 8***	***Practical Exercise 8*** The MTI is required to specify suitable activities for the	***Practical Exercise 8*** Participating in the practical exercise on	• Exercise Sheet A6.8

		Perform safe navigation to avoid a close encounter or collision with another vessel	conduct of the practical exercise in performing the safe navigation to avoid a close encounter or collision with another vessel in accordance with the International Regulations for Preventing Collisions at Sea, 1972, as amended.	performing the safe navigation to avoid a close encounter or collision with another vessel in accordance with the International Regulations for Preventing Collisions at Sea, 1972, as amended.	• Full Mission Bridge Simulator and Mini Bridge Simulator Workstations • Two-Way Handheld Radio
	Core Elements	**14. The interrelationship and optimum use of all navigational data available for conducting navigation** ***Practical Exercise 8*** Use all navigational data derived from navigational equipment for conducting safe navigation	***Practical Exercise 8*** The MTI is required to specify suitable activities for the conduct of the practical exercise in using all the navigational data derived from navigational equipment for conducting safe navigation in accordance with the established watchkeeping procedures in a given scenario.	***Practical Exercise 8*** The MTI is required to specify suitable activities for the conduct of the practical exercise in using all the navigational data derived from navigational equipment for conducting safe navigation in accordance with the established watchkeeping procedures in a given scenario.	• Exercise Sheet A6.8 • Full Mission Bridge Simulator and Mini Bridge Simulator Workstations • Two-Way Handheld Radio
5 minutes	**Conclusion**	Navigational information derived from all sources The interrelationship and optimum use of all navigational data available for conducting navigation	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Maintain the safety of navigation through the use of ECDIS and associated navigation systems to assist command decision making.
	Knowledge, Understanding and Proficiency: Management of operational procedures, system files and data, including: .1 manage procurement, licensing and updating of chart data and system software to conform to established procedures .2 system and information updating, including the ability to update ECDIS system version in accordance with vendor's product development .3 create and maintain system configuration and backup files .4 create and maintain log files in accordance with established procedures .5 create and maintain route plan files in accordance with established procedures .6 use ECDIS log-book and track history functions for inspection of system functions, alarm settings and user responses
	Topic: 15. Management of operational procedures, system files and data
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test and Practical Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• The interrelationship and optimum use of all navigational data available for conducting navigation • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation

55 minutes	**Core Elements**	**15. Management of operational procedures, system files and data** .1 management of operational procedures, system files and data, including: • manage procurement, licensing and updating of chart data and system software to conform to established procedures • system and information updating, including the ability to update ECDIS system version in accordance with vendor's product development	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
2 hours	**Core Elements**	***Practical Exercise 9*** • Create and maintain the system configuration and backup files, log files, and route plan files • Use the ECDIS log-book and track history functions for inspection of system functions, alarm settings and user responses	***Practical Exercise 9*** The MTI is required to specify suitable activities for the conduct of the practical exercise in the following: • creating and maintaining the following in accordance with the established procedure: ○ system configuration and backup files; ○ log files; and ○ route plan files. • using the ECDIS log-book and track history functions for inspection of system	***Practical Exercise 9*** Participating in the practical exercise on the following: • creating and maintaining the following in accordance with the established procedure: ○ system configuration and backup files; ○ log files; and ○ route plan files. • using the ECDIS log-book and track history functions for inspection of system functions, alarm	• Exercise Sheet A6.9 • Full Mission Bridge Simulator and Mini Bridge Simulator Workstations • Two-Way Handheld Radio

			functions, alarm settings and user responses.	settings and user responses.	
5 minutes	**Conclusion**	Management of operational procedures, system files and data	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)			**Competence:** Maintain safe navigation through the use of information from navigation equipment and systems to assist command decision making		
			Knowledge, Understanding and Proficiency: Use ECDIS playback functionality for passage review, route planning and review, route planning and review of system functions.		
			Topic: 16. ECDIS playback functionality		
No. of Trainees: Twenty-Four (24) Trainees			**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes		
Class Layout: Lay-out suitable for theoretical part			**Formative Assessment:** Written Test and Practical Test		
Time	**Phase**	**Content**	**Instructor-led Activity**	**Trainee's Learning Activity**	**Instructional Materials Used**
5 minutes	**Introduction**	• Management of operational procedures, system files and data • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**16. ECDIS playback functionality** .1 ECDIS playback functionality for passage review, route plan and review of system functions.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
1 hour and 30 minutes	**Core Elements**	***Practical Exercise 10*** Perform the ECDIS playback functionality	***Practical Exercise 10*** The MTI is required to specify suitable activities for the conduct of the practical exercise in performing the ECDIS playback functionality for passage review, route plan and review of system functions.	***Practical Exercise 10*** Participating in the practical exercise on performing the ECDIS playback functionality for passage review, route plan and review of system functions.	• Exercise Sheet A6.10 • Full Mission Bridge Simulator and Mini Bridge Simulator Workstations • Two-Way Handheld Radio

5 minutes	**Conclusion**	ECDIS playback	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)			**Competence:** Forecast weather and oceanographic conditions		
			Knowledge, Understanding and Proficiency: Ability to understand and interpret a synoptic chart and to forecast area weather, taking into account local weather conditions and information received by weather fax.		
			Topic: 17. Synoptic chart and forecast area weather		
No. of Trainees: Twenty-Four (24) Trainees			**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes		
Class Layout: Lay-out suitable for theoretical part			**Formative Assessment:** Written Test and Practical Test		
Time	**Phase**	**Content**	**Instructor-led Activity**	**Trainee's Learning Activity**	**Instructional Materials Used**
5 minutes	**Introduction**	• ECDIS playback • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
20 minutes	**Core Elements**	**17. Synoptic chart and forecast area weather** .1 importance of interpreting a synoptic chart and to forecast area weather, taking into account local weather conditions and information received by weather fax.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
1 hour		***Practical Exercise 11*** Forecast likely weather conditions for a determined period based on all available information	***Practical Exercise 11*** The MTI is required to specify suitable activities for the conduct of the practical exercise in forecasting likely weather conditions for a determined period based on all available information.	***Practical Exercise 11*** Participating in the practical exercise on forecasting likely weather conditions for a determined period based on all available information.	Exercise Sheet A6.11

5 minutes	**Conclusion**	Synoptic chart and forecast area weather	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Forecast weather and oceanographic conditions
	Knowledge, Understanding and Proficiency: Knowledge of the characteristics of various weather systems, including tropical revolving storms and avoidance of storm centres and the dangerous quadrants.
	Topic: 18. Characteristics of various weather systems
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Synoptic chart and forecast area weather • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**18. Characteristics of various weather systems** .1 specific characteristics of tropical revolving storms, including formation, development and intensification, to make informed decisions on storm avoidance .2 dangerous quadrants/semi-circle of tropical revolving storms in the northern and southern hemispheres. .3 appropriate actions to avoid storm centers and dangerous quadrants to ensure ship's safety in accordance with the established procedures.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic

5 minutes	**Conclusion**	Characteristics of various weather systems	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Forecast weather and oceanographic conditions
	Knowledge, Understanding and Proficiency: Knowledge of ocean current systems
	Topic: 19. Ocean current systems
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Characteristics of various weather systems • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**19. Ocean current systems** .1 ocean current systems, including their causes, characteristics, and variations in different geographical regions. .2 impact of ocean currents on maritime operations, considering their influence on ship navigation and overall safety. .3 Sample ocean currents to optimize route planning and enhance overall navigation efficiency.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
5 minutes	**Conclusion**	Ocean current systems	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following:	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

			- Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning		

Course: Management Level Course for Marine Deck Officers (Function 1)			**Competence:** Forecast weather and oceanographic conditions		
			Knowledge, Understanding and Proficiency: Knowledge ocean current systems		
			Topic: 20. Tidal conditions		
No. of Trainees: Twenty-Four (24) Trainees			**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes		
Class Layout: Lay-out suitable for theoretical part			**Formative Assessment:** Written Test and Practical Test		
Time	**Phase**	**Content**	**Instructor-led Activity**	**Trainee's Learning Activity**	**Instructional Materials Used**
5 minutes	**Introduction**	• Ocean current systems • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**20. Tidal conditions** .1 tidal conditions of a port with the use of tide tables	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
1 hour and 30 minutes	**Core Elements**	***Practical Exercise 12*** Validate the calculated tidal condition of a secondary port with the use of tide tables	***Practical Exercise 12*** The MTI is required to specify suitable activities for the conduct of the practical exercise in validating the calculated tidal condition of a secondary port with the use of tide tables in a given scenario.	***Practical Exercise 12*** Participating in the practical exercise on validating the calculated tidal condition of a secondary port with the use of tide tables in a given scenario.	Exercise Sheet A6.12
5 minutes	**Introduction**	Tidal conditions	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

			- Assignment • Other activities to check the retention of learning		

Course: Management Level Course for Marine Deck Officers (Function 1)			**Competence:** Forecast weather and oceanographic conditions		
			Knowledge, Understanding and Proficiency: Use all appropriate nautical publications on tides and currents		
			Topic: 21. Nautical publications on tides and currents		
No. of Trainees: Twenty-Four (24) Trainees			**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes		
Class Layout: Lay-out suitable for theoretical part			**Formative Assessment:** Written Test and Practical Test		
Time	**Phase**	**Content**	**Instructor-led Activity**	**Trainee's Learning Activity**	**Instructional Materials Used**
5 minutes	**Introduction**	• Tidal conditions • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**21. Nautical publications on tides and currents** .1 ocean current(s) and tides, and its effects on a predetermined route using appropriate nautical publications.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	Visual Presentation
1 hour	**Core Elements**	***Practical Exercise 13*** Use the appropriate nautical publications on tides and currents when passing through ocean routes	***Practical Exercise 13*** The MTI is required to specify suitable activities for the conduct of the practical exercise in using the appropriate nautical publications on tides and currents when passing through ocean routes in a given scenario.	***Practical Exercise 13*** Participating in the practical exercise on using the appropriate nautical publications on tides and currents when passing through ocean routes in a given scenario.	Exercise Sheet A6.13

5 minutes	**Conclusion**	Nautical publications on tides and currents	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Manoeuvre and handle a ship in all conditions
	Knowledge, Understanding and Proficiency: Manoeuvring and handling a ship in all conditions, including: .1 Manoeuvres when approaching pilot stations and embarking or disembarking pilots, with due regard to weather, tide, headreach and stopping distances
	Topic: 22. Manoeuvring and handling a ship in all conditions: 22.1 approaching pilot stations and embarking or disembarking pilots
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test and Practical Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Nautical publications on tides and currents • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
2 hours and 20 minutes	**Core Elements**	**22. Manoeuvring and handling a ship in all conditions** **22.1 approaching pilot stations and embarking or disembarking pilots** .1 ship's manoeuvring and engine characteristic and the forces such as weather conditions, tides, head reach, and stopping distances prior approaching and departing pilot station under all conditions.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic

2 hours and 30 minutes	**Core Elements**	***Practical Exercise 14*** Manoeuvre the ship to embark and disembark pilots in various conditions of loading (loaded and ballast) and weather	***Practical Exercise 14*** The MTI is required to specify suitable activities for the conduct of the practical exercise in manoeuvring the ship to embark and disembark pilots in various conditions of loading (loaded and ballast) and weather in accordance with the established procedures in a given scenario.	***Practical Exercise 14*** ~~Participating in the practical exercise on maneuvering the ship to embark and disembark pilots in various conditions of loading (loaded and ballast) and weather in accordance with the established procedures in a given scenario.~~ Participating in the practical exercise on manoeuvring the ship to embark and disembark pilots in various conditions of loading (loaded and ballast) and weather in accordance with the established procedures in a given scenario.	• Exercise Sheet A6.14 • Full Mission Bridge Simulator and Mini Bridge Simulator Workstations • Two-Way Handheld Radio
5 minutes	**Conclusion**	Manoeuvring and handling a ship in approaching pilot stations and embarking or disembarking pilots	• Make generalization~~s~~ and abstraction ~~about~~ of the lesson~~s~~ • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Manoeuvre and handle a ship in all conditions
	Knowledge, Understanding and Proficiency: Manoeuvring and handling a ship in all conditions, including: .2 Handling ship in rivers, estuaries and restricted waters, having regard to the effects of current, wind and restricted water on helm response
	Topic: 22. Manoeuvring and handling a ship in all conditions 22.2 Handling ship in rivers, estuaries and restricted waters
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test and Practical Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Manoeuvring and handling a ship in approaching pilot stations and embarking or disembarking pilots • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
1 hour and 20 minutes	**Core Elements**	**22. Manoeuvring and handling a ship in all conditions** **22.2 handling ship in rivers, estuaries and restricted waters** .1 effects of current and wind for the safe handling of ships in rivers, estuaries, and restricted waters in the intended track of the vessel.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
2 hours and 30 minutes	**Core elements**	***Practical Exercise 15*** Manoeuvre the ship in rivers, estuaries and restricted water in	***Practical Exercise 15*** The MTI is required to specify suitable activities for the conduct of the practical	***Practical Exercise 15*** Participating in the practical exercise on manoeuvring the ship in rivers, estuaries	• Exercise Sheet A6.15 • Full Mission Bridge Simulator

		various conditions of loading (loaded and ballast) and weather	exercise in manoeuvring the ship in rivers, estuaries and restricted water in various conditions of loading (loaded and ballast) and weather in accordance with the established procedures in a given scenario.	and restricted water in various conditions of loading (loaded and ballast) and weather in accordance with the established procedures in a given scenario.	and Mini Bridge Simulator Workstations • Two-Way Handheld Radio
5 minutes	**Conclusion**	Manoeuvring and handling a ship in Handling ship in rivers, estuaries and restricted waters	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Manoeuvre and handle a ship in all conditions
	Knowledge, Understanding and Proficiency: Manoeuvring and handling a ship in all conditions, including: .3 Application of constant-rate-of-return techniques
	Topic: 22. Manoeuvring and handling a ship in all conditions 22.3 Application of constant-rate-of-turn techniques
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test and Practical Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Manoeuvring and handling a ship in Handling ship in rivers, estuaries and restricted waters • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**22. Manoeuvring and handling a ship in all conditions** **22.3 Application of constant-rate-of-turn techniques** .1 constant-rate-of-turn effects of ship's manoeuvring characteristics and turn techniques under various conditions of loading (loaded and ballast) and weather.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
2 hours and 30 minutes	**Core Elements**	***Practical Exercise 16*** Manoeuvre the ship using constant-rate-of-turn techniques under various conditions of loading (loaded and ballast) and weather	***Practical Exercise 16*** The MTI is required to specify suitable activities for the conduct of the practical exercise in manoeuvring the	***Practical Exercise 16*** Participating in the practical exercise on manoeuvring the ship using constant-rate-of-turn techniques	• Exercise Sheet A6.16 • Full Mission Bridge Simulator and Mini Bridge

			ship using constant-rate-of-turn techniques under various conditions of loading (loaded and ballast) and weather in a given scenario.	under various conditions of loading (loaded and ballast) and weather in a given scenario.	Simulator Workstations • Two-Way Handheld Radio
5 minutes	**Conclusion**	Manoeuvring and handling a ship in Application of constant-rate-of-turn techniques	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Manoeuvre and handle a ship in all conditions
	Knowledge, Understanding and Proficiency: Manoeuvering and handling a ship in all conditions, including: .4 Maneuvering in shallow water, including the reduction in under-keel clearance caused by squat, rolling and pitching
	Topic: 22. Manoeuvring and handling a ship in all conditions 22.4 In shallow water and under-keel clearance
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test and Practical Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Manoeuvring and handling a ship in Application of constant-rate-of-turn techniques • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**22. Manoeuvring and handling a ship in all conditions** **22.4 In shallow water and under-keel clearance** .1 given changes in dynamic under-keel clearance when manoeuvring the vessel in shallow water, under various conditions of loading and weather.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
2 hours	**Core Elements**	***Practical Exercise 17*** Manoeuvre the ship in shallow water including the reduction in under-keel clearance caused by squat, rolling and pitching under various conditions	***Practical Exercise 17*** The MTI is required to specify suitable activities for the conduct of the practical exercise in manoeuvring the	***Practical Exercise 17*** Participating in the practical exercise on manoeuvring the ship in shallow water including the reduction in	• Exercise Sheet A6.17 • Full Mission Bridge Simulator and Mini Bridge

		of loading (loaded and ballast) and weather	ship in shallow water including the reduction in under-keel clearance caused by squat, rolling and pitching under various conditions of loading and weather in a given scenario.	under-keel clearance caused by squat, rolling and pitching under various conditions of loading and weather in a given scenario.	Simulator Workstations • Two-Way Handheld Radio
5 minutes	**Conclusion**	Manoeuvring and handling a ship in shallow water and under-keel clearance	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Manoeuvre and handle a ship in all conditions
	Knowledge, Understanding and Proficiency: Manoeuvre and handling a ship in all conditions, including; .5 Interaction between passing ships and between own ship and nearby banks (canal effect)
	Topic: 22. Manoeuvring and handling a ship in all conditions 22.5 Interaction between passing ships and between own ship and nearby banks (canal effect)
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test and Practical Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Manoeuvring and handling a ship in shallow water and under-keel clearance • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
1 hour and 20 minutes	**Core Elements**	**22. Manoeuvring and handling a ship in all conditions** **22.5 Interaction between passing ships and between own ship and nearby banks (canal effect)** .1 effect of interaction between passing ships and between own ship and nearby banks (bank cushion and suction effect).	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic

2 hours	**Core Elements**	***Practical Exercise 18*** Manoeuvre the ship when passing close to other ships and nearby banks, considering canal effect	***Practical Exercise 18*** The MTI is required to specify suitable activities for the conduct of the practical exercise in manoeuvring the ship when passing close to other ships and nearby banks, considering canal effect, in accordance with the established procedures in a given scenario.	***Practical Exercise 18*** Participating in the practical exercise on manoeuvring the ship when passing close to other ships and nearby banks, considering canal effect, in accordance with the established procedures in a given scenario.	• Exercise Sheet A6.18 • Full Mission Bridge Simulator and Mini Bridge Simulator Workstations • Two-Way Handheld Radio
5 minutes	**Conclusion**	Manoeuvring and handling a ship in Interaction between passing ships and between own ship and nearby banks (canal effect)	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Manoeuvre and handle a ship in all conditions
	Knowledge, Understanding and Proficiency: Manoeuvring and handling a ship in all conditions, including; .6 Berthing and unberthing under various conditions of wind, tide and current with and without tugs
	Topic: 22. Manoeuvring and handling a ship in all conditions 22.6 berthing and unberthing in all conditions
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test and Practical Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Manoeuvring and handling a ship in Interaction between passing ships and between own ship and nearby banks (canal effect) • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
1 hour and 20 minutes	**Core Elements**	**22. Manoeuvring and handling a ship in all conditions** **22.6 Berthing and unberthing in all conditions** .1 given ship handling movements when berthing and unberthing with respect to ship's manoeuvring and engine characteristics, with and without tugs assistance, under various conditions of loading (loaded and ballast) and weather.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic

4 hours	**Core Elements**	***Practical Exercise 19*** Perform the berthing and unberthing of the ship, with and without tugs, under various conditions of loading (loaded and ballast) and weather	***Practical Exercise 19*** The MTI is required to specify suitable activities for the conduct of the practical exercise in performing the berthing and unberthing of the ship, with and without tugs, under various conditions of loading (loaded and ballast) and weather.	***Practical Exercise 19*** Participating in the practical exercise on performing the berthing and unberthing of the ship, with and without tugs, under various conditions of loading (loaded and ballast) and weather.	• Exercise Sheet A6.19 • Full Mission Bridge Simulator and Mini Bridge Simulator Workstations • Two-Way Handheld Radio
5 minutes	**Conclusion**	Manoeuvring and handling a ship in Berthing and unberthing in all conditions	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Manoeuvre and handle a ship in all conditions **Knowledge, Understanding and Proficiency:** Manoeuvring and handling a ship in all conditions, including; .7 Ship and tug interaction **Topic:** 22. Manoeuvring and handling a ship in all conditions 22. 7 ship and tug interaction
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Practical Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Manoeuvring and handling a ship in Berthing and unberthing in all conditions • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**22.Manoeuvring and handling a ship in all conditions** **22.7 Ship and tug interaction** ***Practical Exercise 20*** • Analyze the risks and dangers related to ship and tug interaction • Perform the ship handling as per ship's manoeuvring and engine characteristics	***Practical Exercise 20*** The MTI is required to specify suitable activities for the conduct of the practical exercise in performing the ship handling as per ship's manoeuvring and engine characteristics considering external forces to be expected during ship and tug interaction in a given scenario.	***Practical Exercise 20*** Participating in the practical exercise on performing the ship handling as per ship's manoeuvring and engine characteristics considering external forces to be expected during ship and tug interaction in a given scenario.	• Exercise Sheet A6.20 • Full Mission Bridge Simulator and Mini Bridge Simulator Workstations • Two-Way Handheld Radio
5 minutes	**Conclusion**	Manoeuvring and handling a ship in Ship and tug interaction	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

			- Oral Examination - Assignment • Other activities to check the retention of learning		

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Manoeuvre and handle a ship in all conditions
	Knowledge, Understanding and Proficiency: Manoeuvering and handling a ship in all conditions, including: .8 Use of propulsion and maneuvering systems
	Topic: 22. Manoeuvring and handling a ship in all conditions 22.8 propulsion and manoeuvring systems
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test and Practical Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Manoeuvring and handling a ship in Ship and tug interaction • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**22. Manoeuvring and handling a ship in all conditions** **22.8 propulsion and manoeuvring systems** .1 factors to be considered with the use of propulsion and manoeuvring systems during ship handling under various conditions of loading (loaded and ballast) and weather.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
2 hours	**Core Elements**	***Practical Exercise 21*** Perform the ship handling using available propulsion and manoeuvring systems under various conditions of loading (loaded and ballast) and weather	***Practical Exercise 21*** The MTI is required to specify suitable activities for the conduct of the practical exercise in performing the ship handling using available	***Practical Exercise 21*** Participating in the practical exercise on performing the ship handling using available propulsion and manoeuvring systems under	• Exercise Sheet A6.21 • Approved Ship's Bridge Simulator • Two-Way Handheld Radio

			propulsion and manoeuvring systems under various conditions of loading (loaded and ballast) and weather in accordance with the established procedures.	various conditions of loading (loaded and ballast) and weather in accordance with the established procedures.	
5 minutes	**Conclusion**	Manoeuvring and handling a ship in propulsion and manoeuvring systems	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Manoeuvre and handle a ship in all conditions
	Knowledge, Understanding and Proficiency: Manoeuvring and handling a ship in all conditions, including: .9 Choice of anchorage; anchoring with one or two anchors in limited anchorages and factors involved in determining the length of anchor cable to be used
	Topic: 22. Manoeuvring and handling a ship in all conditions 22.9 Anchoring 22.10 Dragging anchor
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test and Practical Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Manoeuvring and handling a ship in propulsion and manoeuvring systems • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
1 hour and 25 minutes	**Core Elements**	**22. Manoeuvring and handling a ship in all conditions** **22.9 Anchoring** .1 factors such as, but not limited to, appropriate anchorage area, water depth, nature of seabed, direction and speed of approach, and weather condition to be considered when anchoring.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
1 hour and 25 minutes	**Core Elements**	**22. Manoeuvring and handling a ship in all conditions** 22.10 **Dragging anchor**	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation

		.1 how to detect dragging anchor and appropriate measures to take when dragging anchor/s in accordance with the established procedures. .2 factors and situations leading to fouled anchor/s and appropriate measures in accordance with the established procedures.			• Training videos related to the topic
2 hours and 30 minutes	**Core Elements**	***Practical Exercise 22*** • Perform the ship anchoring • Perform the actions to be taken when dragging anchor	***Practical Exercise 22*** The MTI is required to specify suitable activities for the conduct of the practical exercise in the following: • performing the ship anchoring in accordance with the established procedures in a given scenario. • performing the actions to be taken when dragging anchor in accordance with the established procedures in a given scenario.	***Practical Exercise 22*** Participating in the practical exercise on the following: • performing the ship anchoring in accordance with the established procedures in a given scenario. • performing the actions to be taken when dragging anchor in accordance with the established procedures in a given scenario.	• Exercise Sheet A6.22 • Full Mission Bridge Simulator and Mini Bridge Simulator Workstations • Two-Way Handheld Radio
5 minutes	**Conclusion**	Manoeuvring and handling a ship in Anchoring and Dragging anchor	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

			• Other activities to check the retention of learning		

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Manoeuvre and handle a ship in all conditions
	Knowledge, Understanding and Proficiency: Manoeuvring and handling a ship in all conditions, including; .11 Dry-docking, both with and without damage
	Topic: 22. Manoeuvring and handling a ship in all conditions 22.11 Dry-docking
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test and Practical Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Manoeuvring and handling a ship in Acnhoring and Dragging anchor • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**22. Manoeuvring and handling a ship in all conditions** **22.11 Dry-docking** .1 given manoeuvring plan and handling of ship when approaching a shipyard for dry-docking with and without damage.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
2 hours	**Core Elements**	***Practical Exercise 23*** Manoeuvre the ship when approaching a shipyard for dry-docking with and without damage	***Practical Exercise 23*** The MTI is required to specify suitable activities for the conduct of the practical exercise in manoeuvring the ship when approaching a shipyard for dry-docking with	***Practical Exercise 23*** Participating in the practical exercise on manoeuvring the ship when approaching a shipyard for dry-docking with and without damage in	• Exercise Sheet A6.23 • Full Mission Bridge Simulator and Mini Bridge Simulator Workstations

			and without damage in accordance with the established procedures.	accordance with the established procedures.	• Two-Way Handheld Radio
5 minutes	**Conclusion**	Manoeuvring and handling a ship in Dry-docking	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Manoeuvre and handle a ship in all conditions
	Knowledge, Understanding and Proficiency: Manoeuvring and handling a ship in all conditions, including; .12 Management and handling of ships in heavy weather, including assisting a ship or aircraft in distress; towing operations; means of keeping an unmanageable ship out of trough of the sea; lessening drift and use of oil
	Topic: 22. Manoeuvring and handling a ship in all conditions 22.12 Management and handling of ships in heavy weather
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test and Practical Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Manoeuvring and handling a ship in Dry-docking • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
1 hour and 50 minutes	**Core Elements**	**22. Manoeuvring and handling a ship in all conditions** **22.12 Management and handling of ships in heavy weather** .1 appropriate measures to ensure safe ship handling prior and during heavy weather in accordance with the established procedures. .2 measures in assisting a ship or aircraft in distress and towing operations in	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic

		accordance with the established procedures. .3 safety measures in keeping an unmanageable ship out of trough of the sea, lessening drift and use of oil.			
2 hours	**Core Elements**	***Practical Exercise 24*** Manage and handle the ship in heavy weather, including assisting a ship or aircraft in distress, towing operations, lessening drift and use of oil	***Practical Exercise 24*** The MTI is required to specify suitable activities for the conduct of the practical exercise in managing and handling the ship in heavy weather, including assisting a ship or aircraft in distress, towing operations, lessening drift and use of oil in accordance with established procedure.	***Practical Exercise 24*** Participating in the practical exercise on managing and handling the ship in heavy weather, including assisting a ship or aircraft in distress, towing operations, lessening drift and use of oil in accordance with established procedure.	• Exercise Sheet A6.24 • Full Mission Bridge Simulator and Mini Bridge Simulator Workstations • Two-Way Handheld Radio
5 minutes	**Conclusion**	Manoeuvring and handling a ship in Management and handling of ships in heavy weather	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Manoeuvre and handle a ship in all conditions
	Knowledge, Understanding and Proficiency: Manoeuvring and handling a ship in all conditions, including; .13 Precautions in manoeuvring to launch rescue boats or survival craft in bad weather
	Topic: 22. Manoeuvring and handling a ship in all conditions 22.13 Precautions in manoeuvring to launch rescue boats or survival craft in bad weather
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Manoeuvring and handling a ship in Management and handling of ships in heavy weather • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**22. Manoeuvring and handling a ship in all conditions** **22.13 Precautions in manoeuvring to launch rescue boats or survival craft in bad weather** .1 precautionary measures in manoeuvring the ship to launch rescue boats or survival craft in bad weather condition. .2 launching, manoeuvring and recovering of rescue boat and survival craft in bad weather	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic

		condition in accordance with the established procedures.			
5 minutes	**Conclusion**	Manoeuvring and handling a ship in Precautions in manoeuvring to launch rescue boats or survival craft in bad weather	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)			**Competence:** Manoeuvre and handle a ship in all conditions		
			Knowledge, Understanding and Proficiency: Manoeuvring and handling a ship in all conditions, including; .14 Methods of taking on board survivors from rescue boats and survival craft		
			Topic: 22. Manoeuvring and handling a ship in all conditions 22.14 Methods of taking on board survivors from rescue boats and survival craft		
No. of Trainees: Twenty-Four (24) Trainees			**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes		
Class Layout: Lay-out suitable for theoretical part			**Formative Assessment:** Written Test		
Time	**Phase**	**Content**	**Instructor-led Activity**	**Trainee's Learning Activity**	**Instructional Materials Used**
5 minutes	**Introduction**	• Manoeuvring and handling a ship in Precautions in manoeuvring to launch rescue boats or survival craft in bad weather • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**22.Manoeuvring and handling a ship in all conditions** **22.14 Methods of taking on board survivors from rescue boats and survival craft** .1 ship manoeuvring procedures and methods of taking survivors on board from rescue boats and survival craft in accordance with the established procedures.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
5 minutes	**Conclusion**	Manoeuvring and handling a ship in Methods of taking on board survivors from rescue boats and survival craft	• Make generalization and abstraction of the lesson	• Participating, sharing insights and learning gained	Visual Presentation

			• Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Answering/asking questions	

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Manoeuvre and handle a ship in all conditions
	Knowledge, Understanding and Proficiency: Manoeuvring and handling a ship in all conditions, including; .15 Ability to determine the manoeuvring and propulsion characteristics of common types of ships, with special reference to stopping distances and turning circles at various draughts and speeds
	Topic: 22. Manoeuvring and handling a ship in all conditions 22.15 Manoeuvring and propulsion characteristics of common types of ships
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test and Practical Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Manoeuvring and handling a ship in Methods of taking on board survivors from rescue boats and survival craft • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**22.Manoeuvring and handling a ship in all conditions** **22.15 Manoeuvring and propulsion characteristics of common types of ships** .1 manoeuvring and propulsion characteristics of common types of ships, with special references to: - stopping distances	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic

		- turning circles at various draughts and speeds			
2 hours	**Core Elements**	***Practical Exercise 25*** Perform the ship handling with respect to manoeuvring and propulsion characteristics of own ship	***Practical Exercise 25*** The MTI is required to specify suitable activities for the conduct of the practical exercise in performing the ship handling with respect to manoeuvring and propulsion characteristics of own ship in accordance with IMO manoeuvring standards as posted in the wheelhouse (manoeuvring poster), with special reference to: - stopping distances - turning circles at various draughts and speeds	***Practical Exercise 25*** Participating in the practical exercise on performing the ship handling with respect to manoeuvring and propulsion characteristics of own ship in accordance with IMO manoeuvring standards as posted in the wheelhouse (manoeuvring poster), with special reference to: - stopping distances - turning circles at various draughts and speeds	• Exercise Sheet A6.25 • Full Mission Bridge Simulator and Mini Bridge Simulator Workstations • Two-Way Handheld Radio
5 minutes	**Conclusion**	Manoeuvring and handling a ship in Manoeuvring and propulsion characteristics of common types of ships	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Manoeuvre and handle a ship in all conditions
	Knowledge, Understanding and Proficiency: Manoeuvring and handling a ship in all conditions, including; .16 Importance of navigating at reduced speed to avoid damage caused by own ship's bow wave and stern wave
	Topic: 22. Manoeuvring and handling a ship in all conditions 22.16 navigating at reduced speed
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Manoeuvring and handling a ship in Manoeuvring and propulsion characteristics of common types of ships • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**22. Manoeuvring and handling a ship in all conditions** **22.16 navigating at reduced speed** .1 importance of navigating at reduced speed to avoid damage caused by own ship's bow wave and stern wave.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
5 minutes	**Conclusion**	Manoeuvring and handling a ship in navigating at reduced speed	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

			- Assignment • Other activities to check the retention of learning		

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Manoeuvre and handle a ship in all conditions
	Knowledge, Understanding and Proficiency: Manoeuvring and handling a ship in all conditions, including; .17 Practical measures to be taken when navigating in or near ice or in conditions of ice accumulation on board
	Topic: 22. Manoeuvring and handling a ship in all conditions 22.17 Navigating in or near ice or in conditions of ice accumulation on board
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Manoeuvring and handling a ship in navigating at reduced speed • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**22.Manoeuvring and handling a ship in all conditions** **22.17 Navigating in or near ice or in conditions of ice accumulation on board** .1 practical measures to be taken when navigating in or near ice region and in condition of ice accumulation on board in accordance with the established procedures.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
5 minutes	**Conclusion**	Manoeuvring and handling a ship in Navigating in or near ice or in conditions of ice accumulation on board	• Make generalization and abstraction of the lesson	• Participating, sharing insights and learning gained	Visual Presentation

			• Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Answering/asking questions	

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Manoeuvre and handle a ship in all conditions
	Knowledge, Understanding and Proficiency: Manoeuvring and handling a ship in all conditions, including; .18 Use of, and maneuvering in and near, traffic separation schemes and in vessel traffic service (VTS) areas
	Topic: 22. Manoeuvring and handling a ship in all conditions 22.18 Manoeuvring in and near, traffic separation schemes and in vessel traffic service (VTS) areas
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test and Practical Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Manoeuvring and handling a ship in Navigating in or near ice or in conditions of ice accumulation on board • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**22. Manoeuvring and handling a ship in all conditions** **22.18 Manoeuvring in and near, traffic separation schemes and in vessel traffic service (VTS) areas** .1 safe manoeuvres in and near, Traffic Separation Schemes (TSS) in accordance with Rule 10 of COLREGs, and Vessel Traffic Service (VTS) areas under the List of Radio Signals.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic

2 hours	**Core Element**	***Practical Exercise 26*** Perform the safe manoeuvre in and near, Traffic Separation Schemes (TSS)	***Practical Exercise 26*** The MTI is required to specify suitable activities for the conduct of the practical exercise in performing the safe manoeuvres in and near, Traffic Separation Schemes (TSS) in accordance with Rule 10 of COLREGs, and Vessel Traffic Service (VTS) areas under the List of Radio Signals.	***Practical Exercise 26*** Participating in the practical exercise on performing the safe manoeuvres in and near, Traffic Separation Schemes (TSS) in accordance with Rule 10 of COLREGs, and Vessel Traffic Service (VTS) areas under the List of Radio Signals.	• Exercise Sheet A6.26 • Full Mission Bridge Simulator and Mini Bridge Simulator Workstations • Two-Way Handheld Radio
5 minutes	**Conclusion**	Maneuvering in and near, traffic separation schemes and in vessel traffic service (VTS) areas	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)			**Competence:** Respond to navigational emergencies		
			Knowledge, Understanding and Proficiency: Precautions when beaching a ship		
			Topic: 23. Precautions when beaching a ship		
No. of Trainees: Twenty-Four (24) Trainees			**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes		
Class Layout: Lay-out suitable for theoretical part			**Formative Assessment:** Written Test and Practical Test		
Time	**Phase**	**Content**	**Instructor-led Activity**	**Trainee's Learning Activity**	**Instructional Materials Used**
5 minutes	**Introduction**	• Manoeuvring and handling a ship in Manoeuvring in and near, traffic separation schemes and in vessel traffic service (VTS) areas • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**23. Precautions when beaching a ship** .1 safety precautionary measures when beaching a ship in accordance with the established procedures.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
2 hours	**Core Elements**	***Practical Exercise 27*** Evaluate the appropriate actions when beaching a ship	***Practical Exercise 27*** The MTI is required to specify suitable activities for the conduct of the practical exercise in evaluating the appropriate actions when beaching a ship in accordance with the established procedures in a given scenario.	***Practical Exercise 27*** Participating in the practical exercise on evaluating the appropriate actions when beaching a ship in accordance with the established procedures in a given scenario.	Exercise Sheet A6.27

5 minutes	**Conclusion**	Precautions when beaching a ship	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Respond to navigational emergencies
	Knowledge, Understanding and Proficiency: • Action to be taken if grounding is imminent, and after grounding • Refloating a grounded ship with and without assistance
	Topics: 24. Action to be taken if grounding is imminent, and after grounding 25. Refloating a grounded ship with or without assistance
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test and Practical Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Precautions when beaching a ship • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
55 minutes	**Core Elements**	**24. Actions to be taken if grounding is imminent and after grounding** .1 given circumstances and actions to take when a ship's grounding is imminent.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
55 minutes	**Core Elements**	**25. Refloating a grounded ship with or without assistance** .1 appropriate actions in refloating a grounded ship with and without assistance. .2 precautions to be considered regarding the safety of personnel, vessel, and the environment when refloating	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic

2 hours	**Core Elements**	***Practical Exercises 28*** • Assess the extent of damage when a ship is grounded and decide appropriate measures • Evaluate the appropriate actions/measures to prevent further damage to the ship	***Practical Exercises 28*** The MTI is required to specify suitable activities for the conduct of the practical exercise in the following: • assessing the extent of damage when a ship is grounded and decide appropriate measures to ensure safety and minimize the effects of damage of the ship and ensure safety of person on board in accordance with the contingency plan in a given scenario. • evaluating the appropriate actions/measures to prevent further damage to the ship, and subsequently refloat it using her own power (self-propelled) or with the assistance of tugboat in a given scenario.	***Practical Exercise 28*** Participating in the practical exercise on the following: • assessing the extent of damage when a ship is grounded and decide appropriate measures to ensure safety and minimize the effects of damage of the ship and ensure safety of person on board in accordance with the contingency plan in a given scenario. • evaluating the appropriate actions/measures to prevent further damage to the ship, and subsequently refloat it using her own power (self-propelled) or with the assistance of tugboat in a given scenario.	Exercise Sheet A6.28

5 minutes	**Conclusion**	Actions to be taken if grounding is imminent and after grounding Refloating a grounded ship with or without assistance	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Respond to navigational emergencies
	Knowledge, Understanding and Proficiency: Action to be taken if collision is imminent and following a collision or impairment of the watertight integrity of the hull by any cause
	Topic: 26. Action to be taken if collision is imminent and following a collision or impairment of the watertight integrity of the hull by any cause
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test and Practical Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Actions to be taken if grounding is imminent and after grounding and Refloating a grounded ship with or without assistance • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**26. Action to be taken if collision is imminent and following a collision or impairment of the watertight integrity of the hull by any cause** .1 close-quarter situation that could lead to an imminent collision. .2 appropriate actions to mitigate damage that may be sustained during collision. .3 extent of damage following a collision or impairment of the watertight integrity of the hull by any cause in accordance with the contingency plan.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic

1 hour and 30 minutes	**Core Elements**	***Practical Exercise 29*** Apply the action to be taken if collision is imminent and after the collision or impairment of the watertight integrity of the hull and to mitigate risks to personnel, vessel stability, and the marine environment	***Practical Exercise 29*** The MTI is required to specify suitable activities for the conduct of the practical exercise in applying the action to be taken if collision is imminent and after the collision or impairment of the watertight integrity of the hull and to mitigate risks to personnel, vessel stability and the marine environment in accordance with the contingency plan in a given scenario.	***Practical Exercise 29*** Participating in the practical exercise on applying the action to be taken if collision is imminent and after the collision or impairment of the watertight integrity of the hull and to mitigate risks to personnel, vessel stability and the marine environment in accordance with the contingency plan in a given scenario.	• Exercise Sheet A6.29 • Full Mission Bridge Simulator and Mini Bridge Simulator Workstations • Two-Way Handheld Radio
5 minutes	**Conclusion**	Action to be taken if collision is imminent and following a collision or impairment of the watertight integrity of the hull by any cause	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Respond to navigational emergencies
	Knowledge, Understanding and Proficiency: Assessment of damage control
	Topic: 27. Formative Assessment of damage control
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Action to be taken if collision is imminent and following a collision or impairment of the watertight integrity of the hull by any cause • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**27. Assessment of damage control** .1 effectiveness of damage control measures taken under worsening external conditions to safeguard the vessel's integrity, the well-being of all personnel, and the marine environment as outlined in the Damage Control Plan.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
5 minutes	**Conclusion**	Assessment of damage control	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

			• Other activities to check the retention of learning		

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Respond to navigational emergencies
	Knowledge, Understanding and Proficiency: Emergency steering
	Topic: 28. Emergency steering
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Assessment of damage control • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**28. Emergency steering** .1 actions to be taken in the event of steering gear failure, including emergency steering procedures and effective communication, as prescribed in the established contingency plan.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
5 minutes	**Conclusion**	Emergency steering	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)			**Competence:** Respond to navigational emergencies		
			Knowledge, Understanding and Proficiency: Emergency towing arrangements and towing procedure		
			Topic: 29. Emergency towing arrangements and towing procedures		
No. of Trainees: Twenty-Four (24) Trainees			**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes		
Class Layout: Lay-out suitable for theoretical part			**Formative Assessment:** Written Test		
Time	**Phase**	**Content**	**Instructor-led Activity**	**Trainee's Learning Activity**	**Instructional Materials Used**
5 minutes	**Introduction**	• Emergency steering • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
50 minutes	**Core Elements**	**29. Emergency towing arrangements and towing procedures** .1 vessel's response to the emergency towing arrangements (ETA) and towing procedures as specified in the ETA manual/booklet.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
5 minutes	**Conclusion**	Emergency towing arrangements and towing procedures	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation

Course: Management Level Course for Marine Deck Officers (Function 1)	**Competence:** Operate remote controls of propulsion plant and engineering systems and services
	Knowledge, Understanding and Proficiency: • Operating principles of marine power plants • Ships' auxiliary machinery • General knowledge of marine engineering terms
	Topics: 30. Operating principles of marine power plants 31. Ships' auxiliary machinery 32. General knowledge of marine engineering terms
No. of Trainees: Twenty-Four (24) Trainees	**Learning Outcome/s:** At the end of the session, the trainees should be able to: Refer to Part C Course Syllabus for the Intended Learning Outcomes
Class Layout: Lay-out suitable for theoretical part	**Formative Assessment:** Written Test

Time	Phase	Content	Instructor-led Activity	Trainee's Learning Activity	Instructional Materials Used
5 minutes	**Introduction**	• Emergency towing arrangements and towing procedures • Intended Learning Outcomes (ILOs)	• Review of the previous topics • Presentation of the ILOs or other activities to motivate the trainees	Participating, sharing insights and learning gained, asking and answering questions	Visual Presentation
30 minutes	**Core Elements**	**30. Operating principles of marine power plants** .1 operating principles of marine power plants in accordance with the operating manuals.	The MTI is required to specify suitable activities for the delivery of the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
25 minutes		**31. Ships' auxiliary machinery** .1 remote operations and importance of different ships' auxiliary machineries relative to the propulsion plant in accordance with the operating manuals.	The MTI is required to specify suitable activities relative to the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic

25 minutes		**32. General knowledge of marine engineering terms** .1 common marine engineering terms used on board relative to the propulsion plant and engineering systems and services.	The MTI is required to specify suitable activities relative to the topic.	The MTI is required to specify suitable learning activities.	• Visual Presentation • Training videos related to the topic
5 minutes	**Conclusion**	Operating principles of marine power plants Ships' auxiliary machinery General knowledge of marine engineering terms	• Make generalization and abstraction of the lesson • Assess the learning which may come from any of the following: - Formative Test - Oral Examination - Assignment • Other activities to check the retention of learning	• Participating, sharing insights and learning gained • Answering/asking questions	Visual Presentation