

Part C

Course Syllabus

The course syllabus has been written in learning outcomes format in which the outcome describes what the trainee must do to demonstrate that the specified knowledge or skill has been acquired and the proper attitude has been developed. All the outcomes are understood to be prefixed by the words, “At the end of the session, the trainees should be able to ...”

Topics / Learning Outcomes	Reference/ Bibliography	Teaching Aid
Course Introduction .1 explain the requirements under Regulation II/2, Section A-II/2 of the STCW Convention and Code. .2 explain the training outcomes and course requirements.	R1	A1
<i>Competence: Control trim, stability and stress</i>		
1. The fundamental principles of ship construction, theories, factors, and measures necessary to preserve trim and stability .1 explain the fundamental principles of ship construction and the theories and factors affecting trim and stability and measures necessary to preserve trim and stability. .2 explain the appropriate actions to maintain trim and stability within safe limits at all times.	R1, R8, R11, R18, B1, B2, B3, B6	A1, A2
2. The effect on trim and stability of a ship .1 explain the effect on trim and stability of a ship in the event of damage to and consequent flooding of a compartment and appropriate countermeasures to be taken through given scenarios. .2 explain the implementation of the appropriate countermeasures to address trim and stability issues resulting from compartment flooding in order to restore	R1, R8, R9, R11, B1, B2, B3, B6	A1, A2,

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<p>and maintain the ship's stability within acceptable limits.</p> <p>.3 perform the damage stability criteria and calculations on the assessment of ship's response to damage and flooding.</p> <p>3. IMO recommendations concerning ship stability</p> <p>.1 explain the stability criteria set forth by the IMO (Code on Intact Stability) to incorporate these principles into decision-making processes for safe and efficient ship's operations.</p>	<p>R1, R8, R9, R11, B1, B2, B3, B6</p>	<p>A6.1</p>
<p><i>Competence: Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, security and the protection of the marine environment</i></p>		
<p>4. International agreements and conventions</p> <p>4.1 Certificates and other documents required to be carried onboard ships</p> <p>.1 explain the certificates and other documents required to be carried on board ships by international conventions, including the process of obtaining it and their period of validity</p> <p>.2 explain the procedures for monitoring operations and maintenance to comply with legislative requirements.</p> <p>.3 monitor the validity of certificates for timely application before renewal/extension in a given scenario.</p> <p>.4 analyze the potential non-compliance with the IMO conventions and legislative requirements in a given scenario.</p>	<p>R1, R3, R4, R7, R8, R9, R10, R11, R13, R15, , B4</p>	<p>A1, A4</p> <p>A6.2</p>

Topics / Learning Outcomes	Reference/ Bibliography	Teaching Aid
<p>4.3 Methods and aids to prevent pollution of the maritime environment by ships</p> <p>.1 explain the methods and aids used to prevent pollution of the marine environment by ships in accordance with the established procedures.</p> <p>.2 evaluate the methods and aids used to prevent pollution of the marine environment by ships in accordance with the established procedures in a given scenario.</p>	<p>R1, R4, R7, R8, R9, R18</p>	<p>A1, A2, A3, A4</p> <p>A6.4</p>
<p>4.4 National legislation for implementing international agreements and conventions</p> <p>.1 explain the similarities and differences of the salient provisions of relevant legislations in the national level such as but not limited to the following countries relating to the observance of international agreements and conventions:</p> <p>a. Philippines b. U.S.A. c. China d. Japan e. Australia f. EU g. others</p>	<p>R1, R3, R4, R7, R8, R9, R10, R11, R13, R15, R17, R18, B4</p>	<p>A1, A2, A3</p>
<p><i>Competence: Develop emergency and damage control plans and handle emergency situations</i></p>		
<p>5. Preparation of contingency plans for response to emergencies</p> <p>.1 explain the emergency plans based on the specific needs and characteristics of the vessel, its cargo, and its operational environment, considering risk aspects in accordance with established contingency plans.</p>	<p>R1, R5, R7, R8, R9, R10, R15, R17</p>	<p>A1, A2, A3, A4</p>

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<p>.2 analyze the appropriate action of the ship's crew in handling an emergency situation in accordance with the established procedure in a given scenario.</p>		A6.5
<p>6. Ship construction and damage control</p> <p>.1 explain the applicability of the established emergency and damage control plans in relation to ship's construction.</p> <p>.2 analyze the appropriate emergency and damage control plans based on the results of the evaluation taking into consideration the best management practices in a given scenario.</p>	R1, R4, R7, R8, R9, R10, R18, B1, B2, B3, B6	A1, A2, A3, A4 A6.6
<p>7. Methods and aids for fire prevention, detection and extinction</p> <p>.1 explain the effectiveness of the methods for fire prevention, detection, and extinction in accordance with emergency procedures on board</p> <p>.2 evaluate the effectiveness of the methods for fire prevention, detection, and extinction and its corresponding aids in accordance with emergency procedures on board</p>	R1, R8, R18	A1, A3 A6.7
<p>8. Functions and use of life-saving appliances</p> <p>.1 explain the effectiveness of the functions and proper use of life-saving appliances on board a ship in accordance with emergency procedures on board</p> <p>.2 evaluate the effectiveness of the functions and proper use of life-saving appliances on board a ship in accordance with emergency procedures on board</p>	R1, R8, R18	A1, A3 A6.8

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<i>Competence: Maintain safety and security of the ship's crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems</i>		
<p>9. Life-saving appliance regulations (International Convention for the Safety of Life at Sea)</p> <p>.1 explain the procedures for monitoring of Life-saving Appliances (LSAs) in accordance with Chapter III of SOLAS, 1974, as amended.</p>	R1, R8, R13	A1, A2, A3
<p>10. Organization of fire drills and abandon ship drills</p> <p>.1 explain the factors to be considered in planning and organizing fire and abandon ship drills in accordance with established emergency procedures.</p> <p>.2 plan the fire and abandon ship drills in accordance with established emergency procedures in a given scenario.</p>	R1, R8, R13, R15, B5	A1, A2, A3 A6.9
<p>11. Maintenance of operational conditions of life-saving, fire-fighting and other safety systems</p> <p>.1 explain the supervision of the planned testing and maintenance of life-saving appliances, fire detection, alarms, fire-fighting, and other safety system in accordance with the Planned Maintenance Systems (PMS).</p>	R1, R8, R13	A1, A2, A3
<p>12. Action to be taken to protect and safeguard of all persons on board</p> <p>.1 explain the role of the management level officer in implementing measures for the protection, security and safety of all persons on board in accordance with contingency plan manual and ISPS Code.</p>	R1, R8, R15, R16, R17, R18, B5	A1, A2, A3

Topics / Learning Outcomes	Reference/ Bibliography	Teaching Aid
<p>.2 analyze the appropriate measures to be taken to protect and safeguard all personnel on board in emergencies in accordance with the contingency plan manual in a given scenario.</p> <p>13.Action to limit damage and salve the ship</p> <p>.1 explain the role of the management level officer in implementing measures to limit damage and salve the ship following a fire, explosion, collision or grounding.</p> <p>.2 analyze the appropriate measures to be taken to limit damage and salve the ship following a fire, explosion, collision or grounding in accordance with the established procedures.</p>	<p>R1, R4, R7, R8, R9, R10, R18, B1, B2, B3, B6</p>	<p>A6.10</p> <p>A1, A2, A3</p> <p>A6.11</p>
<p>Competence: Use of Leadership and Managerial Skill</p>		
<p>14.Shipboard personnel management and training</p> <p>.1 explain the application of personnel management principles on board.</p> <p>.2 explain the assessment of the current competence, capabilities and operational requirements of the officers and crew.</p> <p>.3 create appropriate learning, development and operational training requirements and activities in accordance with generally accepted principles.</p> <p>15.International maritime conventions and recommendations, and national legislation</p> <p>.1 explain the effectiveness of the demonstrated shipboard operations based on the following related international maritime conventions and recommendations, and national legislation:</p>	<p>R1, R8, R10, R15, R18, B4, B5, B7</p> <p>R1, R7, R8, R13, R15, R18</p>	<p>A1, A2, A3</p> <p>A6.12</p> <p>A1, A2, A3</p>

Topics / Learning Outcomes	Reference/ Bibliography	Teaching Aid
<ul style="list-style-type: none"> • SOLAS (International Convention for the Safety of Life at Sea); • MARPOL (International Convention for the Prevention of Pollution from Ships); • STCW (International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers); • ISM (International Safety Management) Code; and • Maritime Labour Convention 2006 <p>16.Task and workload management</p> <p>.1 explain the application of task and workload management in accordance with safe working practices, including:</p> <ul style="list-style-type: none"> • planning and coordination • personnel assignment • time and resource constraints • prioritization <p>.2 apply task and workload management in accordance with safe working practices through a given scenario, including:</p> <ul style="list-style-type: none"> • planning and coordination • personnel assignment • time and resource constraints • prioritization <p>.3 monitor the effectiveness of task and workload management and adjust as necessary.</p> <p>17.Effective resource management</p> <p>.1 explain the allocation of duties and information required by the crew or subordinate for the expected standards of work and behavior in a manner appropriate to the individuals concerned.</p>	<p>R1, R5, R7, R8, R9, R10, R15, R16, R18, B4, B5</p> <p>R1, R5, R7, R8, R9, R10, R15, R16, R18, B4, B5</p>	<p>A1, A2, A3, A4</p> <p>A6.13</p> <p>A1, A2, A3, A4</p>

Topics / Learning Outcomes	Reference/ Bibliography	Teaching Aid
<p>.2 explain the effective resource management, taking into consideration:</p> <ul style="list-style-type: none"> • allocation, assignment and prioritization of resources • clear and effective communication on board and ashore • decisions reflect consideration of team experiences and are most effective for the situation • assertiveness and leadership, including motivation • obtaining and maintaining situation awareness <p>.3 apply the effective resource management in accordance with the established safety procedures in a given scenario.</p>		<p>A6.14</p>
<p>18. Decision-making techniques</p> <p>.1 explain the most effective decision-making techniques, taking into consideration:</p> <ul style="list-style-type: none"> • situation and risk assessment • identify and generate options • select course of action • evaluation of outcome effectiveness <p>.2 apply the most effective decision-making techniques in accordance with the established safety procedures in a given scenario.</p>	<p>R1, R5, R7, R8, R9, R10, R15, R16, R18, B4, B5</p>	<p>A1, A2, A3, A4</p> <p>A6.15</p>
<p>19. Development, implementation, and oversight of standard operating procedures</p> <p>.1 explain the procedure in the development, implementation and oversight of vessel's safety management system (SMS)/Standards Operating Procedures</p>	<p>R1, R3, R5, R7, R8, R10, R13, R14, R15, R16, R18, B4, B5, B7</p>	<p>A1, A2, A3, A4</p>

Topics / Learning Outcomes	Reference/ Bibliography	Teaching Aid
<p>.2 explain the policies in developing, implementing, and overseeing standard operating procedures (e.g. master standing order, night order book, bunkering, cargo operations, etc.).</p> <p>.3 develop, implement and oversee the standard operating procedures in accordance with operational requirements and applicable rules (e.g. master standing order, night order book, bunkering, cargo operations, etc.) in a given scenario.</p>		A6.16
<p>20. International Medical Guide for Ships involving Dangerous Goods</p> <p>.1 explain the contents and use of the following publications:</p> <ul style="list-style-type: none"> • International Medical Guide for Ships or equivalent national publications • Medical section of the International Code of Signals • Medical First Aid Guide for Use in Accidents Involving Dangerous Goods <p>.2 explain the actions to be taken and procedures as per the above-mentioned medical publications.</p>	R1, R2, R5, R6, R8, R12, R13, R14, R15, R16, R17, R18, B7	A1, A2, A3