

Part C

Course Syllabus

The course syllabus has been written in learning outcome 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
<p>Course Introduction</p> <p>.1 explain the requirements under Regulation III/2, Section A-III/2 Function 4 of the STCW Convention and Code.</p> <p>.2 explain the training outcomes and course requirements.</p>	R1	A1
<i>Competence: Control trim, stability and stress</i>		
<p>1. The fundamental principles of ship construction and the theories and factors affecting trim and stability and measures necessary to preserve trim and stability</p> <p>.1 explain the fundamental principles and theories of ship construction in relation to trim and stability and the factors affecting these.</p> <p>.2 explain the measures necessary to maintain trim and stability within safe limits in the engine department.</p> <p>.3 apply the appropriate measure to maintain the stability and stress conditions within safety limits at all times during operation in a given scenario.</p>	R2, R3, B2, B3, B4, B5, B6, B7	A1, A2, A9
<p>2. The effect on trim and stability of a ship in the event of damage to, and consequent flooding of, a compartment and countermeasures to be taken</p>	B2, R1, R2, R3	A7.1 A1, A2, A8

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<p>.1 Identify the effect of trim and stability of ship in the event of flooding and ship damage</p> <p>.2 make decision to maintain the trim stability of the ship taking into consideration the appropriate countermeasures in a given scenario (e.g. flooding and ship damage of a compartment)</p> <p>3. IMO recommendations concerning ship stability</p> <p>.1 explain the IMO recommendations concerning ship stability (e.g. Load Line Rules 1966, Intact Stability Code, etc.)</p> <p>.2 use the IMO recommendations about ships stability related to issues onboard</p>		<p>A7.2</p> <p>A7.3</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. Relevant international maritime law embodied in international agreements and conventions</p> <p>4.1 Certificates and other documents required to be carried on board ships by international conventions</p> <p>.1 explain the procedures for monitoring operations and maintenance to comply with legislative requirements.</p> <p>.2 analyze potential non-compliance with the IMO conventions and legislative requirements in a given scenario.</p> <p>.3 monitor the validity of certificates of surveyed items and equipment in a given scenario.</p> <p>4.2 Responsibilities under International Conventions and instruments</p> <p>.1 explain the responsibilities in monitoring the compliance to the</p>	<p>R1, R2, R3, R4, R5, R6</p> <p>R1, R2, R3, R4, R5, R6</p>	<p>A1, A2, A8</p> <p>A7.4</p> <p>A7.4</p> <p>A1, A2, A9,</p>

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<p>following international agreements, conventions and instruments:</p> <ul style="list-style-type: none"> • International Convention on Load Lines, 1966, as amended; • International Convention for the Safety of Life at Sea, 1974, as amended; • International Convention for the Prevention of Pollution from Ships, as amended; • International Health Regulations; and • International instruments affecting the safety of the ship, passengers, crew and cargo <p>.2 monitor the compliance with the requirements and responsibilities with the following international agreements, conventions and instruments in given scenarios:</p> <ul style="list-style-type: none"> • International Convention on Load Lines, 1966, as amended; • International Convention for the Safety of Life at Sea, 1974, as amended; • International Convention for the Prevention of Pollution from Ships, as amended; • International Health Regulations; and • International instruments affecting the safety of the ship, passengers, crew and cargo <p>4.3 Methods and aids to prevent pollution of the environment by ships</p>	<p>R4, R5</p>	<p>A7.5</p>

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<p>.1 explain the methods and aids to prevent pollution of the marine environment by ships.</p> <p>.2 apply the appropriate methods and aids to prevent pollution of the marine environment by ships in a given scenario.</p> <p>4.4 National legislation for implementing international agreements and conventions</p> <p>.1 explain the salient provision of relevant and related legislations in the national level from the following countries relating to the observance of international agreements and conventions.</p>	<p>R1, R2, R3, R4, R5, R6,</p>	<p>A1, A2, A10, A11, A12</p> <p>A7.6,</p> <p>A1, A2</p>
<p><i>Competence: Develop emergency and damage control plans and handle emergency situations</i></p>		
<p>5. Ship construction and damage control</p> <p>.1 evaluate the applicability of the established emergency and damage control plans in relation to ship's construction in a given scenario.</p> <p>.2 develop emergency and damage control plans based on the results of the evaluation taking into consideration the best management practices.</p>	<p>B2, B3, B4, B5, B6, B7, B8</p>	<p>A1, A2, A3, A4, A5, A7.7,</p> <p>A7.8</p>
<p>6. 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 and aids for fire prevention, detection, and extinction in accordance with emergency procedures on board</p>	<p>R2</p>	<p>A1, A2</p> <p>A7.9</p>
<p>7. Functions and use of life-saving appliances</p>	<p>R2</p>	<p>A1, A2</p>

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<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>		A7.10
<p><i>Competence: Maintain safety and security of the vessel, crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems</i></p>		
<p>8. 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> <p>9. Maintenance of operational condition 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> <p>.2 supervise the conduct of a planned testing and maintenance of life-saving appliances, fire detection, alarms, fire-fighting and other safety systems in accordance with the Planned Maintenance Systems (PMS).</p> <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>R2</p> <p>R2</p> <p>B1 B2, B3, B4, B5, B6, B7, B8</p>	<p>A1, A2</p> <p>A1, A2, A6,</p> <p>A7.11</p> <p>A1, A2, A3, A4, A5, A6</p>

Topics / Learning Outcomes	Reference/ Bibliography	Teaching Aid
<p>.2 plan fire and abandon ship drills in accordance with established emergency procedures, in a given scenario.</p> <p>11. Actions to be taken to protect and safeguard all persons on board in emergencies</p> <p>.1 explain the role of the management level officer in implementing measures to protect and safeguard all persons on board in accordance with prepared contingency plan</p> <p>.2 apply the appropriate measures to be taken based on the prepared contingency plan in a given scenario.</p> <p>12. Actions to limit damage and save the ship following fire, explosion, collision or grounding</p> <p>.1 explain the role of the management level officer in implementing measures to limit damage and save the ship following a fire, explosion, collision or grounding.</p> <p>.2 apply the appropriate established procedures to be taken to limit damage and save the ship following a fire, explosion, collision or grounding.</p>	<p>R6</p> <p>B1, B2, B3, B4, B5, B6, B7, B8</p>	<p>A7.12</p> <p>A1, A2, A7</p> <p>A7.13</p> <p>A1, A2, A3, A4,</p> <p>A7.14</p>
<p><i>Competence: Use Leadership and Managerial Skill</i></p>		
<p>13. Related international maritime conventions and recommendations, and related national legislation</p> <p>.1 explain the effectiveness of the demonstrated shipboard operations based on related international maritime conventions and recommendations, and national legislation.</p> <p>14. Shipboard personnel management and training</p>	<p>R1</p> <p>R6</p>	<p>A1, A2</p> <p>A1, A3,</p>

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<p>.1 explain the application of personnel management principles on board.</p> <p>.2 explain the assessment of the current competence and capabilities and operational requirements of the officers and crew.</p> <p>.3 assess the current personnel competencies, capabilities and operational requirements and recommend appropriate learning and development requirements and activities in accordance with generally accepted principles.</p>		<p>A7.15.1</p>
<p>15. 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 the task and workload management in accordance with safe working practices in 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>R6</p>	<p>A1, A7.15.1</p>
<p>16. Effective resource management</p> <p>.1 explain the allocation of duties and information required by the crew or</p>	<p>R6</p>	<p>A1</p>

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<p>subordinate for the expected standards of work and behavior in a manner appropriate to the individuals concerned.</p> <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>A7.15.1</p>
<p>17. 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>R6</p>	<p>A1</p> <p>A7.15.1</p>
<p>18. Development, implementation and oversight of standard operating procedures</p>	<p>R6</p>	<p>A1, A5,</p>

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<p>.1 explain the overview, principles, and concepts associated with the vessel's safety management system (SMS).</p> <p>.2 explain the procedures in developing, implementing, and overseeing standard operating procedures.</p> <p>.3 develop, implement and oversee the standard operating procedures in accordance with operational requirements and applicable rules in a given scenario.</p>		<p>A7.15.2</p>