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
Course Introduction .1 explain the requirements under Regulation III/2, Section A-III/2 Function 2 of the STCW Convention and Code. .2 explain the training outcomes and course requirements. .3 explain the leadership skills that a management level officer should possess.	R1	A1
Competence: *Manage Operation of Electrical and Electronic Control Equipment (Theoretical Knowledge)*		
1. Marine Electrotechnology, Electronics, Power Electronics, Automatic Control Engineering and Safety Devices 1.1 explain the operation of electrical and electronic equipment and system, and safety devices, other than high voltage equipment, in accordance with operating manuals 1.2 explain the management of the operation of electrical and electronic equipment and system, and safety devices, other than high voltage equipment, in accordance with operating manuals. 1.3 manage the operation of electrical and electronic equipment and	R1, R2	A1, A2, A3 A4.1

Topics / Learning Outcomes	Reference/ Bibliography	Teaching Aid
system, and safety devices, in accordance with operating manuals in a given scenario.		
2. Design Features and System Configurations of Automatic Control Equipment and Safety Devices for main engine, generator and distribution system, and steam boiler	R2	A1, A2, A3
2.1 explain the design features and systems configurations of automatic control equipment and safety devices for main engine, generator and distribution system, and steam boiler.		
2.2 explain the management of operation of the automatic control equipment and safety devices for main engine, generator and distribution system, and steam boiler in accordance with technical specifications.		
2.3 manage the operation of the automatic control equipment and safety devices for main engine, generator and distribution system, and steam boiler in accordance with technical specifications in a given scenario.		A4.2
2.4 explain the assessment of the performance level of the automatic control equipment and safety devices for main engine, generator and distribution system, and steam boiler in accordance with technical specifications.		
2.5 carry out assessment and adjustment of the automatic control equipment and safety devices for main engine, generator and its distribution system, and		A4.3

Topics / Learning Outcomes	Reference/ Bibliography	Teaching Aid
steam boiler, based on optimum performance levels in accordance with technical specifications in a given scenario.		
3. Design features and system configurations of operational control equipment for electrical motors	R2	A1, A2, A3
3.1 explain the design features and system configurations of operational control equipment for electrical motors.		
3.2 explain the management of the operation of control equipment system for electrical motors based on its design features, configurations, and operating manuals.		
3.3 manage the operation of control equipment system for electrical motors based on its design features, configurations, and operating manuals in a given scenario.		A4.4
3.4 explain the assessment of the performance level of control equipment system for electrical motors based on its design features, configurations, and operating manuals.		
3.5 assess the performance level of control equipment system for electrical motors based on its design features, configurations, and operating manuals in a given scenario.		A4.5

Topics / Learning Outcomes	Reference/ Bibliography	Teaching Aid
4. Design Features of High-Voltage Installations	R2	A1, A2, A3
4.1 explain the design features of high-voltage installations.		
4.2 explain the management of operation of high-voltage installations in accordance with design features and operating manuals.		
4.3 manage the operation of high-voltage installations in accordance with design features and operating manuals in a given scenario.		A4.6
5. Features of hydraulic and pneumatic control equipment		
5.1 explain the features of hydraulic and pneumatic control equipment in accordance with technical specifications.	R2	A1, A3
5.2 explain the management of the operation of hydraulic and pneumatic control equipment in accordance with technical specifications.		
5.3 manage the operation of hydraulic and pneumatic control equipment in accordance with technical specifications in a given scenario.		A4.7
5.4 explain the assessment of the performance level of hydraulic and pneumatic control equipment in accordance with technical specifications.		
5.5 assess the performance level of hydraulic and pneumatic control equipment in accordance with technical specifications in a given scenario.		A4.8

Topics / Learning Outcomes	Reference/ Bibliography	Teaching Aid
Competence: *Manage Troubleshooting, Restoration of Electrical and Electronic Control Equipment to Operating Condition (Practical Knowledge)*		
6. Troubleshooting of Electrical and Electronic Control Equipment	R2	A1, A2, A3
6.1 explain the management of inspection, troubleshooting, and restoration activities for electrical and electronic control equipment in accordance with technical, legislative, safety, and procedural specifications		
6.2 manage the inspection, troubleshooting, and restoration activities for electrical and electronic control equipment in accordance with technical, legislative, safety, and procedural specifications in a given scenario.		A4.9
7. Function Test of Electrical, Electronic Control Equipment and Safety Devices	R2	A1
7.1 explain the management of function test of electrical, electronic control equipment and safety devices in accordance with technical, legislative, safety, and procedural specifications		
7.2 manage the function test of electrical, electronic control equipment and safety devices in accordance with technical, legislative, safety, and procedural specifications in a given scenario.		A4.10
8. Troubleshooting of Monitoring Systems		
8.1 explain the management of troubleshooting activities in	R2	A1, A3

Topics / Learning Outcomes	Reference/ Bibliography	Teaching Aid
monitoring systems in accordance with technical, legislative, safety, and procedural specifications.		
8.2 manage the troubleshooting activities in monitoring systems in accordance with technical, legislative, safety, and procedural specifications in a given scenario.		A4.11
9. Software Version Control	R2	A1, A2, A3
9.1 explain the planning of maintenance and installation activities for updated software version in accordance with technical, legislative, safety, and procedural specifications		
9.2 plan the maintenance of software in accordance with technical, legislative, safety, and procedural specifications		A4.12; A4.13
9.3 supervise the maintenance and installation activities for updated software version in accordance with technical, legislative, safety, and procedural specifications.		