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 Function 2 of the STCW Convention and Code. .2 explain the training outcomes and course requirements. .3 explain the leadership skill that a management level officer should possess.	R1	A1, A2
Competence: Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes		
1. International regulations, codes, and standards concerning the safe handling, stowage, securing and transport of cargoes .1 explain the relevant international regulations, codes, and standards concerning the safe handling, stowage, securing, care and transport of cargoes.	R1, R2, R3, R5, B3	A1, A2, A3
2. The effect on trim and stability of cargoes and cargo operations .1 explain the principles governing trim and stability calculations, including factors such as cargo distribution, loading procedures, and environmental conditions .2 interpret the given data related to cargo distribution, weight, and stability criteria to assess the vessel's condition.	R1, R3, B1, B2, B3, B4	A1, A2

Topics / Learning Outcomes	Reference/ Bibliography	Teaching Aid
3. Stowage and securing of cargoes on board ships, including cargo-handling gear and securing and lashing equipment .1 analyze the proper stowage and securing of cargoes, including appropriate cargo-handling gear, securing, care and lashing equipment within safe limits at all times during the voyage in accordance with established procedures.	R1, R2, R3, R4, B1, B2, B3, B4	A1, A2, A3
4. Loading and unloading operations, with special regard to the transport of cargoes identified in the Code of Safe Practice for Cargo Stowage and Securing .1 explain the loading and unloading operations, with special regard to the transport of cargoes identified in the Code of Safe Practice for Cargo Stowage and Securing (CSS Code).	R1, R2, R3, R4, B1, B2, B3, B4	A1, A2, A3
5. General knowledge of tankers and tanker operations .1 explain the general arrangement of tankers such as: a. Cargo tanks b. Pump rooms c. Segregated ballast tanks d. Slop tanks e. Cofferdams-peak tanks-deep tanks f. Accommodation g. Ventilators leading to accommodation and machinery spaces .2 explain the common types of tankers and principles of cargo pumps used onboard. .3 explain the guidance on safe operation of gas tankers, and oil/chemical tankers, including the use of inert gas systems, in accordance with the international safety regulations.	R1, B1	A1, A2

Topics / Learning Outcomes	Reference/ Bibliography	Teaching Aid
6. Operational and design limitations of Bulk Carriers	R1, B2, B3, B4	A1, A2
.1 explain the operational and design limitations of Bulk Carrier regulations provided under the International Maritime Solid Bulk Cargoes (IMSBC) Code and Additional Safety Measures for Bulk Carriers in Chapter XII of the SOLAS convention.		
7. Shipboard data related to loading/unloading, and care of cargoes, and ballasting with the use of stability and trim diagrams and stress-calculating equipment	R1, R2, R3, R10, B1, B2, B3, B4	A1, A2
.1 explain the cargo-related data to determine the appropriate loading/unloading and ballasting/de-ballasting operation, stowage and care of the following types of vessels, but not limited to bulk, tanker and container, to maintain stability and safety in accordance with the Safety of Life at Sea (SOLAS), International Maritime Solid Bulk Cargoes Code (IMSBC Code), International Safety Guide for Oil Tankers and Terminals (ISGOTT), and International Convention for Safe Container.		
.2 create plans for the safe cargo loading/unloading and ballasting/de-ballasting operations using stability and trim diagrams, and stress-calculating equipment of the following types of vessels, but not limited to bulk, tanker and container in given scenarios.		A4.1.1-A4.1.3
8. Procedures for safe cargo handling	R1, R2, R3, R4, B1, B2, B3, B4	A1, A2, A3
.1 explain the safe cargo handling procedures in accordance with provisions of IMDG Code, IMSBC Code, MARPOL 73/78 Annexes III and V and other relevant information.		

Topics / Learning Outcomes	Reference/ Bibliography	Teaching Aid
9. Effective communications and improving working relationship between ship and terminal personnel .1 explain the basic principles in promoting safety communication protocols between ship and terminal personnel, emphasizing the importance of clear and timely information related to safety procedures and emergency response.	R1	A1, A2
Competence: Assess reported defects and damage to cargo spaces, hatch covers and ballast tanks and take appropriate action		
10. Limitation on strength of the vital constructional parts of a standard bulk carrier .1 analyze the given figures with the use of the ship's cargo loading program, stability, trim and stress tables, diagrams, and stress-calculating equipment resulting in bending moments and shear forces.	R1, R2, B2, B3, B4	A1, A2
11. Detrimental effects on bulk carriers of corrosion, fatigue, and inadequate cargo handling .1 assess the given reported defects and damage to cargo spaces, hatch covers, and ballast tanks and take appropriate action in accordance with the established procedures. .2 develop the strategies, including risk assessment, to avoid the detrimental effects of corrosion, fatigue, and inadequate cargo handling on bulk carriers in accordance with the established procedures.	R1, R2, B2, B3, B4	A1, A2, A3 A4.2

Topics / Learning Outcomes	Reference/ Bibliography	Teaching Aid
Competence: Carriage of dangerous goods		
12. International regulations, standards, codes and recommendations on the carriage of dangerous cargoes .1 explain the planned distribution of cargo in accordance with international regulations, standards, codes and recommendations on the carriage of dangerous cargoes, including the International Maritime Dangerous Goods (IMDG) Code and the International Maritime Solid Bulk Cargoes (IMSBC) Code.	R1, R2, R6, R7, R8, R9	A1, A2, A3
13. Carriage of dangerous, hazardous and harmful cargoes .1 explain the information on dangers, hazards, special requirements and incident recording on the carriage of dangerous, hazardous and harmful cargoes taking necessary precautions during the loading and unloading operations, and ensuring the safe handling and care of cargo during the voyage	R1, R2, R3, R6, R7, R8, R9	A1, A2, A3