Part B
Course Outline

Subject Area	Time Allotment (in hours)	
	Lecture	**Simulation/ Laboratory**
I. Introduction 1. Chapter III, Regulation III/4 of STCW Convention, as amended and Section A-III/4 and Table A-III/4, STCW Code, as amended 2. Chapter VIII, Regulation VIII/1, Regulation VIII/2 of STCW Convention, as amended and Section A-VIII/1, Section A-VIII/2 of the STCW Code, as amended 3. Marine Propulsion Systems	1.0	-
II. Terms Used in Machinery Spaces and Names of Machinery and Equipment	2.0	-
III. Engine-room Watchkeeping Procedures 1. Electrical Generating Plant 2. Lube-oil and fuel oil purification systems 3. Compressed Air Plant 4. Refrigeration and Air-Conditioning Plant 5. Tank and Pressure-vessel Levels 6. Charging a "water-logged" portable water pressure tank with compressed air 7. Propulsion shafting and bearings 8. Steering Gear	2.0	5.0
IV. Safe Working Practices as related to Engine-room Operations 1. Basic knowledge of maintenance and repair of machinery and tools used in the engine-room	2.0	5.0
V. Basic Environmental Protection Procedures 1. MARPOL 73/78 Convention 2. Principles of OWS, STP 3. Bunkering operation	1.0	-
VI. Use of Appropriate Internal Communication Systems	1.0	-
VII. Engine-room Alarm Systems and Ability to Distinguish between the Various Alarms, with Special reference to Fire-Extinguishing Gas Alarms 1. Safety of operations in unmanned machinery spaces	1.0	2.0
VIII. Safe Operation of Boilers 1. Boiler safety operation and maintenance	2.0	2.0
IX. Knowledge of Emergency Duties	2.0	2.0
X. Escape Routes from Machinery Spaces	1.0	-
XI. Familiarity with the Location and Use of Fire-fighting Equipment in Machinery Spaces	1.0	2.0
Assessment	2.0	4.0
Sub-Total	18	22
Total	**40 hours**	