K TO 12 BASIC EDUCATION CURRICULUM
SENIOR HIGH SCHOOL TECHNICAL-VOCATIONAL-LIVELIHOOD MARITIME SPECIALIZATION
ENGINE WATCH 1

Grade: 11
Subject Title: Engine Watch 1

Semester: 2nd Semester
No. of Hours: 80 hours
Prerequisite: Safety 1

Subject Description:
This course in Engineering Watch 1 is a requirement of the Standards of Training, Certification and Watch keeping For Seafarers (STCW), 1978, as amended. This course is a prerequisite to the certification of Rating Forming Part of an Engineering Watch (RFPEW) in compliance with the mandatory minimum requirements for ratings as specified in Section A-III/4. This is designed for Senior High School (SHS) students to enhance their knowledge, understanding, and proficiency in accordance with workplace standards. It focuses on the following competencies: 1) carrying-out a watch routine appropriate to the duties of a rating forming part of an engine-room watch, and 2) understanding orders and being understood in matters relevant to watchkeeping duties.

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCIES	CODE
Introduction 1. Procedure, specifications and manuals of instructions 2. Relevance of the course 3. Career opportunities	The learners demonstrate an understanding of the basic concepts and underlying theories in Engine Watch 1	The learners shall be able to demonstrate competencies in engine watch 1 as prescribed by STCW Training Regulations of table A-III/4	1. Observe procedure, specifications and manuals of instructions 2. Discuss the relevance of the course 3. Identify the career opportunities related to the course	
LESSON 1: CARRY OUT A WATCH ROUTINE APPROPRIATE TO THE DUTIES OF A RATING FORMING PART OF AN ENGINE-ROOM WATCH (RFPEW) (40 hrs)				
1. Terms used in machinery spaces and names of machinery and equipment	The learner demonstrates an understanding of the basic concepts and underlying principles in carrying-out a watch routine appropriate to the duties of a rating forming part of an engine-room watch	The learner demonstrate the competencies in carrying-out a watch routine appropriate to the duties of a rating forming part of an engine-room watch as prescribed by STCW Training Regulations of table A-III/4	**LO1. Identify the terms used in machinery spaces and names of machinery and equipment (8 hrs)**	**TVL_MEW111RFPEW-IIIa-b-1**
2. Engine-room watchkeeping procedures			**LO2. Discuss engine-room watchkeeping procedures (16 hrs)** 1.1 Discuss the factors to consider in watchkeeping 1.2 Explain safety manual contents for the engine room	**TVL_MEW111RFPEW-IIIc-f-2**
3. Safe working practices related to engine-room operations			**LO3. Identify safe working practices related to engine-room operations (16 hrs)** 1.1 Explain the importance of safety working practices in engine-room operations	**TVL_MEW111RFPEW-IIIg-j-3**

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCIES	CODE
LESSON 2: UNDERSTAND ORDERS AND BE UNDERSTOOD IN MATTERS RELEVANT TO WATCHKEEPING DUTIES (MRWD) (40hrs)				
1. Basic environmental protection procedures	The learners demonstrate the basic concepts and underlying theories in understanding orders and being understood in matters relevant in matters relevant to watchkeeping duties	The learners shall be able to demonstrates the competencies in understanding orders and be understood in matters relevant to watchkeeping duties prescribed by STCW Training Regulations of table A-III/4	**LO1. Explain basic environmental protection procedures (16 hrs)** 1.1 Identify the MARPOL provisions related to engine watchkeeping 1.2 Discuss the principles governing operation of oily water separator 1.3 Discuss the principles of sewage treatment plant operation 1.4 Discuss the effect of oil pollution on marine life 1.5 Explain precautions to prevent pollution within the framework of existing international and local regulations	**TVL_MEW111MRWD-IVa-d-1**
2. Use of appropriate internal communication system			**LO2. Explain the use of appropriate internal communication system (16 hrs)** 1.1 Identify the types of shipboard communication used in the engine room spaces 1.2 Explain the importance of internal communications (IC) and it's use for the orderly performance of both emergency and routine shipboard functions	**TVL_EW111MRWD-IVe-h-2**
3. Engine room alarm system			**LO3. Discuss engine room alarm system (8 hrs)** 1.1 Identify the various engine room alarm system 1.2 Explain the function of engine room alarm system	**TVL_MEW111MRWD-IVi-j-3**

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Glossary

Engine room alarming and monitoring system	A system that monitors various statuses which indicate the running situation of the drivers in the engine room
Engine room (ER)	The propulsion machinery spaces of the vessel
Internal communications (IC)	The function responsible for effective communications among participants within an organization
Officer of the watch	The officer in charge of the watch
Pouring oil on troubled waters	The heavy-weather practice of pouring oil on the sea so as to form a film on the surface, thus preventing the seas from breaking; to smooth out some difficulty
Oil pollution	The most conspicuous forms of damage to the marine environment. Oil enters the seas not only as a result of spectacular oil tanker or oil rig disasters, but also–and primarily–from diffuse sources, such as leaks during oil extraction, illegal tank-cleaning operations at sea, or discharges into the rivers which are then carried into the sea.
Oily water separator (OWS)	Equipment used to separate oil and water mixtures into their separate components
Safety working practices	Protocols dealing with safety
Sewage treatment	The process of removing contaminants from wastewater, primarily from household sewage. It includes physical, chemical, and biological processes to remove contaminants and produce environmentally safe treated wastewater (or treated effluent).
Ship's bells	A system to indicate the hour by means of bells, used aboard a ship to regulate the sailors' duty watches
Station bill	The posted bill showing stations of the crew at maneuvers and emergency drills
Watch officer	An officer taking his turn as officer of the watch
Watch system, watch schedule, or watch bill	A method of assigning regular periods of work duty aboard ships and some other areas of employment
Watchkeeping	The division of qualified personnel to operate a ship continuously

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Code Book Legend

Sample: TVL_MEW1MRWD-IIIa-d-1

LEGEND		SAMPLE	
First Entry	Learning Area and Strand/ Subject or Specialization	Technical-Vocational-Livelihood Maritime Track Engine Watch 1	**TVL_MEW111**
	Grade Level	Grade 11	
Uppercase Letter/s	Domain/Content/ Component/ Topic	Understand Orders And Be Understood In Matters Relevant To Watchkeeping Duties	**MRWD**
			-
Roman Numeral **Zero if no specific quarter*	Quarter	Third Quarter	**III**
Lowercase Letter/s **Put an en dash (–) in between letters to indicate more than a specific week*	Week	Week One to Four	**a–d**
			-
Arabic Number	Competency	Explain Basic Environmental Protection Procedures	**1**

DOMAIN/ COMPONENT	CODE
Carry Out a Watch Routine Appropriate to the Duties of a Rating Forming Part of an Engine-Room Watch	RFPEW
Understand Orders and be Understood in Matters Relevant to Watchkeeping Duties	MRWD

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References

Main Reference:

International Maritime Organization. *International Connvention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) and STCW Code including the 2010 Manila Amendments.* London: International Maritime Organization, 2011.

Other References:

International Convention for the Prevention of Pollution from Ships, 1973, *as modified by the protocol of 1978 relating thereto*. Consolidated ed. 2002. London: International Maritime Organization, 2002.

Jackson, L. & Morton, T. Reeds Volume 8: *General Engineering Knowledge for Marine Engineers.* London: Thomas Reed Publications, 2009.

Taylor, D A. *Introduction to Marine Engineering.* Butterworth-Heinemann, 1990.