

**K to 12 BASIC EDUCATION CURRICULUM  
SENIOR HIGH SCHOOL PRE-BACCALAUREATE MARITIME SPECIALIZATION  
INTRODUCTION TO MARITIME SAFETY**

**Grade:** 12

**Core Subject Title:** Introduction to Maritime Safety

**Semester:** 1<sup>st</sup> Semester

**No. of Hours:** 80 hours

**Prerequisite:** Introduction to Marine Transportation and Engineering

**Core Subject Description:** This course serves as an introduction to the safety standards stipulated in Section A-VI/1 of the 1978 Standards of Training, Certification, and Watchkeeping Convention, as amended. It aims to acquaint the learners on the basic requirements of safety inherent to the work of seafarers on board ships. Specifically, it provides an overview and rudimentary knowledge, skills, and attitudes vital to areas of *Personal Survival Technique, Fire Prevention and Fire Fighting, Elementary First Aid, and Personal Safety and Social Responsibility*. The competencies covered in this course are: 1) survival at sea in the event of ship abandonment, 2) cutting back the risk of fire and maintain a state of readiness to respond to emergency situations involving fire, 3) the ability to take immediate action in the event of an accident or other medical emergency, 4) compliance with emergency procedures, 5) the ability to take precautions against pollution of the marine environment, 6) observance of safe working practices, 7) the ability to contribute to effective communications on board ship, 8) the ability to contribute to effective human relationships on board ship, and 9) the ability to understand and control fatigue.

CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCIES	CODE
<b>LESSON 1: DETERMINE THE MEANS OF SURVIVAL AT SEA IN THE EVENT OF SHIP ABANDONMENT(DMSS) (8 hrs)</b>				
1. Types of emergency situations	The learners demonstrate an understanding of the basic concepts and underlying principles in surviving at sea in the event of ship abandonment	The learners shall be able to independently demonstrate the competencies in surviving at sea in the event of ship abandonment as prescribed by STCW	<b>LO 1. Identify emergency situations</b> 1.1 Identify the general emergency situations on Board 1.2 Describe the different emergency situations	<b>PMMS12DMSS-Ia-1</b>
2. Types and usages of some life- saving appliances a. Lifebuoy b. Lifejacket c. Immersion suits d. Thermal protective aids			<b>LO 2. Use life-saving appliances</b> 2.1 Identify the kinds of life-saving appliances 2.2 Describe the use of some common life saving appliances	<b>PMMS12DMSS-Ia-2</b>
3. Uses of survival crafts a. Lifeboat b. Rescue boat c. Life craft			<b>LO 3. Explain the use of survival crafts during ship abandonment</b> 3.1 Describe the structure and contents of the survival craft 3.2 Differentiate the uses of lifeboat, life craft, and rescue boat	<b>PMMS12DMSS-Ib-3</b>
<b>LESSON 2: MINIMIZE THE RISK OF FIRE AND MAINTAIN A STATE OF READINESS TO RESPOND TO EMERGENCY SITUATIONS INVOLVING FIRE (MRFM) (12 hrs)</b>				
1. The nature of fire	The learners demonstrate an understanding of the different concepts of minimizing the	The learners shall be able to minimize the risk of fire and maintain	<b>LO 1. Recognize the nature of fire</b> 1.1 Identify the conditions required for fire to occur 1.2 Describe the classes of fire	<b>PMMS12DMSS-Ic-1</b>

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2. Flammable materials, Fire hazards, and general safety practices	risk of fire and maintaining a state of readiness to responding to fire-related emergency situations	a state of readiness in responding to fire-related emergency situations	<b>LO 2.1. Relate flammable materials to fire Hazard</b> 2.1.1 Define fire hazard 2.1.2 Identify the kinds of flammable Materials 2.1.3 Describe the conditions that predispose a situation to fire hazard	<b>PMMS12DMSS-Id-2.1</b>
			<b>LO 2.2. Explain general safety practices</b> 2.2.1 Discuss general safety practices that will prevent the occurrence of fire 2.2.2 Emphasize the need for vigilance to minimize the risk of fire 2.2.3 Identify the location of fire-fighting equipment and emergency escape routes on board	<b>PMMS12DMSS-Id-2.2</b>
3 Response to fire emergency situations			<b>LO 3. Respond to fire emergency situations</b> 3.1 Explain the steps to be done upon discovery of fire 3.2 Identify the various fire-fighting agents or media 3.3 Describe the basic concept of extinguishing fire 3.4 Demonstrate how to extinguish small fire using water, sand, blanket 3.5 Demonstrate how to extinguish extensive fire using a CO <sub>2</sub> fire-extinguisher	<b>PMMS12DMSS-Ie-3</b>
<b>LESSON 3: DETERMINE THE APPROPRIATE ACTION TO BE UNDERTAKEN DURING AN ACCIDENT OR OTHER MEDICAL EMERGENCIES (DAAU) (18 hrs)</b>				
1. The parts of the human body	The learners demonstrate an understanding of the concepts and underlying principles in determining the action to be taken in the event of an accident or medical emergency	The learners shall be able to take action in the event of an accident or medial emergency	<b>LO 1. Describe the parts of the human body</b> 1.1 Identify the parts of the human body susceptible to accident or injury	<b>PMMS12DAAU-If-1</b>
2. Emergency First Aid application and management			<b>LO2. Apply and manage emergency First Aid</b> 2.1 Explain the principle of First Aid application 2.2 Explain the measures that should be considered during accidents or medical emergencies 2.3 Determine the nature, causes, and extent of injuries 2.4 Determine the immediate measures to be undertaken in the event of an accident or medical	<b>PMMS12DAAU-Ig-i-2</b>

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCIES	CODE
			emergency 2.5 Explain the care needed to prevent a medical condition from worsening, and promote recovery 2.6 Demonstrate how to alert co-workers for assistance in an event of a medical emergency situation 2.7 Perform resuscitation procedure alone, and with a companion, taking into consideration the control of respiration, function of reclined position of head, mouth-to-mouth respiration, and mouth-to-nose respiration	
3. Medical emergencies on board ships a. burn b. shock c. poisoning d. electrocution e. suffocation f. hypothermia			<b>LO 3. Recognize other medical emergencies on board ships</b>	<b>PMMS12DAAU-Ij-3</b>
<b>LESSON 4: EXPLAIN HOW TO COMPLY WITH EMERGENCY PROCEDURES (CEP) (4 hrs)</b>				
1. Muster Station	The learners demonstrate an understanding of concepts and underlying principles in complying with emergency procedures	The learners shall be able to comply with emergency procedures as prescribed by STCW	<b>LO 1 Explain the importance of the muster station</b> 1.1 Describe the muster station 1.2 Explain the function of a muster station in case of emergency 1.3 Explain the procedure in different types of Emergency	<b>PMMS12CEP-IIa-1</b>
2. Emergency Alarm Signals			<b>LO 2. Distinguish the different emergency alarm signals</b>	<b>PMMS12CEP-IIa-2</b>
3. Value of Training and Drills			<b>LO 3. Explain the importance of training and drills</b>	<b>PMMS12CEP-IIa-3</b>
			<b>LO 4. Explain the use of internal communication system during emergency</b>	<b>PMMS12CEP-IIa-4</b>

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCIES	CODE
<b>LESSON 5: EXPLAIN THE PRECAUTIONS TO PREVENT POLLUTION OF THE MARINE ENVIRONMENT (TPPP) (2 hrs)</b>				
1. Types of marine pollution	The learners demonstrate an understanding of the concepts and underlying theories in preventing pollution of the marine environment	The learners shall be able to prevent pollution of the marine environment	<b>LO 1. Describe the domain of marine pollution</b> 1.1 Identify the different types of marine pollution 1.2 Explain the basic procedure for protecting the marine environment 1.3 Explain the legal requirements that protect the marine environment	<b>PMMS12TPPP-IIb-1</b>
2. Impact of pollution on marine environment			<b>LO 2. Explain the impact of marine pollution</b>	<b>PMMS12TPPP-IIb-2</b>
<b>LESSON 6: EXPLAIN HOW TO OBSERVE SAFE WORKING PRACTICES (OSWP) (2 hrs)</b>				
1. Introduction to basic safe working practices on board a ship	The learners demonstrate an understanding of concepts and underlying principles in observing safe work practices on board a ship	The learners shall be able to observe safe work practices on board a ship	<b>LO 1. Explain the importance of observing safe working practices</b> 1.1 Identify the safety and protective devices against potential hazards available on board 1.2 Identify the hazard when entering enclosed spaces 1.3 Discuss the precautions to be undertaken prior to entering enclosed spaces 1.4 Explain the importance of adhering to safe working practices at all time	<b>PMMS12OSWP-IIb-1</b>
<b>LESSON 7: DISCUSS THE IMPORTANCE OF EFFECTIVE COMMUNICATIONS ON BOARD SHIP (CECB) (2hrs)</b>				
1. Introduction to Standard Marine Communication Phrases (SMCP)	The learners demonstrate an understanding of the concepts and underlying principles in effective communication on board a ship	The learners shall be able to effectively communicate on board a ship	<b>LO 1. Use maritime terminologies for communication on board a ship</b> 1.1 Identify the common SMCP terminologies used on board 1.2 Use the common terminologies in oral discourse	<b>PMMS12CECB-IIb-1</b>
2. Effective communication on board a ship			<b>LO 2. Demonstrate the use of effective communication on board</b> 2.1 Describe the basic elements of communication 2.2 Explain the importance of addressing the barriers in communication 2.3 Demonstrate how to achieve effective transmission of communication	<b>PMMS12CECB-IIb-2</b>

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCIES	CODE
<b>LESSON 8: EXPLAIN THE DYNAMICS OF SOCIOCULTURAL DIVERSITY AND STEREOTYPING (ADSD) (16 hrs)</b>				
1. Importance of inter-personal relationships and teamwork on board	The learners demonstrate an understanding of concepts and underlying principles of effective human relationships on board ship	The learners shall be able to maintain good human relationships on board.	<b>LO 1. Analyze the importance of good interpersonal relationships and teamwork</b> 1.1 Explain the measures that can be undertaken to improve interpersonal relationship 1.2 Explain the value of teamwork 1.3 Explain the social responsibility of crew to his ship, colleagues, company, himself, and to the marine environment 1.4 Recognize the importance of respecting the culture and religious practices of seafarers on board	<b>PMMS12ADSD-IIc-d-1</b>
2. Dangers of Drug and Alcohol Abuse and Sexually Transmitted Diseases			<b>LO 2. Prevent drug and alcohol abuse and the occurrence of sexually transmitted diseases</b> 2.1 Analyze the various ways through which drug and alcohol abuse may occur among seafarers 2.2 Explain the dangers and consequences of drug and alcohol abuse 2.3 Describe the different kinds of sexually transmitted disease (STD) 2.4 Analyze the various ways through which a seafarer may acquire STD 2.5 Explain the dangers and consequences of STDs 2.6 Analyze the impact of drug and alcohol abuse and STD on relationships of people on board	
<b>LESSON 9: EXPLAIN THE NECESSARY ACTIONS TO CONTROL FATIGUE (UTNA) (16 hrs)</b>				
1. General knowledge on health and fitness to work on board	The learners demonstrate an understanding of the concepts and underlying principles in fitness and health in performing one's duty	The learners shall be able to know how to control fatigue	<b>LO 1. Analyze the importance of maintaining good health in relation to requirements for fitness to shipboard work</b> 1.1 Recognize health and medical requirements for seafarers 1.2 Explain the importance of nutrition, exercise, personal sanitation and hygiene, and healthy lifestyle to achieve fitness for shipboard work	<b>PMMS12UTA-IIg-h-1</b>

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CONTENT	CONTENT STANDARDS	PERFORMANCE STANDARDS	LEARNING COMPETENCIES	CODE
2. Importance of sleep, rest, diet, and schedules to seafarers			<b>LO 2. Analyze the importance of sleep, rest, diet, and work schedules in controlling fatigue at work</b> 2.1 Determine the hours of sleep and rest that control fatigue at work 2.2 Explain the importance of diet to attain good health and control fatigue 2.3 Determine the ways to adapt to varying work schedules on board without adverse effects on one's health	<b>PMMS12UTA-III-j-2</b>

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**Glossary**

<b>Ashore</b>	On the shore (on land)
<b>Awash</b>	Level with the water (water ready to, or slightly covering decks)
<b>Awning</b>	A canvas canopy secured over the ship's deck as a protection from the weather (covering)
<b>Aye, aye, sir</b>	The reply to an officer's order signifying that he is understood and will be obeyed (I understand)
<b>Bail</b>	To throw water out of a boat; a yoke, as a ladder bail (rung)
<b>Bear a hand</b>	To assist or help
<b>Coming around</b>	To bring a sailing vessel into the wind and change to another tack; one who is influenced to a change of opinion
<b>Easy</b>	Carefully (watch what you're doing)
<b>Freeboard</b>	The distance from the surface of the water to the main deck or gunwale
<b>Hang from the yards</b>	Dangle a man from one of the yard arms, sometimes by the neck, if the man was to be killed, and sometimes by the toes, if he was merely to be tortured. A severe punishment used aboard sailing ships long ago; today, a reprimand
<b>Launch</b>	Place in the water
<b>Lifeline</b>	A line secured along the deck to lay hold of in heavy weather; A line thrown on board a wreck by life-saving crew; a knotted line secured to the span between life-boat davits for the use of the crew when hoisting and lowering
<b>Make the land</b>	Landfall; To reach shore
<b>Painter</b>	A short piece of rope secured in the bow of a small boat used for making her fast
<b>Snub</b>	To check suddenly
<b>Stove</b>	Broken in
<b>Stow</b>	To put in place

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**Code Book Legend**

**Sample: PMMS12DMSS-Ia-1**

LEGEND		SAMPLE	
<b>First Entry</b>	Learning Area and Strand/ Subject or Specialization	STEM Maritime Maritime Safety	<b>PMMS12</b>
	Grade Level	Grade12	
<b>Uppercase Letter/s</b>	Domain/Content/ Component/ Topic	Determine the means of survival at sea in the event of ship abandonment	<b>DMSS</b>
			-
<b>Roman Numeral</b> <i>*Zero if no specific quarter</i>	Quarter	First Quarter	<b>I</b>
<b>Lowercase Letter/s</b> <i>*Put a an en dash (-) in between letters to indicate more than a specific week</i>	Week	Week One	<b>a</b>
			-
<b>Arabic Number</b>	Competency	Identify emergency situations	<b>1</b>

DOMAIN/ COMPONENT	CODE
Determine the Means of Survival at Sea in the Event of Ship Abandonment	DMSS
Minimize the Risk of Fire and Maintain a State of Readiness to Respond to Emergency Situations Involving Fire	MRFM
Determine the Appropriate Action to be Undertaken in the Event of An Accident or Other Medical Emergency	DAAU
Comply with Emergency Procedure	CEP
Take Precautions to Prevent Pollution of the Marine Environment	TPPP
Observe Safe Working Practices	OSWP
Contribute to Effective Communications On Board Ship	CECB
Adapt to the Dynamics of Sociocultural Diversity and Stereotyping	ADSD
Understand and Take Necessary Actions to Control Fatigue	UTNA

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**Reference**

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