



MARITIME TRANSPORTATION AT THE SUPPORT LEVEL

TECHNICAL-PROFESSIONAL

Grade 12

**Three-Term Budget Of Work (BOW)
for Learning Competencies**

**TECHNICAL PROFESSIONAL
MARITIME
Grade 12**

**Three-Term Budget of Work
For Learning Competencies**

Please note that each TechPro elective is completed within one term if delivered at Grade 12.

Elective	Maritime Transportation at the Support Level
Prerequisite	None

Performance Standard	The learners perform look-out, handover and relief of the watch in conformity with acceptable practices and procedures.
Content Standard	The learners demonstrate an understanding of the principles in shipping industry and safe navigational watch in navigating vessel.

Week	Learning Competency	Suggested Activities
1	Discuss the shipping industry and its career opportunities	Sail Through History! - Learners explore the journey of shipping from ancient times to modern trade by arranging key events on a timeline. Discover Maritime Careers! - Learners analyze various maritime careers and classify them based on functions through job cards.

Week	Learning Competency	Suggested Activities
	Discuss the regulatory bodies and conventions in the maritime industry	Know Maritime Authorities! - Learners analyze the roles of IMO, ILO, and MARINA by matching real-life maritime scenarios to each organization. Match Maritime Conventions! - Learners connect SOLAS, MARPOL, MLC, and STCW to safety, environment, labor, or training situations.
	Discuss the stressors, and emotional challenges of seafarers	Experience Life at Sea! - Learners analyze common stressors through case scenarios and discuss their effects on well-being. Promote Well-being! - Learners design simple coping strategies for seafarers based on given situations.
	Discuss the shipboard organization and its functions according to the level of responsibility	Meet the Ship Crew! - Learners explore shipboard departments by organizing crew roles into a visual chart. Assign Responsibilities! - Learners match tasks to appropriate crew members and explain their roles.

Week	Learning Competency	Suggested Activities
2	Discuss the types of ships and operations, parts, dimensions, and terminologies used in ships direction	Explore Vessel Types! - Learners classify types of ships and major parts. Present diagram and ask learners to label parts. Match Ship Uses! - Learners connect ship types to real-world transport scenarios. Locate the Position! - Learners describe ship positions using correct terminology in given scenarios.
	Discuss the purpose of charter party agreement in the ship's trading services	Understand Ship Contracts! - Learners differentiate charter types through examples of shipping arrangements. Analyze Charter Cases! - Learners identify the correct agreement based on real-world cases.
	Discuss the safety and security code for the protection of personnel, ships, cargo and environment	Stay Safe at Sea! - Learners explore ISM and ISPS codes and how they ensure ship safety. Apply Safety Procedures! - Learners evaluate emergency scenarios and suggest proper actions.

Week	Learning Competency	Suggested Activities
	Discuss the purpose of bridge equipment and instruments used during ship navigation	Know Navigation Tools! - Learners identify bridge equipment and explain their role in navigation. Navigate with Precision! - Learners examine different bridge instruments and describe how each supports accurate and safe ship navigation.
	Analyze the common factors affecting the ship's stability	Balance the Ship! - Learners identify internal factors (cargo, ballast, fuel) and explain how they affect ship stability. - Provide ships scenarios and ask learners to determine how loading conditions impact balance. Weather the Waves! - Learners examine external factors (wind, waves, shallow waters) affecting ship stability. - Present situations and ask learners to explain how environmental conditions influence stability.

Week	Learning Competency	Suggested Activities
	Compare the duties of the deck watchkeepers for security and safety operation of the ship at sea, anchor, and port	Watchkeeper's Duty Map! - Learners compare the duties of deck watchkeepers at sea, at anchor, and in port using a visual organizer. - Provide task descriptions and ask learners to explain differences in responsibilities. Spot the Duty Differences! - Learners analyze different watchkeeping scenarios and identify specific duties based on ship condition (sea, anchor, port). - Present situations and ask learners to explain how duties vary in each setting.
3	Perform fire patrolling onboard ship at the support level	Spot Fire Hazards Onboard! - Learners identify potential fire hazards in different areas of the ship during a simulated patrol. - Present shipboard scenarios and ask learners to point out risks and recommend preventive measures. Conduct a Fire Patrol Check! - Learners perform a fire patrol routine by checking safety

Week	Learning Competency	Suggested Activities
		equipment and assigned ship areas. ○ Provide a checklist and ask learners to demonstrate proper inspection and reporting of findings.
	● Use communication equipment for shipboard operations	● Communicate Onboard! ○ Learners identify and differentiate internal (walkie-talkie, intercom, telephone) and external (VHF, satellite) communication tools used on board. ○ Present shipboard situations and ask learners to select the appropriate communication equipment and explain its proper use. ● Closed-Loop Communication! ○ Learners demonstrate closed-loop communication by receiving, repeating, and confirming orders related to watchkeeping duties ○ Provide role-play scenarios and ask learners to communicate instructions clearly with the OOW using proper equipment and procedures.

Week	Learning Competency	Suggested Activities
	Perform ship steering	Steer the Vessel Safely! - Learners apply appropriate steering modes (manual, auto, NFU) in given navigation scenarios. - Present situations and ask learners to select, simulate, and justify the correct steering mode used. Execute Helmsman Orders! - Learners interpret standard helm orders (e.g., port, starboard, midship) and demonstrate proper responses. - Learners act as helmsman and execute commands accurately and timely.
	Perform procedures in the relief, maintenance, and handover of the watch in conformity with industry standards	Watch Handover! - Learners perform watch handover procedures by communicating essential information (position, status, hazards) to the incoming watch. - Provide a simulated scenario and ask learners to demonstrate clear, accurate, and complete handover following standard procedures.

Week	Learning Competency	Suggested Activities
		• Maintain and Relieve the Watch! ○ Learners carry out standard procedures in watch relief and maintenance by following checklists and monitoring ship conditions. ○ Present operational scenarios and ask learners to perform, and justify actions taken during watchkeeping duties.
	• Perform reporting of detected targets, sound or light signals, shapes, or other objects	• Target Reporting! ○ Learners perform reporting of detected targets, lights, sounds, or shapes using correct maritime terms and compass directions. ○ Provide scenarios and ask learners to deliver clear, timely, and reports to the Office of the Watch. • Signal Communication! ○ Learners perform identification and reporting of navigation signals (IALA buoys, lights, sounds, and shapes) during simulated watchkeeping. ○ Present signal situations and ask learners to communicate findings

Week	Learning Competency	Suggested Activities
		following standard reporting procedures.
4	Demonstrate emergency duties in response to emergency situations	Response Actions! - Learners demonstrate appropriate emergency duties (fire, man overboard, abandon ship) based on assigned scenarios. - Provide emergency situations and ask learners to execute correct procedures following standard shipboard protocols. Respond to Shipboard Emergencies! - Learners perform assigned duties during simulated emergency drills using proper communication and coordination - Present emergency cases and ask learners to apply procedures and justify their actions based on safety standards.

Week	Learning Competency	Suggested Activities
	Discuss the purpose of pyrotechnic, EPIRB and SART as used for distress signal.	Distress Signals! - Learners explain the purposes of pyrotechnics, EPIRB, and SART used in emergency situations. - Present scenarios and ask learners to match each device with its appropriate use. Signal Functions! - Learners analyze how pyrotechnics, EPIRB, and SART are used to send distress signals at sea. - Provide situations and ask learners to analyze how each device helps in rescue operations.
Suggested Performance Tasks	Individual Activities Look-Out Duties! - Learners perform lookout responsibilities by identifying and reporting targets, lights, or hazards using proper maritime procedures. Watch Relief Procedures! - Learners demonstrate proper watch relief by following standard steps and communicating essential information clearly.	

	Group Activities • Simulate Watch Handover! ○ Learners perform watch handover as a group by delivering complete and accurate information to the incoming watch. • Execute Watchkeeping Operations! ○ Learners perform coordinated lookout, handover, and relief duties during a simulated shipboard watchkeeping activity.

Performance Standard	The learners carry out mooring operations, safe handling of stowage, securing of cargoes, and stores including dangerous, hazardous, and harmful substances and liquids.
Content Standard	The learners demonstrate an understanding of the procedure in mooring operations and handling of cargo and stores.

Week	Learning Competency	Suggested Activities
5	• Perform mooring operations in accordance with established safety practices and equipment operating instructions.	• Perform Mooring Operations Execute Safe Mooring Operations! ○ Learners perform mooring procedures by demonstrating proper use of equipment and correct sequencing of making fast and letting go. • Apply Mooring and Anchoring Procedures! ○ Learners perform mooring and anchoring operations by selecting appropriate lines, equipment, and procedures in given scenarios.

Week	Learning Competency	Suggested Activities
	Perform safe handling of stowage and securing of cargoes and stores.	Perform Safe Cargo Handling! - Learners perform proper handling, stowage, and securing of cargo based on type and required safety precautions. Handle Dangerous Goods Safely! - Learners perform identification and safe handling of hazardous cargo using IMDG classification, labels, and safety procedures.

Performance Standard	The learners operate deck equipment and machinery, apply occupational health and safety precautions, apply precautions and contribute to the prevention of pollution of the marine environment, and operate survival crafts and rescue boats.
Content Standard	The learners demonstrate an understanding of the procedure in safe operations of deck equipment and machinery, occupational health and safety precautions, prevention of pollution of the marine environment, and survival crafts and rescue boats.

Week	Learning Competency	Suggested Activities
6	Perform safe working practices and use of appropriate safety and protective equipment to the identified task prior commencement of work.	Apply Safe Work Practices! - Learners perform safe working procedures by using appropriate PPE and safety precautions before starting tasks. Demonstrate Proper PPE Use! - Learners perform correct selection and use of personal protective equipment based on assigned shipboard tasks.

	Perform safe operations of deck equipment and machinery.	Operate Deck Equipment Safely! - Learners perform safe operation of deck equipment and machinery by following standard procedures and safety guidelines
7	Perform rigging and unrigging.	Perform Rigging Procedures! - Learners perform rigging and unrigging using proper tools and safety procedures. Apply Safe Rigging Techniques! - Learners perform rigging tasks by following correct procedures and precautionary measures.
	Perform seamanship skills.	Perform Seamanship Tasks! - Learners perform seamanship skills by demonstrating proper use of knots, splices, and tools. Execute Knot-Tying Techniques! - Learners perform knot-tying and basic seamanship procedures accurately in given tasks.
	Perform hoisting and dipping flags.	Perform Flag Hoisting! - Learners perform hoisting and dipping of flags following correct procedures and signal protocols. Apply Flag Signaling Procedures! - Learners perform flag handling by Interpreting and executing proper signaling methods.

Suggested Performance Tasks	Individual Activities • Operate Deck Equipment Safely! ○ Learners perform safe operation of deck equipment and machinery while applying appropriate safety precautions. • Perform Survival and Emergency Actions! ○ Learners perform appropriate survival and emergency procedures using survival crafts and equipment. Group Activities • Operate Deck Equipment Safely! ○ Learners perform safe operation of deck equipment and machinery while applying appropriate safety precautions. • Perform Survival and Emergency Actions! ○ Learners perform appropriate survival and emergency procedures using survival crafts and equipment.
------------------------------------	--

Performance Standard	The learners operate deck equipment and machinery, apply occupational health and safety precautions, apply precautions and contribute to the prevention of pollution of the marine environment, and operate survival crafts and rescue boats.
Content Standard	The learners demonstrate an understanding of the procedure in safe operations of deck equipment and machinery, occupational health and safety precautions, prevention of pollution of the marine environment, and survival crafts and rescue boats.

Week	Learning Competency	Suggested Activities
8	• Discuss prevention of pollution of the marine environment.	• Explain Pollution Prevention Practices! ○ Learners discuss methods to prevent marine pollution by explaining proper waste disposal procedures.

Week	Learning Competency	Suggested Activities
		• Analyze Environmental Protection Measures! ○ Learners discuss practices that minimize environmental impact during ship operations.
	• Discuss survival techniques.	• Explain Survival Procedures! ○ Learners discuss survival techniques by describing correct actions during emergency situations. • Identify Survival Strategies! ○ Learners discuss appropriate survival actions based on given maritime emergency scenarios.

Performance Standard	The learners perform shipboard maintenance and repair.
Content Standard	The learners demonstrate an understanding of the procedure in shipboard maintenance and repair.

Week	Learning Competency	Suggested Activities
9-11	• Perform deck maintenance and repair activities in accordance with technical, safety, and procedural specifications	• Surface Preparation Tasks! ○ Learners perform surface preparation by applying cleaning, wire brushing, sanding, and scraping techniques following safety procedures.

Week	Learning Competency	Suggested Activities
		• Maintenance Procedures! ○ Learners perform painting, lubrication, and equipment maintenance using proper tools, materials, and manufacturer's safety guidelines. • Operate Tools and Ensure Safe Disposal! ○ Learners perform maintenance tasks using hand and power tools and apply proper waste disposal procedures in compliance with MARPOL regulations.

Suggested Performance Tasks	Individual Activities • Deck Maintenance Tasks! ○ Learners perform assigned shipboard maintenance and repair tasks using appropriate tools and safety procedures. • Safe Repair Procedures! ○ Learners perform repair activities by following technical guidelines and proper use of equipment. Group Activities • Maintenance Operations! ○ Learners perform coordinated shipboard maintenance tasks as a group while applying safety and operational standards.
------------------------------------	--

	• Repair Simulation! ○ Learners perform group-based repair activities in a simulated shipboard scenario by following standard procedures, applying safety practices, and demonstrating effective teamwork.
--	--