



Republic of the Philippines

# Department of Education

DepEd Complex, Meralco Avenue, Pasig City

**STRENGTHENED SENIOR HIGH SCHOOL CURRICULUM**

## **FISH CAPTURE**

**Grade 11/12**

**Course Description:**

This course equips learners with essential skills in fish capture, focusing on fish capture operations in accordance with the industry standards. The course includes maintenance of fishing gears and fish capture operations, municipal vessel operation and navigation, handling, storing, transportation and recording of aquatic products adhering to food safety standards. After completing the course, learners are eligible to take assessments to earn the National Certificate Level II in Fish Capture. They may also pursue higher education or careers in the fish capture industry.

**Elective:** Technical Professional

**Prerequisite:** None

**Time Allotment:** In Grade 11, 320 hours for two semesters, 8 hours per week. In Grade 12, 320 hours for one semester, 16 hours per week

**Schedule:** First/Second Semester

**QUARTER 1**

<b>CONTENT STANDARD:</b>	The learners demonstrate an understanding of the overview of fish capture, legal bases in protecting the marine environment, tools, materials, and equipment in fish capture operations and safe navigation information.	
<b>PERFORMANCE STANDARD:</b>	The learners perform safe navigation applying the weather information in a simulated environment.	
<b>LEARNING COMPETENCIES</b>		<b>CONTENTS</b>
1. Discuss the overview of fish capture		<b>Overview of fish capture</b> <ul style="list-style-type: none"> <li>• Background of fish capture</li> <li>• Local and global trends in fish capture <ul style="list-style-type: none"> <li>○ sustainable fishing technologies</li> <li>○ condition of fishery resources</li> <li>○ approaches to fisheries management</li> </ul> </li> <li>• Career and business opportunities in fish capture</li> <li>• Safety measures in fish capture operations</li> </ul>
2. Discuss the legal frameworks and regulations that protect the marine environment		<b>Legal Bases in Protecting the Marine Environment</b> <ul style="list-style-type: none"> <li>• Marine Protected Areas (MPAs)</li> <li>• International laws and agreements <ul style="list-style-type: none"> <li>○ UN Fish Stock Agreement</li> <li>○ Regional Fisheries Management Organization</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ SDG 14 on life below water</li> <li>• National laws and agreements <ul style="list-style-type: none"> <li>○ Republic Act 10654</li> <li>○ relevant fisheries administrative orders on fish capture</li> </ul> </li> <li>• Local ordinances</li> </ul>
<p>3. Discuss tools, materials, equipment, and safety practices in municipal fishing operations</p>	<p><b>Tools, Materials, and Equipment in Fish Capture Operations</b></p> <ul style="list-style-type: none"> <li>• Handheld tools</li> <li>• Baiting tools</li> <li>• Tackle management tools</li> <li>• Line management tools</li> <li>• Measurement and weighing tools</li> <li>• Safety and navigation tools</li> <li>• Electronic tools</li> <li>• Netting tools and equipment</li> <li>• Storage containers</li> <li>• Boat and navigation equipment</li> </ul>
<p>4. Apply weather information when navigating vessels in a simulated environment</p>	<p><b>Safe Navigation Information</b></p> <ul style="list-style-type: none"> <li>• Weather and oceanography</li> <li>• Meteorological charts and publications</li> <li>• Navigational hazards</li> <li>• Weather forecast</li> <li>• Open-source app for weather forecasting</li> </ul>

## QUARTER 2

<b>CONTENT STANDARD:</b>	The learners demonstrate an understanding of types, functions, and maintenance of fishing gears and fish capture operations.
<b>PERFORMANCE STANDARD:</b>	The learners perform maintenance of fishing gears and fish capture operations.
LEARNING COMPETENCIES	CONTENTS
1. Perform maintenance of fishing gears	<p><b>Types of Fishing Gears and Their Functions</b></p> <ul style="list-style-type: none"> <li>• Netting gears <ul style="list-style-type: none"> <li>○ beach seine</li> <li>○ cast nets</li> <li>○ seine nets</li> <li>○ mesh nets or gill nets</li> <li>○ trawl nets</li> <li>○ lift nets</li> <li>○ dip nets</li> </ul> </li> <li>• Hook and line fishing <ul style="list-style-type: none"> <li>○ handline (trolling, long lining, drop lining, jigging, and dry fishing)</li> <li>○ pole and line</li> </ul> </li> <li>• Pots and traps <ul style="list-style-type: none"> <li>○ crab pots</li> <li>○ lobster pots</li> <li>○ prawn trap</li> <li>○ fish trap</li> </ul> </li> <li>• Spearguns <ul style="list-style-type: none"> <li>○ band-powered (rubber)</li> <li>○ pneumatic (air-powered)</li> </ul> </li> </ul> <p><b>Maintenance of Fishing Gears</b></p> <ul style="list-style-type: none"> <li>• Pre-operative operations</li> <li>• Corrective maintenance</li> </ul>

2. Perform fish capture operations using different types of fishing gear	<p><b>Fish Capture Operations</b></p> <ul style="list-style-type: none"> <li>• Beach seining, mesh or gill netting <ul style="list-style-type: none"> <li>○ loading and unloading</li> <li>○ placement of beach seines, mesh nets, or gill nets</li> <li>○ nets to land catch management</li> </ul> </li> <li>• Hand line fishing <ul style="list-style-type: none"> <li>○ placement of hand line</li> <li>○ hand line to land catch management</li> </ul> </li> <li>• Pots and traps <ul style="list-style-type: none"> <li>○ placement of pots and traps</li> <li>○ pots and trap to land catch management</li> </ul> </li> </ul>
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### QUARTER 3

<b>CONTENT STANDARD:</b>	The learners demonstrate an understanding of the condition, seaworthiness, operation and navigation of a municipal vessel.
<b>PERFORMANCE STANDARD:</b>	The learner performs municipal vessel operation and navigation.
<b>LEARNING COMPETENCIES</b>	<b>CONTENTS</b>
1. Evaluate the seaworthiness of municipal vessels for fishing operations	<p><b>Municipal Vessel Condition and Seaworthiness</b></p> <ul style="list-style-type: none"> <li>• Municipal coastal vessel routine maintenance tasks <ul style="list-style-type: none"> <li>○ cleaning</li> <li>○ inspection</li> <li>○ equipment checks</li> <li>○ safety gear</li> </ul> </li> <li>• Seaworthiness regulations <ul style="list-style-type: none"> <li>○ vessel registration and documentation</li> <li>○ safety equipment requirements</li> <li>○ navigation and communication equipment</li> <li>○ equipment and structural integrity</li> </ul> </li> </ul>

2. Operate vessels of up to 3.0 gross tonnage	<p><b>Municipal Vessel Operation</b></p> <ul style="list-style-type: none"> <li>• Classification, parts, and functions of fishing vessels</li> <li>• Municipal vessels used in the locality</li> <li>• Key components of the engine and mechanical systems</li> <li>• Basic engine operation maintenance <ul style="list-style-type: none"> <li>○ troubleshooting of engine faults</li> <li>○ perform minor repair</li> </ul> </li> </ul>
3. Perform safe navigation for municipal vessels	<p><b>Vessel Navigation</b></p> <ul style="list-style-type: none"> <li>• Maneuvering techniques</li> <li>• Types of sea state</li> <li>• Procedures on steering modes</li> <li>• Monitoring and controlling a navigational watch</li> </ul>

#### QUARTER 4

<b>CONTENT STANDARD:</b>	The learners demonstrate an understanding of handling, storing, transporting, and recording of aquatic products.	
<b>PERFORMANCE STANDARD:</b>	The learners perform handling, storing, transporting, and recording of aquatic products adhering to food safety standards.	
<b>LEARNING COMPETENCIES</b>	<b>CONTENTS</b>	
1. Perform handling and storing of aquatic products adhering to food safety standards	<p><b>Handling Aquatic Products</b></p> <ul style="list-style-type: none"> <li>• Safety standards and regulations</li> <li>• Handling techniques</li> <li>• Best practices</li> <li>• Hazards and risks to aquatic products</li> <li>•</li> </ul> <p><b>Storing Aquatic Product</b></p> <ul style="list-style-type: none"> <li>• Temperature control</li> <li>• Refrigeration and freezing</li> </ul>	

	<ul style="list-style-type: none"> <li>• Vacuum sealing</li> </ul>
2. Perform proper transportation methods for aquatic products	<p><b>Transportation of Aquatic Products</b></p> <ul style="list-style-type: none"> <li>• Refrigerated trucks and containers</li> <li>• Live fish transport considerations</li> </ul>
3. Record activities in fish capture operations	<p><b>Types of Records to Maintain</b></p> <ul style="list-style-type: none"> <li>• Catch records</li> <li>• Fishing effort records</li> <li>• Sales and revenue records</li> </ul> <p><b>Recording Methods</b></p> <ul style="list-style-type: none"> <li>• Manual logbooks</li> <li>• Digital tools</li> <li>• Handheld GPS</li> </ul>

## GLOSSARY

**beach seine** – is a fishing net that hangs vertically in the water with floats on the top edge and weights on the bottom, used near beaches to encircle and trap fish.

**fishing efforts** – is the amount of time, labor, and equipment used to catch fish, often measured to evaluate the intensity of fishing activity.

**fishing gear** – refers to the tools and equipment used in fishing, including nets, lines, traps, and hooks.

**hand management tools** – are small tools used manually to organize or handle fishing gear, such as pliers, spooling devices, or knot-tying tools.

**hook and line** – a traditional fishing method that involves using a hook, fishing line, and bait or lure to catch fish.

**landing net** – a type of net used to help land fish after they have been reeled in.

**maneuver** – the action of skillfully controlling or moving a vessel, particularly in complex situations such as docking or avoiding obstacles.

**Marine Protected Area (MPA)** – Designated zones in oceans or seas where human activity, including fishing, is restricted to conserve biodiversity.

**meteorological charts** – refers to maps showing weather patterns and atmospheric conditions, used for navigation and forecasting.

**meteorological publications** – these are documents or reports that provide detailed weather information, forecasts, and historical data.

**municipal fishing** - refers to small-scale fishing activities carried out within municipal waters (up to 15 kilometers from the coastline) using fishing boats of 3 gross tons or less, or no boats at all.

**navigational hazards** – refers to physical obstacles or conditions that pose risks to vessels, such as rocks, reefs, shallow waters, or shipwrecks.

**navigational watch** – is the act of monitoring a vessel's course, surroundings, and systems while at sea to ensure safe navigation.

**net gears** – fishing tools made of netting material designed to trap, enclose, or filter fish.

**oceanography** – refers to the scientific study of oceans, including their physical, chemical, biological, and geological properties.

**open-source app** – a software application with publicly available source code, allowing anyone to view, modify, and distribute it freely.

**pole and line** – a traditional and sustainable fishing method that uses a fishing pole (rod), line, hook, and bait to catch fish one by one.

**sea state** – is the condition of the sea surface, often described by wave height, frequency, and wind strength.

**seaworthiness** – is the suitability of a vessel to safely navigate the sea, considering its design, condition, and equipment.

**seine nets** – a large fishing net that hangs vertically in the water with floats on the top and weights on the bottom, used to encircle fish.

**simulated environment** – refers to the controlled setting designed to mimic real-world conditions, often used for training or testing purposes.

**vacuum sealing** – is a process of packaging where air is removed from a container to preserve freshness and extend the shelf life of food or other items.

**Vessel Monitoring System (VMS)** – refers to a satellite-based system used to track the location and activities of fishing vessels, often for regulatory and safety purposes.

**weather forecast** – is a prediction of atmospheric conditions, such as temperature, precipitation, and wind, over a specific period.

## REFERENCES

Department of Education (DepEd), MATATAG Curriculum Framework (Manila: Department of Education, 2024).  
<https://www.deped.gov.ph/matatag-curriculum>.

Department of Labor and Employment. Key Employment Generators

General Shaping Paper for Senior High School Curriculum Revision. 2024. Department of Education.

Learners Information System Data. Enrollment by Specialization. 2024. Department of Education.

Sandoval, Jose S. Policy Directions on SHS Work Immersion

Technical Education and Skills Development Authority-Qualification Standards Office. Training Regulations for Fish Capture NC II. Taguig City, Philippines: TESDA, 2006.

Technical Education and Skills Development Authority-Qualification Standards Office. *Training Regulations for Fishing Gear Repair and Maintenance NC III*. Taguig City, Philippines: TESDA, 2007.

### **LINKS**

[Fisheries Situation Report, January to December 2022 | Philippine Statistics Authority | Republic of the Philippines \(psa.gov.ph\)](#)

<https://lrmds.deped.gov.ph>

<https://www.teacherph.com/list-applied-track-subjects-senior-high-school-shs-tracks/>

[Fish-Capture-NC-II-CG.pdf](#)

[Fishing Gear Repair and Maintenance NC III CG | PDF | Learning | Communication](#)

### TOOLS, MATERIALS, and EQUIPMENT

TOOLS	MATERIALS	EQUIPMENT
Handheld tools, including chipping hammer and scraper	Sweeps	Nets (beach seine, mesh and gill nets)
Baiting tools	Netting materials	Fish finder
Tackle management tools	Hangings	Hand lines
Line management tools	Flotation devices	Netting equipment
Safety and navigation tools	Ballast	Boat and navigation equipment
Electric power tools, such as grinders, sanders, and drills	Flags	Fish traps
Pneumatic power tools, such as grinders, sanders, and drills	Droppers / bait	Marine diesel engine (from 5 to 20 HP), with fuel, such as diesel oil/marine diesel oil
Marine preservative finish tools, such as brush, spray gun, roller	Clips	Personal protection clothing, such as: eye protection
Netting tools	Bridles	Ear protection
Thermometer	Nylon monofilament line	Safety boots
	Weighted hand line	Dust and fume masks
	Hooks / lures	Headgear
	Sinkers	Gloves
	Radar reflectors	Storage containers
	Toggles	Rinsing and storing equipment
	Lashings	Computer / laptop
	Bait holding device	
	Logbooks	