

**K to 12 BASIC EDUCATION CURRICULUM**  
**JUNIOR HIGH SCHOOL TECHNICAL LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL TECHNICAL-VOCATIONAL-LIVELIHOOD TRACK**  
**AGRI – FISHERY - ARTS – FOOD PROCESSING (NC II)**  
(640 Hours)

These are the specializations and their pre-requisites. These lists should be used as reference for curriculum maps.

**AGRI-FISHERY ARTS**

	<b>Specialization</b>	<b>Number of Hours</b>	<b>Pre-requisite</b>
1.	Agricultural Crops Production (NC I)	320 hours	
2.	Agricultural Crops Production (NC II) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	640 hours	
3.	Agricultural Crops Production (NC III)	640 hours	Agricultural Crops Production (NC II)
4.	Animal Health Care Management (NC III)	320 hours	Animal Production (Poultry-Chicken) (NC II) or Animal Production (Ruminants) (NC II) or Animal Production (Swine) (NC II)
5.	Animal Production (Poultry-Chicken) (NC II) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	320 hours	
6.	Animal Production (Large Ruminants) (NC II) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	320 hours	
7.	Animal Production (Swine) (NC II) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	320 hours	
8.	Aquaculture (NC II)	640 hours	
9.	Artificial Insemination (Large Ruminants) (NC II)	160 hours	Animal Production (Large Ruminants) (NC II)
10.	Artificial Insemination (Swine) (NC II)	160 hours	Animal Production (Swine) (NC II)
11.	Fish Capture (NC II)	640 hours	
12.	Fishing Gear Repair and Maintenance (NC III)	320 hours	
13.	Fish-Products Packaging (NC II)	320 hours	
14.	Fish Wharf Operation (NC I)	160 hours	
15.	Food Processing (NC II)	640 hours	
16.	Horticulture (NC III)	640 hours	Agricultural Crops Production (NC II)
17.	Landscape Installation and Maintenance (NC II)	320 hours	
18.	Organic Agriculture (NC II)	320 hours	
19.	Pest Management (NC II)	320 hours	
20.	Rice Machinery Operations (NC II)	320 hours	
21.	Rubber Processing (NC II)	320 hours	
22.	Rubber Production (NC II)	320 hours	
23.	Slaughtering Operations (Hog/Swine/Pig) (NC II)	160 hours	

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**HOME ECONOMICS**

	<b>Specialization</b>	<b>Number of Hours</b>	<b>Pre-requisite</b>
1.	Attractions and Theme Parks Operations with Ecotourism (NC II)	160 hours	
2.	Barbering (NC II)	320 hours	
3.	Bartending (NC II)	320 hours	
4.	Beauty/Nail Care (NC II)	160 hours	
5.	Bread and Pastry Production (NC II)	160 hours	
6.	Caregiving (NC II)	640 hours	
7.	Commercial Cooking (NC III)	320 hours	Cookery (NC II)
8.	Cookery (NC II)	320 hours	
9.	Dressmaking (NC II)	320 hours	
10.	Events Management Services (NC III)	320 hours	
11.	Fashion Design (Apparel) (NC III)	640 hours	Dressmaking (NC II) or Tailoring (NC II)
12.	Food and Beverage Services (NC II) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	160 hours	
13.	Front Office Services (NC II)	160 hours	
14.	Hairdressing (NC II)	320 hours	
15.	Hairdressing (NC III)	640 hours	Hairdressing (NC II)
16.	Handicraft (Basketry, Macrame) (Non-NC)	160 hours	
17.	Handicraft (Fashion Accessories, Paper Craft) (Non-NC)	160 hours	
18.	Handicraft (Needlecraft) (Non-NC)	160 hours	
19.	Handicraft (Woodcraft, Leathercraft) (Non-NC)	160 hours	
20.	Housekeeping (NC II) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	160 hours	
21.	Local Guiding Services (NC II)	160 hours	
22.	Tailoring (NC II)	320 hours	
23.	Tourism Promotion Services (NC II)	160 hours	
24.	Travel Services (NC II)	160 hours	
25.	Wellness Massage (NC II)	160 hours	

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**INDUSTRIAL ARTS**

	<b>Specialization</b>	<b>Number of Hours</b>	<b>Pre-requisite</b>
1.	Automotive Servicing (NC I) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	640 hours	
2.	Automotive Servicing (NC II)	640 hours	Automotive Servicing (NC I)
3.	Carpentry (NC II)	640 hours	
4.	Carpentry (NC III)	320 hours	Carpentry (NC II)
5.	Construction Painting (NC II)	160 hours	
6.	Domestic Refrigeration and Air-conditioning (DOMRAC) Servicing (NC II)	640 hours	
7.	Driving (NC II)	160 hours	
8.	Electrical Installation and Maintenance (NC II)	640 hours	
9.	Electric Power Distribution Line Construction (NC II)	320 hours	Electrical Installation and Maintenance (NC II)
10.	Electronic Products Assembly and Servicing (NC II) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	640 hours	
11.	Furniture Making (Finishing) (NC II)	640 hours	
12.	Instrumentation and Control Servicing (NC II)	320 hours	Electronic Products Assembly and Servicing (EPAS) (NC II)
13.	Gas Metal Arc Welding (GMAW) (NC II)	320 hours	Shielded Metal Arc Welding (SMAW) (NC II)
14.	Gas Tungsten Arc Welding (GTAW) (NC II)	320 hours	Shielded Metal Arc Welding (GMAW) (NC II)
15.	Machining (NC I)	640 hours	
16.	Machining (NC II)	640 hours	Machining (NC I)
17.	Masonry (NC II)	320 hours	
18.	Mechatronics Servicing (NC II)	320 hours	Electronic Products Assembly and Servicing (EPAS) (NC II)
19.	Motorcycle/Small Engine Servicing (NC II)	320 hours	
20.	Plumbing (NC I)	320 hours	
21.	Plumbing (NC II)	320 hours	Plumbing (NC I)
22.	Refrigeration and Air-Conditioning (Packaged Air-Conditioning Unit [PACU]/Commercial Refrigeration Equipment [CRE]) Servicing (NC III)	640 hours	Domestic Refrigeration and Air-conditioning (DOMRAC) Servicing (NC II)
23.	Shielded Metal Arc Welding (NC I)	320 hours	
24.	Shielded Metal Arc Welding (NC II)	320 hours	Shielded Metal Arc Welding (NC I)
25.	Tile Setting (NC II)	320 hours	
26.	Transmission Line Installation and Maintenance (NC II)	640 hours	Electrical Installation and Maintenance (NC II)

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**INFORMATION, COMMUNICATIONS AND TECHNOLOGY (ICT)**

	<b>Specialization</b>	<b>Number of Hours</b>	<b>Pre-requisite</b>
1.	Animation (NC II)	320 hours	
2.	Broadband Installation (Fixed Wireless Systems) (NC II)	160 hours	Computer Systems Servicing (NC II)
3.	Computer Programming (.Net Technology) (NC III) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	320 hours	
4.	Computer Programming (Java) (NC III) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	320 hours	
5.	Computer Programming (Oracle Database) (NC III) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	320 hours	
6.	Computer Systems Servicing (NC II) <i>updated based on TESDA Training Regulations published December 28, 2007</i>	640 hours	
7.	Contact Center Services (NC II)	320 hours	
8.	Illustration (NC II)	320 hours	
9.	Medical Transcription (NC II)	320 hours	
10.	Technical Drafting (NC II)	320 hours	
11.	Telecom OSP and Subscriber Line Installation (Copper Cable/POTS and DSL) (NC II)	320 hours	Computer Systems Servicing (NC II)
12.	Telecom OSP Installation (Fiber Optic Cable) (NC II)	160 hours	Computer Systems Servicing (NC II)

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**Course Description:**

This Module is an exploratory and introductory course which leads to **Food Processing** National Certificate Level II (NC II). It covers **four** common competencies that a high school student ought to possess, namely: 1) using and maintaining tools, equipment and paraphernalia; 2) performing mensuration and calculation; 3) interpreting technical drawing and plans and; 4) applying food safety and sanitation.

The preliminaries of this exploratory course include the following: 1) discussion on the relevance of the course; 2) explanation of key concepts relative to the course and; 3) exploration on career opportunities.

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODING	LEARNING MATERIALS
<b>Introduction</b> 1. Basic concepts in Food (Fish) Processing 2. Relevance of the course 3. Career opportunities	The learner demonstrates understanding of basic concepts, and underlying theories in Food (Fish) Processing.	The learner independently demonstrates common competencies in Food (Fish) Processing as prescribed in the TESDA Training Regulation.	1. Explain basic concepts in Food (Fish) Processing 2. Discuss the relevance of the course 3. Explore on opportunities for Food (Fish) Processing as a career		
<b>Personal Entrepreneurial Competencies (PECS )</b>					
1. Assessment of Personal Entrepreneurial Competencies and Skills (PECs) vis-à-vis a practicing entrepreneur/e mployee 1.1 Characteristics 1.2 Attributes 1.3 Lifestyle 1.4 Skills 1.5 Traits 2. Analysis of one's PECs	The learner demonstrates understanding of one's Personal Entrepreneurial Competencies and Skills (PECs).	The learner recognizes his/her Personal Entrepreneurial Competencies and Skills (PECs) and prepares a list of PECs of a practitioner/entrepreneur in Food Processing.	<b>LO 1. Recognize Personal Entrepreneurial Competencies and Skills (PECs) needed in Food Processing</b> 1.1. Assess one's PECs: characteristics, attributes, lifestyle, skills, traits 1.2. Assess practitioner's: characteristics, attributes, lifestyle, skills, traits 1.3. Compare one's PECs with that of a practitioner /entrepreneur	<b>TLE_PECs9-12-00-1</b>	

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<b>Environment and Marketing (EM)</b>					
<ol style="list-style-type: none"> <li>1. Key concepts of Environment and Market</li> <li>2. Products &amp; services available in the market</li> <li>3. Differentiation of products and services</li> <li>4. Customers and their buying habits</li> <li>5. Competition in the market</li> <li>6. SWOT Analysis</li> </ol>	The learner demonstrates understanding of environment and market that relates with a career choice in Food Processing.	The learner independently generates a business idea based on the analysis of environment and market in Food Processing.	<b>LO 1. Generate a business idea that relates with a career choice in Food Processing</b> <ol style="list-style-type: none"> <li>1.1. Conduct SWOT analysis</li> <li>1.2. Identify the different products/services available in the market</li> <li>1.3. Compare different products/services in computer hardware servicing business</li> <li>1.4. Determine the profile potential customers</li> <li>1.5. Determine the profile potential competitors</li> <li>1.6. Generate potential business idea based on the SWOT analysis</li> </ol>	<b>TLE_EM9-12EM-00-1</b>	
<b>LESSON 1: USE AND MAINTAIN FOOD PROCESSING TOOLS, EQUIPMENT AND UTENSILS (UT)</b>					
<ol style="list-style-type: none"> <li>1. Food (fish) processing tools, equipment and instruments</li> <li>2. Faults and defects of tools, equipment and instruments in food (fish) processing</li> </ol>	The learner demonstrates understanding of uses and maintenance of food (fish) processing tools, equipment, instruments and utensils in food (fish) processing.	The learner uses and maintain appropriate food (fish) processing tools, equipment, instruments and utensils and reports accordingly upon discovery of defect/s.	<b>LO 1. Select tools, equipment, utensils and instruments</b> <ol style="list-style-type: none"> <li>1.1. Select tools, equipment, utensils and instruments according to food (fish) processing method</li> <li>1.2. Explain the defects in tools, equipment, utensils and instrument</li> <li>1.3. Follow procedures in reporting defective tools,</li> </ol>	<b>TLE_AFFP9-12UT- 0a-1</b>	<ol style="list-style-type: none"> <li>1. CBLM IV Fish Processing. Module I. Lesson I. pp. 2-11.</li> <li>2. CBLM II Fish Processing. Module II. Lesson I.</li> </ol>

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3. Reporting defective tools, equipment and utensils			equipment, utensils and instruments		pp.14-24.
4. Standard measuring devices and instruments 5. Sanitizing tools, equipment, instruments, and utensils 6. Calibration of measuring devices and instruments 7. Selection of food (fish) processing tools, equipment, instruments and utensils			<b>LO 2. Use tools, equipment, instruments and utensils by following the standard procedures</b> 2.1. Interpret a food processing procedure 2.2. Apply standard procedures in using tools, equipment, instruments, and utensils 2.3. Calibrate tools, equipment instruments and utensils 2.4. Follow procedures in sanitizing tools, equipment, instruments and utensils 2.5. Use tools, equipment, instruments, and utensils according to job requirements and manufacture’s specification	<b>TLE_AFFP9-12 UT-0b-2</b>	1. CBLM IV Fish Processing. Module I. Lesson I. p. 12. 2. CBLM II Fish Processing. Module II. Lesson I. pp. 23-30.
8. Storing tools, equipment, instruments and utensils 9. Minor preventive machine maintenance			<b>LO 3. Perform post-operation activities</b> 3.1. Apply procedures in switching off/plugging off food (fish) processing tools, equipment, instruments and utensils	<b>TLE_AFFP9-12 UT-0c-3</b>	1. CBLM IV Fish Processing. Module I. Lesson I. p. 13. 2. CBLM IV

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODING	LEARNING MATERIALS
10. Disposal of defective tools, equipment, instruments and utensils			3.2. Follow steps in cleaning and sanitizing tools, equipment, instruments and tools before storing 3.3. Perform minor preventive machine maintenance 3.4. Explain the proper disposal of defective tools, equipment, instruments and utensils		Fish Processing. Module II. Lesson II. pp. 31-68.
<b>LESSON 2: PERFORM ESTIMATION AND BASIC CALCULATION (MC)</b>					
1. Weights and measurements 1.1 Gravimetric 1.2 Volumetric 1.3 Lengths, diameter, widths 1.4 Seam measurements 2. Hotness/coldness temperature	The learner demonstrates understanding of basic measurements and calculation.	The learner performs basic measurements and calculation that relate with weight and measurements.	<b>LO 1. Tabulate the recorded data relevant to production of processed food</b> 1.1. Record weights and measurements of raw materials and ingredients 1.2. Summarize/sum up recorded weights and measurements of processed products 1.3. Perform how a seam is measured	<b>TLE_AFFP9-12MC-0d-1</b>	CBLM III Fish Processing. Module I. Lesson I. pp. 1-14.
3. Basic mathematical skills in computing 3.1. Ingredients formulation 3.2. Percentage formulation	The learner demonstrates understanding of basic mathematical skills that relate with estimation and basic calculation.	The learner performs basic mathematical skills that relate with weight and measurements.	<b>LO 2. Review various formulations</b> 2.1. Check raw materials, ingredients and percentage formulations according to approved specifications and enterprise requirements 2.2. Re-check percentage formulations of finished	<b>TLE_AFFP9-12MC-0d-2</b>	CBLM III Fish Processing. Module I. Lesson II. pp. 15-19.



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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODING	LEARNING MATERIALS
3.3. Conversions : ratios and proportions			products according to approved specifications and enterprise requirements		
4. Spoilage and rejects 5. Recoveries and yields	The learner demonstrates understanding of basic mathematical skills that relate with spoilage, rejects and the percentage of recovery of yields.	The learner exhibits basic mathematical skills that relate with computation of percentage of spoilage, rejects and recovery of yields.	<b>LO 3. Calculate the production inputs and output</b> 3.1. Compute for the percentage equivalents of actual spoilage and rejects 3.2. Calculate the percentage of actual yields and recoveries according to enterprise requirements 3.3. Record calculated data according to enterprise requirements	<b>TLE_AFFP9-12MC-0e-3</b>	CBLM III Fish Processing. Module I. Lesson III. pp. 20-24.
6. Basic mathematical computation of production costs 6.1. Ingredients formulations 6.2. Percentage formulations 6.3. Conversions 6.4. Ratios and proportion 6.5. Spoilage and rejects	The learner demonstrates understanding of basic computation of production costs and simple record keeping.	The learner computes for production costs and performs simple record keeping.	<b>LO 4. Compute for the costs of production</b> 4.1. Follow the standard procedures in computing for production costs 4.2. Validate the computed costs of production according to enterprise production requirements	<b>TLE_AFFP9-12MC-0e-4</b>	

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6.6. Percentage of recoveries and rejects 6.7. Simple record keeping					
<b>LESSON 3: INTERPRET PLANS AND DRAWINGS (ID)</b>					
1. Fish processing activities 2. Layout of fish processing area 3. Signs and symbols in layout plan	The learner demonstrates understanding of interpreting plans and drawings that relate with basic fish processing activities.	The learner interprets plans and drawings that relate with basic fish processing activities.	<b>LO 1. Interpret a layout plan</b> 1.1. Explain the meanings of signs and symbol used in lay outing plan for fish processing activity 1.2. Interpret layout plan for fish processing area according to standard set	<b>TLE_AFFP9-12ID-0f-1</b>	
4. Packaging fish products 5. Designing packaging materials 6. Labels and symbols used in packaging	The learner demonstrates understanding of basic principles of design, labels and symbols used in packaging fish products.	The learner creates an acceptable packaging for fish products.	<b>LO 2. Perform outer packaging procedures</b> 2.1. Design packaging materials for fish products 2.2. Label packaged fish products according to quality control standards	<b>TLE_AFFP9-12ID-0f-2</b>	CBLM II Fish Processing. Module II. Lesson III. pp. 17-24.
<b>LESSON 4: APPLY FOOD SAFETY AND SANITATION (OS)</b>					
1. GMP requirements on personal hygiene 2. Personal protective equipment 3. Workplace health and	The learner demonstrates understanding of basic principles and rules to be observed to ensure food safety and sanitation when he/she packages fish products.	The learner observes basic principles and rules to be observed to ensure food safety and sanitation when he/she packages fish products.	<b>LO 1. Observe personal hygiene and good grooming</b> 1.1. Explain the importance of good grooming in a workplace 1.2. Follow the procedures in cleaning, checking and sanitizing personal protective equipment	<b>TLE_AFFP9-12OS-0g-1</b>	1. CBLM I Fish Processing. Module I. Lesson II. pp.1-24.  2. CBLM III Fish Capture.

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safety requirements 4. Good grooming 5. Sanitizing PPE					Module X. pp.4-14.
6. Safety measures and practices 7. First aid 8. Practices in manufacturing good food 9. TQM 10. Codes and regulations			<b>LO 2. Implement food safety practices</b> 2.1. Discuss the sanitary practices in food safety 2.2. Explain the importance of cleanliness and sanitation in a workplace 2.3. Observe practices in manufacturing good food 2.4. Perform first aid according to workplace standard and operating procedures	<b>TLE_AFFP9-12OS-0g-2</b>	CBLM I Fish Production. Module I. Lesson III-IV. 2008. pp.23-58.
11. HACCP 12. Waste disposal 13. Environmental protection 14. Monitoring practices 15. Record keeping procedures			<b>LO 3. Conduct work in accordance with environmental policies and procedures</b> 3.1. Explain the importance of implementing the HACCP plan 3.2. Discuss how a sound monitoring practices is done 3.3. Develop a plan to document and monitor corrective actions on environmental protection	<b>TLE_AFFP9-12OS-0h-3</b>	1. CBLM IV Fish Processing. Module II. Lesson I. pp. 2-17.  2. CBLM I Fish Processing. Module I. Lesson V. pp. 60-71.

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16. Environmental hazards 17. Prevention and control of environmental risks 18. Disaster preparedness and identification 19. Risk assessment and control options 20. Identifying and responding to hazards 21. Investigating incidents 22. Management and utilization of environmental resources 23. Practices on resource utilization and wastage 24. Handling hazardous waste 25. Rehabilitation procedures			<b>LO 4. Participate in improving environmental practices at work</b> 4.1. Explain environmental hazards 4.2. Discuss how environmental risks, hazards and incidents can be prevented and controlled 4.3. Plan ways in managing and utilizing resources in the environment 4.4. Suggest ways to avoid wastage 4.5. Observe rehabilitation procedures	<b>TLE_AFFP9-12OS-0i-j-4</b>	CBLM IV Fish Processing. Module II. Lesson I. pp. 18-30.

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**Course Description:**

This a course which leads to the specialization on **Food Processing** National Certificate (NC II), it covers (4) four of the (7) seven core competencies that a high school student ought to poses, namely: 1) implement sampling procedure; 2) inspect and sort materials and products; 3) dispense non-bulk ingredients; and 4) prepare raw and packaging materials and supplies for processing;

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<b>Introduction</b> 1. Basic concepts in Food (Fish) Processing 2. Relevance of the course 3. Career opportunities	The learner demonstrates understanding of basic concepts and underlying theories in food (fish) processing.	The learners independently develop the skills in food processing and demonstrate the core competencies in food processing prescribed in TESDA Training Regulation.	1. Explain basic concepts food (fish) processing 2. Discuss the relevance of the course 3. Explain on opportunities for food (fish) processing as a career		
<b>Personal Entrepreneurial Competencies (PECS )</b>					
1. Assessment of Personal Competencies and Skills (PECs) vis-à-vis a practicing entrepreneur/ employee in locality/town. 1.1 Characteristics 1.2 Attributes 1.3 Lifestyle 1.4 Skills 1.5 Traits 2. Analysis of PECs in relation	The learner demonstrates understanding of one’s Personal Competencies and Skills (PECs) in Food Processing	The learner recognizes his/her Personal Entrepreneurial Competencies and Skills (PECSs) and prepares an activity plan that aligns with that of a practitioner/entrepreneur in Food Processing	<b>LO 1. Recognize Personal Entrepreneurial Competencies and Skills (PECSs) needed in Food Processing</b> 1.1. Assess one’s PECSS: characteristics, attributes, lifestyle, skills, traits 1.2. Assess practitioner’s: characteristics, attributes, lifestyle, skills, traits 1.3. Compare one’s PECSS with that of a practitioner /entrepreneur	<b>TLE_PEC9-12-00-1</b>	

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to a practitioner 3. Align, strengthen and develop ones PECs based on the results			1.4. Align one’s PECSS with that of a practitioner/entrepreneur		
<b>Environment and Marketing (EM)</b>					
<b>Market (Town)</b> 1. Key concepts of Market 2. Players in the Market (Competitors) 3. Products & services available in the market	The learner demonstrates understanding of environment and market in Food Processing in one’s town/municipality.	The learner independently creates a business vicinity map reflective of potential Food Processing market within the locality/town.	<b>LO 1. Recognize and understand the market in Food Processing</b> 1.1. Identify the players/competitors within the town 1.2. Identify the different products/services available in the market	<b>TLE_EM9-12-00-1</b>	
<b>Market (Customer)</b> 4. Key concepts of Identifying and Understanding the Consumer 5. Consumer Analysis through: 5.1. Observation 5.2. Interviews 5.3. FGD 5.4. Survey			<b>LO 2. Recognize the potential customer/market in Food Processing</b> 2.1. Identify the profile of potential customers 2.2. Identify the customer’s needs and wants through consumer analysis 2.3. Conduct consumer/market analysis	<b>TLE_EM9-12-00-2</b>	
6. Generating Business Idea 6.1. Key concepts of Generating			<b>LO 3. Create new business ideas in Food Processing business by using various techniques</b>	<b>TLE_EM9-12-00-3</b>	

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
Business Ideas 6.2. Knowledge & Skills, Passions, Interests 6.3. new application 6.4. Irritants 6.5. Striking ideas (new concept) 7. Serendipity Walk			3.1. Explore ways of generating business idea from ones' own characteristics/attributes 3.2. Generate business ideas using product innovation from irritants, trends and emerging needs 3.3. Generate business ideas using Serendipity Walk		
<b>LESSON 1: IMPLEMENT SAMPLING PROCEDURES (SA)</b> <i>(Note: Research components should be included in all activities)</i>					
1. Sampling requirements 2. Types of samples 3. Sampling plan 4. Basic sampling principles, with emphasis on sampling which is random and representative of the lot 5. Sampling techniques 6. Basic characteristics of samples to be handled	The learner demonstrates understanding on implementing or employing sampling procedures.	The learner demonstrates independently the given procedures of implementing or employing sampling procedures.	<b>LO1. Prepare for sampling</b> 1.1. Identify sampling requirements in accordance with sampling plan 1.2. Prepare sampling equipment container and labels according to sampling requirements	<b>TLE_AFFP9-12SA-Ia-c-1</b>	

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
7. Preparation of requirements for samples 8. Awareness of Codes or Regulations such as HACCP and GMP 9. Preparing sampling tools and equipment 10. Using PPE					
11. Applying basic sampling principles, with emphasis on sampling which is random and representative of the lot 12. Sampling plan, procedures and techniques 13. Collecting, handling and preparing samples 14. Using sampling materials, tools and equipment 15. Recording sample information			<b>LO2. Collect samples</b> 2.1. Collect and transfer samples under controlled condition 2.2. Handle samples to preserve them and the source integrity according to sampling requirement and OHS requirements 2.3. Identify and report defects or abnormalities in source material and/or sample according to workplace requirements 2.4. Record sample information according to workplace procedures 2.5. Clean and maintain the workplace according to workplace standards	<b>TLE_AFFP9-12SA-Id-j-2</b>	



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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
16. Sample information 17. Basic characteristics of samples to be handled 18. Following work procedures 19. Reporting defected samples 20. Handling, preservation and storage requirements for samples 21. Maintaining clean and safe workplace 22. Practicing 5S and 3Rs principles 23. Awareness of Codes or Regulations such as HACCP and GMP 24. Using PPE					
<b>LESSON 2: INSPECT AND SORT RAW MATERIALS AND PRODUCT (IS)</b> <i>(Note: Research components should be included in all activities)</i>					
1. Preparation of tools for inspection and sorting	The learner demonstrates understanding inspecting and sorting raw materials and product to be used.	The learner demonstrates independently the given procedures on inspecting and sorting raw materials to be used.	<b>LO 1. Prepare equipment and tools</b> 1.1. Prepare equipment and tools for inspection and sorting in accordance	<b>TLE_AFFP9-12IS-IIa-c-1</b>	CBLM IV Fish Processing. Module I. Lesson I. pp. 2-17.

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
2. Checking, cleaning and sanitation of equipment and tools. 3. Preparation of office materials/supplies and equipment. 4. Cleaning and sanitation procedures 5. Food safety principles and practices 6. Awareness of Codes or Regulations such as Hazard Analysis Critical Control Point (HACCP) and Good Manufacturing Practice (GMP)			with manufacturer’s specifications and workplace requirements 1.2. Check, clean and sanitize equipment and tools are in accordance with manufacturer’s specifications and workplace requirements 1.3. Prepare office equipment and materials/supplies needed in accordance with approved specifications		
7. Types of raw materials and product 8. Procedures and techniques inspection and sorting of raw			<b>LO 2. Inspect and sort the materials and product</b> 2.1. Receive and handle raw materials and product according to standard operating procedures 2.2. Conduct inspection and sorting according to	<b>TLE_AFFP9-12IS-IId-h-2</b>	CBLM IV Fish Processing. Module I. Lesson II. pp. 18-27.

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
materials or products 9. Operating equipment 10. Grading of raw materials or products 11. Defects of raw materials 12. Defects of semi-processed/finished products 13. Physical properties for sorting food 14. OHS requirements 15. Manufacturer’s requirements 16. Workplace requirements 17. Record and report making			required specifications, OHS requirements and workplace procedures 2.3. Undertake grading undertaken, as necessary, according to raw material or product requirements 2.4. Inspect raw materials and products for visible signs of defects according to set processing and purchasing specifications 2.5. Sort raw materials and products in accordance with physical property specifications 2.6. Weigh and keep inspected and sorted raw materials and products in accordance with standard operating procedures 2.7. Report rejected/sub-standard raw materials and products to appropriate person and/or disposed according to organizational guidelines		
18. Cleaning and storing			<b>LO3. Complete inspection and sorting activity</b>	<b>TLE_AFFP9-12IS-IIi-j-3</b>	CBLM I Fish Processing. Module I.

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
equipment and tools after use 19. 5S principle 20. Proper waste disposal 21. Recycling/by-product utilization (3Rs principles) 22. Environmental protection and concerns 23. OHS requirements 24. Manufacturer’s requirements 25. Workplace requirements 26. Completing record and report			3.1. Clean and keep equipment and tools according to manufacturers’ specifications and workplace procedures 3.2. Complete and report records according to workplace procedures		Lesson V. pp. 60-71.
<b>LESSON 3: DISPENSE NON-BULK INGREDIENTS (NB)</b> <i>(Note: Research components should be included in all activities)</i>					
1. Preparing materials and equipment for dispensing 2. Inspection of materials (Non-bulk ingredients / additives) 3. Types of non-bulk ingredients / additives	The learner demonstrates understanding on dispensing non-bulk ingredients.	The learner demonstrates independently the given method of dispensing non-bulk ingredients.	<b>LO 1. Prepare to dispense ingredients</b> 1.1. Inspect materials to confirm type, quality clearance, quantities and identify any obvious contamination or non-conformance with workplace requirements 1.2. Select appropriate measuring/dispensing and weighing equipment	<b>TLE_AFFP9-12NB-IIIa-e-1</b>	1. CBLM II Fish Processing. Module I. Lesson I. pp. 2-15. 2. CBLM II Fish Processing. Module II. Lesson I. pp. 24-25.

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
4. Workplace requirements 5. Contamination and food safety issues related to dispensing 6. Selection of appropriate measuring/ dispensing equipment) 7. Purpose and basic principles of the dispensing process 8. Quality characteristics and related handling requirements of materials 9. Ensuring availability of containers/bags and labels 10. Pre-start checks 11. Manufacturer’s specifications 12. Personal protective equipment (PPE)			according to dispensing requirements 1.3. Confirm availability of containers/bags and labels according to dispensing requirements 1.4. Carry out pre-start checks according to manufacturer’s specifications and workplace procedures 1.5. Use appropriate personal protective equipment (PPE) according to workplace procedures and occupational health and safety (OHS) requirements		

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
13. OHS requirements					
14. Measuring and/or weighing ingredients 15. Dispensing ingredients 16. Purpose and basic principles of the dispensing process 17. Monitoring measuring/dispensing equipment 18. Operating and maintaining the measuring/dispensing equipment 19. Following work procedures 20. Corrective action implementation 21. Basic operating principles of equipment 22. Typical equipment malfunctions and related causes			<b>LO 2. Measure and/or weigh ingredients</b> 2.1. Weigh /measure non-bulk ingredients and additives according to production requirements 2.2. Label dispensed ingredients according to workplace procedures 2.3. Monitor accurate of measuring/dispensing equipment to identify variation in operating conditions according to production requirements 2.4. Report identify variation in equipment operation maintenance requirements according to workplace reporting requirements 2.5. Maintain workplace according to housekeeping standards	<b>TLE_AFFP9-12NB -IIIf-j-2</b>	1. CBLM II Fish Processing. Module II. pp. 14-18.  2. CBLM II Fish Processing. Module I. p. 39.

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
23. Contamination and food safety issues related to dispensing 24. Quality characteristics and related handling requirements of materials 25. Maintaining of workplace 26. Workplace requirements (housekeeping standards, 5S Principles, etc.) 27. Manufacturer’s specifications 28. OHS hazards and controls 29. Using appropriate Personal protective equipment (PPE)					
30. Cleaning and sanitizing of dispensing equipment 31. Maintaining and storage of			<b>LO 3. Complete the dispensing process</b> 3.1. Clean dispensing equipment according to manufacturer’s specifications and workplace procedures	<b>TLE_AFFP9-12 NB -IVa-b-3</b>	CBLM II Fish Processing. Module I. Lesson I. pp. 9-11.

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
dispensing equipment 32. Identifying and reporting unacceptable equipment/utensils 33. Following work procedures 34. Completing records and reports			3.2. Identify maintenance requirements and unacceptable equipment/utensil conditions according to workplace procedures 3.3. Report on the unacceptable equipment/utensil according to workplace procedures 3.4. Records are completed according to workplace procedures		
<b>LESSON 4: PREPARE RAW AND PACKAGING MATERIALS AND SUPPLIES FOR PROCESSING (PR)</b> <i>(Note: Research components should be included in all activities)</i>					
1. Types raw materials and processing supplies 2. Types of packaging materials 3. Required specification 4. Selecting raw materials 5. Confirming raw/packaging materials and supplies and their availability 6. Receiving and handling	The learner demonstrates understanding of preparing raw and packaging materials for food processing.	The learner demonstrates independently the given procedures in preparing raw and packaging materials for food processing.	<b>LO1. Select raw and packaging materials and supplies for processing.</b> 1.1. Confirm raw and packaging materials and supplies for food processing and their availability according to production requirements 1.2. Receive and handle raw and packaging materials and supplies for food processing according to workplace and OHS requirements 1.3. Place raw and packaging materials and supplies for food processing in the	<b>TLE_AFFP9-12PR-IVc-f-1</b>	



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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
raw/packaging materials and supplies 7. Placing in the receiving the raw/packaging materials and supplies 8. Production requirements 9. OHS requirements			receiving bin according to required specifications		
10. Principles and procedures for preparing raw materials 11. Proper handling of raw and packaging materials and supplies 12. Identification and proper use of cleaning/washing equipment, implements and utilities 13. Proper cleaning and/or washing procedure 14. Food safety principles and practices			<b>LO2. Prepare raw and packaging materials and supplies</b> 2.1. Wash or clean materials according to required specifications. 2.2. Prepare raw and packaging materials and supplies according to specifications 2.3. Complete records according to workplace requirements	<b>TLE_AFFP9-12PR-IVg-j-2</b>	

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
15. Recording and reporting procedures 16. 5S principle 17. Proper waste disposal (3Rs principle) 18. Environmental protection and concerns 19. Awareness of Codes or Regulations such as HACCP and GMP 20. OHS requirements 21. Using PPE					

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**Course Description:**

This a course which leads to the specialization on **Food Processing** National Certificate (NC II), it covers the remaining (3) three of the (7) seven core competencies that a high school student ought to poses, namely: 1) operate basic equipment;2) clean and sanitize equipment for processing packaging area; and 3) load and unload raw materials, product and supplies.

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
<b>Introduction</b> 1. Basic concepts in Food (Fish) Processing 2. Relevance of the course 3. Career opportunities	The learner demonstrates understanding of basic concepts and underlying theories in food (fish) processing.	The learners independently develop the skills in food processing and demonstrate the core competencies in food processing prescribed in TESDA Training Regulation.	1. Explain basic concepts food (fish) processing 2. Discuss the relevance of the course 3. Explain on opportunities for food (fish) processing as a career		
<b>Personal Entrepreneurial Competencies (PECS )</b>					
1. Assessment of Personal Competencies and Skills (PECs) vis-à-vis a practicing entrepreneur/employee in a province. 1.1.Characteristics 1.2.Attributes 1.3.Lifestyle 1.4.Skills 1.5.Traits 2. Analysis of PECs in relation	The learner demonstrates understanding of one’s Personal Competencies and Skills (PECs) in Food Processing.	The learner independently creates a plan of action that strengthens/ further develops one’s PECs in Food Processing.	<b>LO 1. Develop and strengthen personal competencies and skills (PECs) needed Food Processing</b> 1.1. Identify areas for improvement, development and growth 1.2. Align one’s PECs according to his/her business/career choice 1.3. Create a plan of action that ensures success of his/her business/career choice	<b>TLE_PECs9-12-00-1</b>	

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
to a practitioner 3. Strengthening and further development of ones PECs					
<b>Environment and Marketing (EM)</b>					
1. Product Development 2. Key concepts of developing a product 3. Finding Value 4. Innovation 4.1. Unique Selling 4.2. Proposition (USP)	The learner demonstrates understanding of environment and market in Food Processing in one's town/municipality.	The learner independently creates a business vicinity map reflective of potential Food Processing market within the locality/town.	<b>LO 1. Develop a product/ service in Food Processing</b> 1.1. Identify what is of "Value" to the customer 1.2. Identify the customer to sell to 1.3. Explain what makes a product unique and competitive 1.4. Apply creativity and Innovative techniques to develop marketable product 1.5. Employ a Unique Selling Proposition (USP) to the product/service	<b>TLE_EM9-12-III0-1</b>	
5. Selecting Business Idea 6. Key concepts of Selecting a: 6.1. Business Idea 6.2. Criteria 6.3. Techniques			<b>LO 2. Select a business idea based on the criteria and techniques set</b> 2.1. Enumerate various criteria and steps in selecting a business idea 2.2. Apply the criteria/steps in selecting a viable business idea	<b>TLE_EM9-12-III0-2</b>	

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
			2.3. Determine a business idea based on the criteria/techniques set		
7. Branding			<b>LO 3. Develop a brand for the product</b> 3.1. Identify the benefits of having a good brand 3.2. Enumerate recognizable brands in the town/province 3.3. Enumerate the criteria for developing a brand 3.4. Generate a clear appealing product brand	<b>TLE_EM9-12-IV0-3</b>	
<b>LESSON 5: OPERATE EQUIPMENT(OE)</b> <i>(Note: Research components should be included in all activities)</i>					
1. Types, characteristics and functions of basic equipment 2. Selection and preparation of equipment for use 3. Pre-operational checks and procedures 4. Identifying and reporting faulty and damaged machine/equipment 5. Identifying required	The learner demonstrates understanding in operating appropriate equipment for food (fish) processing.	The learner demonstrates independently the given procedures in basic operation of equipment needed in food (fish) processing including recognition of functional and quality equipment and its maintenance following specific procedures and instructions.	<b>LO1. Select and prepare equipment for use</b> 1.1. Identify and access basic machine/equipment required to complete tasks in accordance with assignment instructions and workplace requirements 1.2. Carry out routine pre-operational checks according to manufacturers' specifications and workplace procedures 1.3. Identify and report faulty and damaged machine/equipment	<b>TLE_AFFP9-12OE-Ia-e-1</b>	

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
<p>training for equipment operation</p> <p>6. Notifying and reporting appropriate persons</p> <p>7. Apply safe workplace practices and procedures</p> <p>8. Using personal protective equipment (PPE)</p> <p>9. OHS requirements</p>			<p>according to workplace procedures</p> <p>1.4. Identify and notify appropriate person(s) on any training required to operate machine/equipment according to supplier and workplace requirements</p>		
<p>10. Use of appropriate PPE</p> <p>11. Practicing OHS</p> <p>12. Following manufacturer's specification</p> <p>13. Operating machine/equipment</p> <p>14. Identifying and reporting out-of-specification product, process and equipment performance.</p>			<p><b>LO2. Operate equipment</b></p> <p>2.1. Select, use and maintain suitable personal protective equipment in accordance with occupational health and safety (OHS) requirements, and manufacturers' specifications</p> <p>2.2. Operate machine/equipment in a safe and controlled manner in accordance with OHS requirements and manufacturers' specifications</p>	<b>TLE_AFFP9-12OE-If-j-IIa-e-2</b>	

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
15. Workplace procedures			2.3. Identify and report out-of-specification product, process and equipment performance according to workplace procedures		
16. Shutting-down machine/equipment 17. Locate emergency stop functions on equipment 18. Routine maintenance procedures 19. Cleaning and sanitation procedures for work area and equipment 20. Security and storage of equipment and materials 21. Lock out and tag out procedures 22. Safe workplace procedures 23. Emergency procedures 24. Reporting faulty or damaged			<b>LO3. Maintain equipment and resources</b> 3.1. Shut down machine/equipment according to workplace procedures and manufacturers' specifications 3.2. Clean and maintain work area in accordance with workplace requirements 3.3. Clean, maintain and store tools and machine/equipment in accordance with workplace requirements and manufacturers' specifications 3.4. Report faulty or damaged machine/equipment for repair or replacement in accordance with workplace procedures 3.5. Manage wastes generated according to workplace procedures and 3R principle	<b>TLE_AFFP9-12OE-IIf-j-3</b>	

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
machine/equipment 25. Manage wastes (reduce, reuse and recycle 3Rs) 26. Reporting and documentation requirements and processes 27. Relevant legislative provisions including OHS requirements 28. Awareness of Codes or Regulations such as HACCP and GMP 29. Apply safe workplace practices and procedures 30. Use of appropriate PPE			3.6. Complete and maintain records and reports in accordance with industry, legislative and workplace requirements		
<b>LESSON 6: CLEAN AND SANITIZE EQUIPMENT AND PROCESSING/PACKAGING AREA (CS)</b> <i>(Note: Research components should be included in all activities)</i>					
1. Preparing for cleaning equipment and processing/packaging area	The learner demonstrates understanding of cleaning and sanitizing the equipment and work areas which include the food	The learner independently demonstrates the given procedures in cleaning and sanitizing the food processing	<b>LO1. Prepare for cleaning</b> 1.1. Identify cleaning/sanitizing supplies and materials, and utilities	<b>TLE_AFFP9-12CS-IIIa-e-1</b>	CBLM II Fish Processing. Module II. Lesson I. pp. 24-30.



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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
2. Preparing supplies, materials and utilities for cleaning and sanitation 3. Purpose and basic principles of cleaning and sanitation 4. Consequences of contamination of process flows by cleaning solutions and related safeguards 5. Cleaning and sanitation requirements for equipment and processing/ packaging area 6. Methods used to render equipment and processing/ packaging area safe to clean and sanitize	processing and packaging areas	equipment and packaging areas.	1.2. Confirm availability of cleaning/sanitizing supplies and materials, and utilities according to cleaning and sanitizing requirements 1.3. Prepare mixture of sanitizing solutions, as necessary, according to workplace requirements and application 1.4. Clear equipment and processing/packaging area in preparation for cleaning according to workplace requirements and manufacturer’s specifications. 1.5. Render safe to clean the processing/packaging area according to workplace procedures and manufacturer’s specifications		

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
7. Characteristics and functions of cleaning and sanitizing chemicals, including proper handling, use and storage 8. Purpose and limitations of protective clothing and equipment 9. Practicing OHS 10. Regulatory/ Legislative requirements 11. Using PPE					
12. Cleaning and sanitizing equipment and processing/ packaging area 13. Inspecting equipment and processing/ packaging area 14. Identifying and reporting unacceptable equipment and processing/ packaging area			<b>LO2. Clean and sanitize equipment and processing / packaging area to meet workplace requirements.</b> 2.1. Clean and sanitize equipment and processing/ packaging area according to workplace procedures, OHS requirements, and manufacturer’s specifications 2.2. Inspect equipment and processing/ packaging area according to	<b>TLE_AFFP9-12CS-III f-j-2</b>	CBLM II Fish Processing. Module I. Lesson I. pp. 7-8.

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(640 Hours)

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
15. Storing cleaning equipment and chemicals 16. Proper disposal of waste from cleaning process 17. Restoring equipment and processing/packaging area to operating order 18. Completing records 19. Regulatory/legislative requirements 20. Workplace requirements 21. OHS requirements 22. Manufacturer’s specifications			required operating conditions and cleanliness 2.3. Identify and report unacceptable equipment and processing/packaging area conditions according to workplace procedures 2.4. Store cleaning equipment and chemicals according to workplace procedure 2.5. Dispose waste from cleaning process according to workplace and OHS requirements, and regulatory/legislative requirements 2.6. Restore equipment and processing/packaging area to operating order according to workplace procedures 2.7. Complete records in line with workplace requirements		
<b>LESSON 7: LOAD AND UNLOAD RAW MATERIALS, PRODUCTS AND SUPPLIES (LD)</b> <i>(Note: Research components should be included in all activities)</i>					
1. Selection of loading and unloading procedures 2. Basic principles and procedures for loading and unloading	The learner demonstrates understanding of proper procedure in loading and unloading of raw materials, products and supplies in food (fish) processing.	The learner demonstrates independently the given procedures in loading and unloading raw materials, products and supplies in food (fish) processing in accordance with workplace requirement.	<b>LO1. Load and unload raw materials, products and supplies.</b> 1.1. Select loading and unloading procedures according to workplace and OHS requirements	<b>TLE_AFFP9-12LD-IVa-e-1</b>	CBLM III Fish Capture. Module II. Lesson I. pp. 3-11.

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
3. Identifying dangerous or hazardous raw materials, products and/or supplies 4. Identifying raw materials, products and/or supplies requiring special handling and/or documentation 5. Packing and unpacking raw materials, products and/or supplies 6. Loading raw materials, products and/or supplies 7. Selection and using of lifting aids and appliances 8. Unloading activities 9. Identifying and controlling hazards and risks			1.2. Identify and handle dangerous or hazardous raw materials, products and/or supplies in accordance with OHS, regulatory and legislative requirements 1.3. Identify raw materials, products and/or supplies requiring special handling. 1.4. Follow special handling procedures according to workplace requirements 1.5. Pack and unpack raw materials, products and/or supplies according to workplace requirements 1.6. Load raw materials, products and/or supplies in accordance with relevant material loading regulations and workplace procedures 1.7. Select and use lifting aids and appliances according to loading procedures in compliance with workplace requirements and legislation 1.8. Conduct unloading activities safely and efficiently according to workplace requirements		

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
10. Material loading regulations 11. Workplace procedures 12. OHS requirements 13. Regulatory and legislative requirements			1.9. Identify and control hazards and risks according to OHS and workplace requirements. 1.10. Implement controls according to OHS and workplace requirements.		
14. Proper distribution of load 15. Methods of securing and protecting load 16. Warehouse plan/Site layout and obstacles 17. Workplace operating procedures 18. Hazard and risk identification and control 19. Material loading regulations 20. Workplace procedures			<b>LO2. Secure and protect load</b> 2.1. Check load distribution to ensure that it is even, legal and within the working capacity according to workplace procedures 2.2. Check load to ensure that dangerous goods and hazardous substances are appropriately segregated in accordance with regulatory and workplace requirements 2.3. Secure load using the correct load restraint and protection equipment, carrying and garage conditions according to workplace and OHS requirements 2.4. Protect the load in accordance with legal and	<b>TLE_AFFP9-12LD-IVf-h-2</b>	CBLM III Fish Capture. Module II. Lesson II. pp. 12-21.

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE	LEARNING MATERIALS
21. OHS requirements 22. Regulatory and legislative requirements 23. PPE protective/safety gadgets 24. Awareness of Codes or regulations such as HACCP and GMP			workplace safety requirements		
25. Selection and checking of raw materials, products and/or supplies inclusive of travel documents and permits 26. Completing relevant records 27. Legislative requirements 28. Workplace requirements			<b>LO3. Complete documentation</b> 3.1. Select and check raw materials, products and/or supplies for ability to travel in accordance with relevant regulations/permit requirements 3.2. Complete all required records in accordance with legislative and workplace requirements	<b>TLE_AFFP9-12LD-IVi-j-3</b>	CBLM III Fish Capture. Module II. Lesson III. pp. 22-26.

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**CODE BOOK LEGEND**  
**Sample: TLE\_AFFP9-12LD-IVf-h-2**

LEGEND		SAMPLE	
<b>First Entry</b>	Learning Area and Strand/ Subject or Specialization	Technology and Livelihood Education Agri-Fishery Food (Fish) Processing	<b>TLE_AF FP 9-12</b>
	Grade Level	Grade10	
<b>Uppercase Letter/s</b>	Domain/Content/ Component/ Topic	Load and unload raw materials, products and supplies	<b>LD</b>
			-
<b>Roman Numeral</b> <i>*Zero if no specific quarter</i>	Quarter	Fourth Quarter	<b>IV</b>
<b>Lowercase Letter/s</b> <i>*Put a hyphen (-) in between letters to indicate more than a specific week</i>	Week	Week six to eight	<b>f-h</b>
			-
<b>Arabic Number</b>	Competency	Secure and protect load	<b>2</b>

DOMAIN/ COMPONENT	CODE
Personal Entrepreneurial Skills	PECS
Environment and Marketing	EM
Use and Maintain Farm Processing Tools, Equipment and Utensils	UT
Perform Estimation and Basic Calculation	MC
Interpret Plans and Drawings	ID
Apply Food Safety and Sanitation	OS
Implement Sampling Procedures	SA
Inspect and Sort Raw Materials and Product	IS
Dispense Non-bulk Ingredients	NB
Prepare Raw and Packaging Materials and Supplies for Processing	PR
Operate Equipment	OE
Clean and Sanitize Equipment and Processing/Packaging Area	CS
Load and Unload Raw Materials, Products and Supplies	LD

Technology-Livelihood Education and Technical-Vocational Track specializations may be taken between Grades 9 to 12.

Schools may offer specializations from the four strands as long as the minimum number of hours for each specialization is met.

Please refer to the sample Curriculum Map on the next page for the number of semesters per Agri-Fishery Arts specialization and those that have pre-requisites. Curriculum Maps may be modified according to specializations offered by a school.

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**SAMPLE AGRICULTURE AND FISHERY ARTS CURRICULUM MAP\*\* (as of May 2016)**

GRADE 7/8 (EXPLORATORY)			GRADES 9-12			
<b>EXPLORATORY</b>			<b>Agricultural Crops Production (NC I)</b> 4 sems			
			<b>Agricultural Crops Production (NC II)+</b> <small>updated based on TESDA Training Regulations published on December 28, 2013</small>			8 sems
			<b>*Agricultural Crops Production (NC III)</b>			8 sems
			<b>Landscape Installation and Maintenance (NC II)</b> 4 sems	<b>Organic Agriculture (NC II)</b> 4 sems		
			<b>Pest Management (NC II)</b> 4 sems	<b>Rice Machinery Operation (NC II)</b> 4 sems		
			<b>Animal Production (Swine) (NC II)+</b> <small>updated based on TESDA Training Regulations published on December 28, 2013</small> 4 sems	<b>*Artificial Insemination: Swine (NC II)</b> 2 sems	<b>*Slaughtering Operations (Hog/Swine/Pig) (NC II)</b> 2 sems	
			<b>Animal Production (Large Ruminants) (NC II)+</b> <small>updated based on TESDA Training Regulations published on December 28, 2013</small> 4 sems	<b>*Artificial Insemination: Large Ruminants (NC II)</b> 2 sems	<b>Fish Wharf Operation (NC I)</b> 2 sems	
			<b>Animal Production (Poultry-Chicken) (NC II)+</b> <small>updated based on TESDA Training Regulations published on December 28, 2013</small> 4 sems	<b>*Animal Health Care Management NC III</b> 4 sems		
			<b>Rubber Production (NC II)</b> 4 sems	<b>Rubber Processing (NC II)</b> 4 sems		
				<b>*Horticulture (NC III)</b> 8 sems		
				<b>Food Processing (NC II)</b> 8 sems		
				<b>Fish Capture (NC II)</b> 8 sems		
				<b>Aquaculture (NC II)</b> 8 sems		
			<b>Fish-Products Packaging (NC II)</b> 4 sems	<b>Fishing Gear Repair and Maintenance (NC III)</b> 4 sems		

\* Please note that these subjects have pre-requisites mentioned in the CG.

+ CG updated based on new Training Regulations of TESDA.

 Other specializations with no prerequisites may be taken up during these semesters.

**\*\*This is just a sample. Schools make their own curriculum maps considering the specializations to be offered. Subjects may be taken up at any point during Grades 9-12.**



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(640 Hours)

**Reference:**

Technical Education and Skills Development Authority-Qualification Standards Office. *Training Regulations for Food Processing NC II*. Taguig City, Philippines: TESDA, 2011.