

**K TO 12 BASIC EDUCATION CURRICULUM**  
**JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL TECHNICAL-VOCATIONAL LIVELIHOOD TRACK**  
**AGRI-FISHERY ARTS – RUBBER PROCESSING NC II**  
(320 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 qualification is designed to enhance the knowledge, skills and desirable attitudes in Rubber Processing. Its **basic competencies**, i.e. participating in workplace communication; working in a team environment; practicing career professionalism; and practicing occupational health and safety procedures, are embedded in **common competencies**, i.e., 1) applying safety measures in farm operations; using farm tools and equipment; and performing estimation and calculations, and **core competencies**, i.e., receiving latex and lumps; producing blanketed rubber sheet; and performing rubber drying operation.

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
<b>Introduction</b> 1. Basic concepts in Rubber Processing 2. Relevance of the course 3. Career opportunities	The learner demonstrates an understanding of basic concepts and underlying theories in Rubber Processing.	The learner independently demonstrates common competencies in Rubber Processing as prescribed by TESDA Training Regulations.	1. Explain basic concepts in Rubber Processing. 2. Discuss the relevance of the course. 3. Explore career opportunities in Rubber Processing.	
<b>PERSONAL ENTREPRENEURIAL COMPETENCIES AND SKILLS (PECS)</b>				
1. Assessment of Personal Competencies and Skills (PECS) vis-à-vis PECS of a practicing entrepreneur/ employee: 1.1 Characteristics 1.2 Attributes 1.3 Lifestyle 1.4 Skills 1.5 Traits 2. Analysis of learner's PECS in relation to those of a practicing entrepreneur/ employee	The learner demonstrates an understanding of one's Personal Competencies and Skills (PECS).	The learner recognizes his/her Personal Competencies and Skills (PECS) and is able to compare these with the PECS of a practicing entrepreneur/ employee involved in Rubber Processing	<b>LO 1. Recognize Personal Competencies and Skills (PECS) needed in Rubber Processing.</b> 1.1 Identify and assess one's PECS. 1.2 Identify and assess a practitioner's PECS. 1.3 Compare self with a practicing entrepreneur/employee. 1.4 Identify areas for improvement, development and growth.	<b>TLE_PPCS9-12-00-1</b>
<b>ENVIRONMENT AND MARKETING (EM)</b>				
1. Key concepts of Environment and Market 2. Products and services available in the market 3. Concept of differentiation of products and services 4. Concept of customers and the	Learner demonstrates understanding of the environment and market of rubber processing.	The learner independently identifies the products/services available, the customers, and the competition within the rubber processing market.	<b>LO 1. Recognize and understand the market for rubber processing.</b> 1.1 Identify the different products/services available in the market. 1.2 Enumerate the differences between these products. 1.3 Identify the customers and the reason	<b>TLE_EM9-12-00-1</b>

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<p>reasons they buy products and services</p> <p>5. Competitors in the market</p>			<p>these products/services are purchased.</p> <p>1.4 Identify the companies selling these products/services in the market.</p>	
<b>COMMON COMPETENCIES</b>				
<b>LESSON 1. APPLYING SAFETY MEASURES IN FARM OPERATIONS (ASM)</b>				
<ul style="list-style-type: none"> <li>• Work tasks in farm operation</li> <li>• Safety measures in a place in farm operations</li> <li>• Safety measure relative to time in farm operations</li> <li>• Tools, materials and outfits</li> </ul>	The learner demonstrates an understanding of the underlying theories in applying safety measures in farm operations.	The learner independently applies safety measures in farm operations.	<p><b>LO 1. Determine areas of concern for safety measures.</b></p> <p>1.1 Identify work tasks in line with farm operations.</p> <p>1.2 Determine place for safety measures in line with farm operations.</p> <p>1.3 Determine time for safety measures in line with farm operations.</p> <p>1.4 Prepare appropriate tools, materials and outfits in line with job requirements.</p>	<b>TLE_AFARPR9-12ASM-Ia-1</b>
<ul style="list-style-type: none"> <li>• Uses tools &amp; materials</li> <li>• Personal protective equipment</li> <li>• Effectivity/shelf life/expiration of materials</li> <li>• Emergency procedures</li> <li>• Workplace hazards</li> <li>• Report of hazards in a work place</li> </ul>			<p><b>LO 2. Apply appropriate safety measures</b></p> <p>2.1 Use tools and materials according to specifications and procedures.</p> <p>2.2 Wear outfits according to farm requirements.</p> <p>2.3 Observe strictly effectivity/shelf life/expiration of materials.</p> <p>2.4 Know and follow emergency procedures to ensure a safe work requirement.</p> <p>2.5 Identify and report hazards in the workplace in line with farm guidelines.</p>	<b>TLE_AFARPR9-12ASM-Ib-c-2</b>
<ul style="list-style-type: none"> <li>• Clean and store tools and outfits</li> <li>• Label and storage of unused materials <ul style="list-style-type: none"> <li>- Technique in storing materials and chemicals</li> </ul> </li> <li>• Waste materials disposal <ul style="list-style-type: none"> <li>- Principles of 5 s</li> </ul> </li> </ul>			<p><b>LO 3. Safekeep/dispose tools, materials and outfit.</b></p> <p>3.1 Clean used tools and outfit after use and stored in designated areas.</p> <p>3.2 Label and store properly unused materials according to manufacturers recommendation and farm requirements.</p>	<b>TLE_AFARPR9-12ASM-Id-3</b>

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- Waste management system			3.3 Dispose waste materials according to manufacturers, government and farm requirements	
<b>LESSON 2. USING FARM TOOLS AND EQUIPMENT (UFT)</b>				
<ul style="list-style-type: none"> <li>• Farm tools <ul style="list-style-type: none"> <li>- Power tools</li> <li>- Handheld tools</li> </ul> </li> <li>• Farm tool faults and defects</li> <li>• Uses of tools and equipment according to job requirements</li> </ul>	The learner demonstrates an understanding of the underlying theories in using farm tools and equipment.	The learner independently uses farm tools and equipment.	<b>LO 1. Select and use farm tools</b> <ol style="list-style-type: none"> <li>1.1 Identify appropriate farm tools according to requirement/use.</li> <li>1.2 Check farm tools for faults and defective tools reported in accordance with farm procedures.</li> <li>1.3 Use safely appropriate tools and equipment according to job requirements and manufacturers conditions.</li> </ol>	<b>TLE_AFARPR9-12UFT-Ie-4</b>
<ul style="list-style-type: none"> <li>• Farm equipment <ul style="list-style-type: none"> <li>- Motorized equipment</li> <li>- Electrical equipment</li> </ul> </li> <li>• Instructional manuals of farm tools and equipment <ul style="list-style-type: none"> <li>- Uses/functions of farm equipment</li> <li>- Pre-operational checkup of tools and equipment</li> </ul> </li> <li>• Identification and report of faults in farm equipment</li> <li>• Safety procedures</li> </ul>			<b>LO 2. Select and operate farm equipment</b> <ol style="list-style-type: none"> <li>2.1 Identify appropriate farm equipment.</li> <li>2.2 Read carefully instructional manual of the farm tools and equipment prior to operation</li> <li>2.3 Use farm equipment according to its function</li> <li>2.4 Conduct pre-operation check-up in line with manufacturers manual</li> <li>2.5 Identify and report faults in farm equipment in line with farm procedures</li> <li>2.6 Follow safety procedures</li> </ol>	<b>TLE_AFARPR9-12-UFT-If-g-5</b>
<ul style="list-style-type: none"> <li>• Clean tools and equipment</li> <li>• Store tools and equipment</li> <li>▪ Routine checkup and maintenance</li> </ul>			<b>LO 3. Perform preventive maintenance</b> <ol style="list-style-type: none"> <li>3.1 Clean immediately tools and equipment after use in line with farm procedures</li> <li>3.2 Store tools and equipment in designated areas in line with farm procedures</li> <li>3.3 Perform routine check-up and maintenance</li> </ol>	<b>TLE_AFARPR9-12UFT-Ih-6</b>

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<b>LESSON 3. PERFORMING ESTIMATION AND BASIC CALCULATION (PEC)</b>				
<ul style="list-style-type: none"> <li>• Job requirements <ul style="list-style-type: none"> <li>- Written</li> <li>- Oral</li> </ul> </li> <li>▪ Estimates of quantities of materials and resources <ul style="list-style-type: none"> <li>- Percentage and ratios</li> <li>- Unit Conversion</li> <li>- Problem solving procedures</li> </ul> </li> <li>• Estimates of time for completing work activity</li> <li>• Report of estimates of materials and resources</li> </ul>			<b>LO1. Perform estimation</b> 1.1 Identify job requirements from written or oral communications 1.2 Estimate quantities of materials and resources required to complete a work task 1.3 Estimate the time needed to complete a work activity 1.4 Make accurate estimate for work completion 1.5 Report estimate of materials and resources to appropriate person	<b>TLE_A FARPR9-12PEC-Ii-7</b>
<ul style="list-style-type: none"> <li>• Calculations to job requirements</li> <li>• Methods of calculation</li> <li>• System and units of measurement</li> <li>• Basic calculations <ul style="list-style-type: none"> <li>- 4 basic operations (MDAS)</li> </ul> </li> <li>• Calculations involving fractions, percentage <ul style="list-style-type: none"> <li>- Self-checking and completing computed numbers.</li> </ul> </li> </ul>			<b>LO2. Perform basic workplace calculation</b> 2.1 Identify calculations to be made according to job requirements 2.2 Identify correct method of calculation 2.3 Ascertain system and units of measurement to be followed 2.4 Perform calculation needed to complete work tasks using the four basic process of addition, division, multiplication and subtraction 2.5 Calculate whole fraction, percentage and mixed when to complete the instructions 2.6 Self-check and complete number computed for alignment	<b>TLE_A FARPR9-12PEC-Ij-8</b>
<b>CORE COMPETENCIES</b>				
<b>LESSON 4: RECEIVING LATEX AND LUMPS (RLL)</b>				
<ul style="list-style-type: none"> <li>• Measurement of latex volume <ul style="list-style-type: none"> <li>- Measuring latex volume</li> </ul> </li> <li>• Latex quality <ul style="list-style-type: none"> <li>- Characteristics of quality latex</li> </ul> </li> </ul>	The learner demonstrates an understanding of underlying theories and principles in receiving latex	The learner independently receives latex and lumps based on industry procedures and specifications.	<b>LO 1. Receive latex.</b> 1.1 Determine and record latex volume in accordance to industry procedure. 1.2 Test and record latex quality in accordance	<b>TLE_A FARPR9-12RLL-IIa-g-9</b>



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<ul style="list-style-type: none"> <li>- Handling latex</li> <li>- Procedure in testing latex quality</li> <li>• Water-latex ratio <ul style="list-style-type: none"> <li>- Dilution standard</li> <li>- Dry rubber content determination</li> <li>- Water – latex ratio composition</li> </ul> </li> <li>• Coagulation of latex <ul style="list-style-type: none"> <li>- Theory of Coagulating</li> <li>- Purpose of coagulation</li> <li>- Process of coagulating</li> <li>- Application of different coagulants</li> <li>- Occupational safety and health standards</li> <li>- Environmental rules and regulations</li> </ul> </li> </ul>	and lumps.		with company specifications. 1.3 Determine required water-latex ratio in accordance with dilution standard. 1.4 Perform coagulating operation in accordance with enterprise procedure.	
<ul style="list-style-type: none"> <li>• Rubber lumps handling <ul style="list-style-type: none"> <li>- Weighing of lumps</li> <li>- Handling of lumps</li> <li>- Measuring devices</li> <li>- Principles of 5S and 3Rs</li> </ul> </li> <li>• Record maintenance/ recordkeeping</li> </ul>			<b>LO 2. Receive lumps.</b> 2.1 Weigh lumps in accordance to enterprise procedures. 2.2 Maintain records in accordance with enterprises procedures.	<b>TLE_AFARPR9-12RLL-IIg-j-10</b>
<b>LESSON 5: PRODUCING BLANKETED RUBBER SHEETS (PBR)</b>				
<ul style="list-style-type: none"> <li>• Machine check and adjustment <ul style="list-style-type: none"> <li>- Specifications, features and functions of the machine</li> <li>- Inspecting machine</li> <li>- Techniques in adjusting roller distance of the machine</li> <li>- Minor troubleshooting</li> </ul> </li> </ul>	The learner demonstrates an understanding of underlying theories and principles in producing blanketed rubber sheets.	The learner independently produces blanketed rubber sheets based on company's standards.	<b>LO 1. Prepare machine for operation.</b> 1.1 Check and adjust roller distance in accordance with the manual. 1.2 Maintain machine in accordance with standard procedures.	<b>TLE_AFARPR9-12PBR-III-IV-11</b>

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<ul style="list-style-type: none"> <li>• Machine maintenance <ul style="list-style-type: none"> <li>- Different machines in rubber processing, parts and functions</li> <li>- Maintenance system of different rubber machineries</li> </ul> </li> </ul>				
<ul style="list-style-type: none"> <li>• Rubber processing machine operation <ul style="list-style-type: none"> <li>- Slab cutter</li> <li>- Pre-breaker</li> <li>- Milling machine</li> <li>- Occupational Safety and Health Standards</li> </ul> </li> <li>• Blanketed rubber sheets blends <ul style="list-style-type: none"> <li>- Quality/characteristics of rubber for blanketing</li> </ul> </li> </ul>			<p><b>LO 2. Perform milling operation.</b></p> <p>2.1 Operate slab cutter machine in accordance with enterprise and occupational health and safety procedures.</p> <p>2.2 Operate pre-breaker machine in accordance with enterprise procedure and occupational health and safety procedures.</p> <p>2.3 Perform milling operation in accordance with enterprise procedures and occupational health and safety procedures.</p>	<b>TLE_A FARPR9-12PBR-I-IIa-h-12</b>
<ul style="list-style-type: none"> <li>• Operation reports <ul style="list-style-type: none"> <li>- Preparation of report</li> <li>- Submission of report to the supervisor</li> </ul> </li> <li>• Production reports</li> </ul>			<p>2.4 Report breakdown in operation in line with enterprise policy.</p> <p>2.5 Prepare production operation report in line with enterprise policy.</p>	<b>TLE_A FARPR9-12PBR-IIh-j-13</b>
<b>LESSON 6: PERFORMING DRYING OPERATION (PDO)</b>				
<ul style="list-style-type: none"> <li>• Techniques in Shredding blanketed sheets</li> <li>• Techniques in Cutting blanketed sheets</li> <li>• Drying shredded rubber <ul style="list-style-type: none"> <li>- Methods of drying rubber</li> <li>- Temperature setting</li> <li>- Procedures after drying</li> <li>- Laboratory testing of dried rubber</li> <li>- Pressing method for crumb</li> </ul> </li> </ul>	The learner demonstrates an understanding of underlying theories and principles in performing drying operation.	The learner independently performs drying operation based on enterprise procedures.	<p><b>LO 1. Dry rubber.</b></p> <p>1.1 Shred blanketed sheets according to the company standard.</p> <p>1.2 Cut blanketed sheets according to the company standard.</p> <p>1.3 Dry shredded rubber (granulated rubber) in accordance with the temperature requirements of raw materials.</p>	<b>TLE_A FARPR9-12PDO-III-IVa-b-14</b>

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
<ul style="list-style-type: none"> <li>rubber</li> <li>- ISO Standards for drying shredded rubber</li> <li>- Occupational safety and health standards</li> </ul>				
<ul style="list-style-type: none"> <li>• Procedure in weighing crumbed rubber <ul style="list-style-type: none"> <li>- Using weighing scale</li> </ul> </li> <li>• Pressing machine operation <ul style="list-style-type: none"> <li>- Procedure in pressing machine</li> <li>- Operating pressing machine</li> <li>- Occupational safety and health standards</li> </ul> </li> <li>• Method of wrapping, labeling and storing dry rubber bales <ul style="list-style-type: none"> <li>-Types of wrapping materials</li> </ul> </li> <li>• Label information <ul style="list-style-type: none"> <li>- Preparation of production report</li> </ul> </li> <li>• Production reports</li> </ul>			<p><b>LO 2. Pack rubber.</b></p> <ul style="list-style-type: none"> <li>2.1 Weigh crumbed rubber in accordance with enterprise procedures.</li> <li>2.2 Press machine and operated in accordance with enterprise procedures.</li> <li>2.3 Perform wrapping and labeling of bales in accordance with enterprise standard.</li> <li>2.4 Prepare production report in accordance with enterprise policy.</li> </ul>	<p><b>TLE_AFARPR9-12PDO-IVb-j-15</b></p>

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RESOURCES			METHODOLOGY	ASSESSMENT METHOD
TOOLS	EQUIPMENT	MATERIALS		
<ul style="list-style-type: none"> <li>• Adjustable wrench</li> <li>• Pipe wrench (24in)</li> <li>• Vise grip</li> <li>• Long nose pliers</li> <li>• Flat nose pliers</li> <li>• Screw driver (Flat)</li> <li>• Screw driver (Philip)</li> <li>• Grease applicator/ Grease gun</li> <li>• Pull-push (steel-tape) rule</li> <li>• Steel hook</li> <li>• Oiler/Oiler can</li> <li>• Latex container/Drum</li> <li>• Shovel</li> <li>• Wheel barrow</li> <li>• Bolo</li> <li>• Sharpening stone</li> <li>• Steel brush</li> <li>• Grinding disc</li> <li>• Cut-off grinding disc</li> </ul>	<ul style="list-style-type: none"> <li>• Weighing scale</li> <li>• Calculator</li> <li>• Slab cutter machine</li> <li>• Pre-breaker machine</li> <li>• Drying machine</li> <li>• Pressing machine</li> <li>• Shredder</li> <li>• Roller machine</li> <li>• Portable electric drill</li> <li>• Portable electric disc grinder</li> <li>• Coagulating tank (1 ton)</li> <li>• PPEs <ul style="list-style-type: none"> <li>- rubber boots</li> <li>- safety goggles/glass</li> <li>- mask or respirator or face shield</li> <li>- gloves</li> <li>- laboratory coat</li> </ul> </li> <li>• Cover all</li> </ul>	<ul style="list-style-type: none"> <li>• Brochures</li> <li>• Visual aids</li> <li>• Reference manuals</li> <li>• Procedural manuals</li> <li>• Instructional supplies and materials (DVD, VCD, PPT, Prints, etc.)</li> <li>• Reference materials/books</li> </ul>	<ul style="list-style-type: none"> <li>• Discussion</li> <li>• Lecture</li> <li>• Demonstration</li> <li>• Simulation</li> <li>• Hands on</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstration and questioning</li> <li>• Direct observation with questioning</li> <li>• Written examination</li> </ul>

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**GLOSSARY**

1. Blanketing (rubber) - Process of flattening the rubber slabs through miller machine.
2. Drying - Mass transfer process consisting of the removal of water or another solvent by evaporation from a solid, semi-solid or liquid. This process is often used as a final production step before selling or packaging products.
3. Latex - As found in nature is a milky fluid found in 10% of all flowering plants (angiosperms). It is a complex emulsion consisting of proteins, alkaloids, starches, sugars, oils, tannins, resins, and gums that coagulates on exposure to air. It is usually exuded after tissue injury. In most plants, latex is white, but some have yellow, orange, or scarlet latex.
4. Milling - Process of breaking a solid material into smaller pieces
5. Standard - Set of criteria and specifications of quality determining the grades, described as product characteristics such as maturity, color, cleanliness, shape, free from decay and blemishes and uniformity of size.
6. Shredding - Cutting off into smaller pieces

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**CODE BOOK LEGEND**

Sample: **TLE\_AFARPR9-12-Ia-1**

LEGEND		SAMPLE	
<b>First Entry</b>	Learning Area and Strand/ Subject or Specialization	Technology and Livelihood Education_ Agri-Fishery Arts Rubber Processing NC II	<b>TLE_AFA RPR 9-12</b>
	Grade Level	9 /10/11/12	
<b>Uppercase Letter/s</b>	Domain/ Content/ Component/ Topic	Applying Safety Measures in Farm Operations	<b>ASM</b>
-			
<b>Roman Numeral</b> <i>*Zero if no specific Quarter</i>	Quarter	First Quarter	<b>I</b>
<b>Lower case letter/s</b> <i>*Put 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	Determine areas of concern for safety measures.	<b>1</b>

DOMAIN / COMPONENT	CODE
Applying Safety Measures in Farm Operations	ASM
Using Farm Tools and Equipment	UFT
Performing Estimation and Basic Calculation	PEC
Receiving Latex and Lumps	RLL
Producing Blanketed Rubber Sheets	PBR
Performing Drying Operation	PDO

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\*\* (updated as of May 2016)**

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

\* 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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**Reference:**

Technical Education and Skills Development Authority-Qualification Standards Office. *Training Regulations for Rubber Processing NC II*. Taguig City, Philippines: TESDA, 2012.