

**K to 12 BASIC EDUCATION CURRICULUM**  
**JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL - TECHNICAL-VOCATIONAL LIVELIHOOD TRACK**  
**INDUSTRIAL ARTS - CONSTRUCTION PAINTING NC II**  
(160 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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**Description:**

This curriculum guide on **Construction Painting** leads to **National Certificate Level II (NC II)**. This course is designed to enhance the knowledge, skills, positive attitude, and work values of a painter in accordance with international standards. It covers core competencies in preparing tools, painting materials and equipment, preparing surface for painting, and performing painting works.

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
<b>Introduction</b> 1. Basic concepts in Construction Painting 2. Relevance of the course 3. Career opportunities	The learner demonstrates an understanding of the basic concepts and underlying theories in Construction Painting.	The learner independently demonstrates common competencies in Construction Painting as prescribed by TESDA Training Regulations.	1. Explain basic concepts in Construction Painting. 2. Discuss the relevance of the course. 3. Explore career opportunities in Construction Painting.	
<b>PERSONAL ENTREPRENEURIAL COMPETENCIES AND SKILLS (PECS)</b>				
1. Assessment of Personal Entrepreneurial Competencies and Skills (PECS) vis-à-vis a practicing entrepreneur/employee 1.1 Characteristics 1.2 Attributes 1.3 Lifestyle 1.4 Skills 1.5 Traits 2. Analysis of one's PECS	The learner demonstrates an 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 Construction Painting.	<b>LO 1. Recognize Personal Entrepreneurial Competencies and Skills (PECS) needed in Construction Painting.</b> 1.1 Assess one's PECS: characteristics, attributes, lifestyle, skills, and traits. 1.2 Assess practitioner's characteristics, attributes, lifestyle, skills, and traits. 1.3 Compare one's PECS with that of a practitioner /entrepreneur.	<b>TLE_ PECS9-12-00-1</b>
<b>ENVIRONMENT AND MARKET (EM)</b>				
1. Key concepts of environment and market 2. Products and services available in the market 3. Differentiation of products and services 4. Customers and their buying habits 5. Competition in the market 6. SWOT Analysis	The learner demonstrates an understanding of the concepts environment and market and how they relate to a career choice in Construction Painting.	The learner independently generates a business idea based on the analysis of environment and market in Construction Painting.	<b>LO 1. Generate a business idea that relates with a career choice in Construction Painting.</b> 1.1 Conduct SWOT analysis. 1.2 Identify the different products/services available in the market. 1.3 Compare different products/services in the carpentry business. 1.4 Determine profile of potential customers. 1.5 Determine profile of potential competitors. 1.6 Generate potential business ideas based on the SWOT analysis.	<b>TLE_ EM9-12-00-1</b>

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<b>COMMON COMPETENCIES</b>				
<b>LESSON 1: PREPARING CONSTRUCTION MATERIALS AND TOOLS (PMT)</b>				
<ul style="list-style-type: none"> <li>Types and uses of construction materials and tools</li> <li>Description of materials and tools</li> <li>Listing of materials as per company standards.</li> </ul>	The learner demonstrates understanding of the basic concepts in preparing construction materials and tools.	The learner independently performs in preparing construction materials and tools.	<b>LO1. Identify materials.</b> 1.1 List materials as per job requirements. 1.2 Conform quantity and description of materials to the job requirements. 1.3 Identify tools and accessories according to job requirements.	<b>TLE_IACPT9-12PMT-Ia-1</b>
<ul style="list-style-type: none"> <li>Different forms</li> <li>Job order slip</li> <li>Tools and materials requisition slip</li> <li>Borrower's slip</li> <li>Requisition procedures</li> </ul>			<b>LO2. Perform requisition of materials.</b> 2.1 Request materials and tools needed according to the list prepared. 2.2 Request is done as per company standard operating procedures (SOP). 2.3 Provide substitute materials and tools without sacrificing cost and quality of work.	<b>TLE_IACPT9-12PMT-Ia-2</b>
<ul style="list-style-type: none"> <li>Procedures in receiving tools and materials</li> <li>Proper inspection of tools and materials received</li> <li>Proper handling of tools and materials.</li> </ul>			<b>LO3. Receive and inspect materials.</b> 3.1 Inspect materials and tools issued as per quantity and specification. 3.2 Check tools, accessories and materials for damages according to enterprise procedures. 3.3 Set aside materials and tools to appropriate location nearest to the workplace.	<b>TLE_IACPT9-12PMT-Ib-3</b>
<b>LESSON 2: OBSERVING PROCEDURES, SPECIFICATIONS AND MANUALS OF INSTRUCTION (OSM)</b>				
<ul style="list-style-type: none"> <li>Types of manuals used in construction sector</li> <li>Different types of symbols</li> <li>Accessing information and data</li> </ul>	The learner demonstrates understanding of the basic concepts in observing procedures, specification and manuals of instruction.	The learner independently performs in observing procedures, specification and manuals of instruction.	<b>LO1. Identify and access specification/ manuals.</b> 1.1 Identify appropriate manuals and accessed as per job requirements. 1.2 Check version and date of manual to ensure that correct specification and procedures are identified.	<b>TLE_IACPT9-12OSM-Ib-4</b>

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<ul style="list-style-type: none"> <li>Manual/specification application</li> <li>Interpreting specifications</li> </ul>			<p><b>LO2. Interpret manuals.</b></p> <p>2.1 Locate relevant sections, chapters of specifications/ manuals in relation to the work to be conducted.</p> <p>2.2 Interpret information and procedure in the manual in accordance with industry practices.</p>	<p><b>TLE_IACPT9-12OSM-Ic-5</b></p>
<ul style="list-style-type: none"> <li>Manual/specification application</li> <li>Interpreting specifications</li> </ul>			<p><b>LO3. Apply information in manual.</b></p> <p>3.1 Interpret manual according to job requirements.</p> <p>3.2 Identify work steps correctly in accordance with manufacturer's specification.</p> <p>3.3 Apply manual data according to the given task.</p> <p>3.4 Interpret all correct sequencing and adjustments in accordance with information contained on the manual or specifications.</p>	<p><b>TLE_IACPT9-12OSM-Ic-6</b></p>
<ul style="list-style-type: none"> <li>Manual handling</li> </ul>			<p><b>LO4. Store manuals.</b></p> <p>4.1 Store manual or specification appropriately to prevent damage, ready access and updating of information when required in accordance with company requirements.</p>	<p><b>TLE_IACPT9-12OSM-Id-7</b></p>
<b>LESSON 3: INTERPRETING TECHNICAL DRAWINGS AND PLANS (ITD)</b>				
<ul style="list-style-type: none"> <li>Drawing symbols and signs</li> <li>Trade mathematics</li> </ul>	<p>The learner demonstrates understanding of the basic concepts in interpreting technical drawing and plans construction materials and tools.</p>	<p>The learner independently performs in interpreting technical drawing and plans construction materials and tools.</p>	<p><b>LO1. Analyze signs, symbols and data.</b></p> <p>1.1 Obtained technical plans according to job requirements.</p> <p>1.2 Identify signs, symbols and data according to job specifications.</p> <p>1.3 Determine signs symbols and data according to classification or as appropriate in drawing.</p>	<p><b>TLE_IACPT9-12ITD-Id-8</b></p>

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<ul style="list-style-type: none"> <li>• Basic technical drawing</li> <li>• Technical plans and schematic diagram</li> <li>• Symbols and abbreviations</li> </ul>			<p><b>LO2. Interpret technical drawings and plans.</b></p> <p>2.1 Identify necessary tools, materials and equipment according to the plan.</p> <p>2.2 List supplies and materials according to Specifications.</p> <p>2.3 Recognize components, assemblies or objects as required.</p> <p>2.4 Identify dimensions as appropriate to the plan.</p> <p>2.5 Match specification details with existing/available resources and in line with job requirements.</p> <p>2.6 Draw work plan following the specifications.</p>	<p><b>TLE_IACPT9-12ITD-Id-e-9</b></p>
<ul style="list-style-type: none"> <li>• Basic technical drawing</li> <li>• Symbols and abbreviations</li> </ul>			<p><b>LO3. Apply freehand sketching</b></p> <p>3.1 Produce applicable, correct freehand sketching in accordance with the job requirement.</p>	<p><b>TLE_IACPT9-12ITD-Ie-10</b></p>
<b>LESSON 4: PERFORMING MENSURATION AND CALCULATIONS (PMC)</b>				
<ul style="list-style-type: none"> <li>• Visualizing objects and shapes specifically geometric shapes.</li> <li>• Interpreting Formulas for volume, areas, and perimeters of plane and geometric figures.</li> <li>• Measuring Instruments/Measuring Tools</li> <li>• Proper handling of measuring instruments</li> </ul>	<p>The learner demonstrates understanding of the basic concepts in performing mensuration and calculation.</p>	<p>The learner independently performs mensuration and calculation.</p>	<p><b>LO1. Select measuring instruments.</b></p> <p>1.1 Identify object or component to be measured, classified and interpreted according to the appropriate regular geometric shape.</p> <p>1.2 Select and Identify measuring tools as per object to be measured or job requirements.</p> <p>1.3 Obtain correct specifications from relevant sources.</p> <p>1.4 Select appropriate measuring instruments according to job requirements.</p> <p>1.5 Use alternative measuring tools without sacrificing cost and quality of work.</p> <p>1.6 Identify and Convert systems of measurement according to job requirements/ISO.</p> <p>1.7 Measure work pieces according to job requirements.</p>	<p><b>TLE_IAPT9-12PMC-If-11</b></p>



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<ul style="list-style-type: none"> <li>• Trade mathematics/ mensuration</li> <li>• Four fundamental operations</li> <li>• Kinds of measurement</li> <li>• Dimensions</li> <li>• Ratio and proportion</li> <li>• Trigonometric functions</li> <li>• Algebraic equations</li> <li>• Fractions, percentage and decimals</li> <li>• Conversion</li> </ul>			<p><b>LO2. Carry out measurements and calculations</b></p> <p>2.1 Obtain accurate measurements according to job requirements.</p> <p>2.2 Use alternative measuring tools without sacrificing cost and quality of work</p> <p>2.3 Perform Calculation needed to complete work tasks using the four basic process of addition (+), subtraction (-), multiplication (x) and division (/) including but not limited to: trigonometric functions, algebraic computations.</p> <p>2.4 Use calculations involving fractions, percentages and mixed numbers to complete workplace tasks.</p> <p>2.5 Self-check and correct numerical computation for accuracy.</p> <p>2.6 Read instruments to the limit of accuracy of the tool.</p>	<p><b>TLE_IACPT9-12PMC-If-i-12</b></p>
<b>LESSON 5: MAINTAINING TOOLS AND EQUIPMENT (MTE)</b>				
<ul style="list-style-type: none"> <li>• Types of tools and equipment</li> <li>• Classification of functional and non-functional tools</li> <li>• Uses of PPE</li> </ul>	<p>The learner demonstrates understanding of the basic concepts in maintaining tools and equipment.</p>	<p>The learner independently performs in maintaining tools and equipment.</p>	<p><b>LO1. Check condition of tools and equipment.</b></p> <p>1.1 Identify materials, tools and equipment according to classification and job requirements.</p> <p>1.2 Segregate and label non-functional tools and equipment according to classification.</p> <p>1.3 Observe safety of tools and equipment in accordance with manufacturer's instructions.</p> <p>1.4 Check condition of PPE in accordance with manufacturer's instructions.</p>	<p><b>TLE_IACPT9-12MTE-Ii-13</b></p>
<ul style="list-style-type: none"> <li>• Types uses of lubricants</li> <li>• Types and uses of cleaning materials/solvent</li> <li>• Types and uses of measuring instruments and equipment.</li> <li>• Preventive maintenance</li> </ul>			<p><b>LO2. Perform basic preventive maintenance.</b></p> <p>2.1 Identify appropriate lubricants according to types of equipment.</p> <p>2.2 Lubricate tools and equipment according to preventive maintenance schedule or manufacturer's specifications.</p>	<p><b>LE_IACPT9-12MTE-Ii-j-14</b></p>

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techniques and procedures. <ul style="list-style-type: none"> <li>• OSHC workplace regulations</li> </ul>			2.3 Check and calibrate measuring instruments in accordance with manufacturer's instructions. 2.4 Clean and Lubricate tools are according to standard procedures. 2.5 Inspect and replace defective instruments, equipment and accessories according to manufacturer's specifications. 2.6 Inspect, repair and replace tools after use. 2.7 Clean and keep work place in safe state in line with OSHA regulations.	
<ul style="list-style-type: none"> <li>• Inventory of tools and equipment</li> <li>• Tools and equipment handling</li> <li>• Tool safe-keeping/storage</li> </ul>			<b>LO3. Store tools and equipment</b> 3.1 Conduct and record inventory of tools, instruments and equipment as per company practices. 3.2 Store tools and equipment safely in appropriate locations in accordance with manufacturer's specifications or company procedures.	<b>TLE_IACPT9-12MTE-Ij-15</b>
<b>CORE COMPETENCIES</b>				
<b>LESSON 6: PREPARING TOOLS, PAINTING MATERIALS AND EQUIPMENT (PME)</b>				
<ul style="list-style-type: none"> <li>• Basic components of paints</li> <li>• Types of paints</li> <li>• Properties of paint, solvent and abrasives used in painting and selecting appropriate solvent for the paint</li> <li>• System of coating according to application and specification</li> <li>• Types of substrates</li> <li>• Types of substrate contaminants and their effects</li> <li>• Film formation</li> <li>• Trouble shooting</li> <li>• Calculation of paint materials</li> <li>• Selecting appropriate abrasive for the job</li> </ul>	The learner demonstrates an understanding of the basic concepts and underlying principle in preparing tools, painting materials and equipment.	The learner independently performs preparation of tools, painting materials and equipment based on industry standards.	<b>LO 1. Prepare paint and painting materials.</b> 1.1 Identify types of paint appropriate to the surface. 1.2 Select types of paint appropriate for the application. 1.3 Identify appropriate solvents according to types of paints. 1.4 Identify the functions of the components of paints that can be applied to various substrates. 1.5 Identify the features and basic chemistry of substrates to be painted. 1.6 Determine how various paints develop their films. 1.7 Identify the common causes of paint failures, remedies and symptoms of failures.	<b>TLE_IACPT9-12PME-IIa-c-16</b>

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<ul style="list-style-type: none"> <li>• Selecting paint for a painting requirement</li> <li>• Preparing paint</li> <li>• Mixing of paint</li> <li>• Types of fire extinguishers</li> <li>• Fire hazard and safety involving combustible materials</li> <li>• Types of painting tools</li> <li>• PPE for painting works</li> </ul>			1.8 Determine areas to be painted according to job requirements. 1.9 Calculate paints and other paint materials according to job requirement and manufacturer's specification. 1.10 Acquire paint in accordance with the job requirement and standard procedure. 1.11 Check paint quality such as viscosity and color specification. 1.12 Materials are properly staged and stored in line with SOP. 1.13 Observe safety practices. 1.14 Identify common painting tools and special tools used in painting.	
<ul style="list-style-type: none"> <li>• Tools and equipment suited for different method of paint application</li> <li>• Proper handling of tools and equipment</li> <li>• Filling-up of forms</li> <li>• PPE for painting works</li> <li>• Erecting and dismantling of scaffolds and ladder</li> </ul>			<b>LO 2. Prepare painting tools and equipment.</b> 2.1 Identify appropriate painting tools and equipment according to the job requirement. 2.2 Select appropriate painting tools and equipment according to the application. 2.3 Identify different types of forms used in workplace communication and quality assurance system. 2.4 Prepare personal protective equipment according to job requirement. 2.5 Inspect painting tools and equipment if they are in good working condition. 2.6 Prepare scaffoldings and ladders.	<b>TLE_IACPT9-12PME-IIc-e-17</b>
<b>LESSON 7: PREPARING SURFACE FOR PAINTING (PSP)</b>				
<ul style="list-style-type: none"> <li>• Types of contaminants</li> <li>• Identifying wood defects</li> <li>• Determining the moisture content of wood</li> <li>• Ways of preparing wooden surfaces for painting</li> <li>• Painting materials, tools and</li> </ul>	The learner demonstrates an understanding of the basic concepts and underlying principles in preparing surface for painting.	The learner independently performs preparation of surface for painting based on industry standards.	<b>LO 1. Inspect and clean wooden surface.</b> 1.1 Check surface for contaminants. 1.2 Identify surface for contaminants. 1.3 Check surfaces for moisture. 1.4 Check surface for defects and imperfection. 1.5 Identify surface preparation appropriate to substrate or surface. 1.6 Comply with safety regulations.	<b>TLE_IACPT9-12PSP-IIe-h-18</b>

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(160 hours)

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
<p>equipment needed for preparing wood surfaces</p> <ul style="list-style-type: none"> <li>• Procedure in preparing wooden surfaces</li> <li>• Safety regulations</li> </ul>			<p>1.7 Observe safety regulations.  1.8 Identify appropriate tools according to job requirements.  1.9 Select appropriate tools according to job requirements.  1.10 Utilize materials, tools and equipment in line with job requirements.  1.11 Clean surfaces from contaminants.  1.12 Level surfaces until fine and smooth.  1.13 Sander surfaces until fine and smooth.  1.14 Keep work site clean and in safe-state as per OHS regulations.</p>	
<ul style="list-style-type: none"> <li>• Different types of steel contaminants</li> <li>• Cleaning tools, materials and equipment for steel surface</li> <li>• Different coating system</li> <li>• Proper handling of tools</li> <li>• Causes and effects of contaminants to steel to be painted</li> <li>• Cleaning steel surfaces</li> </ul>			<p><b>LO 2. Inspect and clean steel surface.</b>  2.1 Inspect surface in line with job requirements.  2.2 Check area and surface for contaminants.  2.3 Use appropriate personal protective equipment according to job requirements.  2.4 Demonstrate compliance with safety regulations applicable to work operations.  2.5 Prepare materials, tools and equipment for operation.  2.6 Clean traces of oil and other contaminants from surfaces.  2.7 Clean steel surfaces according to standard procedure.  2.8 Remove welding scales/splatters and excess rust.  2.9 Observe proper use of tools and equipment in line with job requirements  2.10 Keep worksite clean and in safe state as per OHS regulations.</p>	<p><b>TLE_IACPT9-12PSP-IIh-j-IIIa-b-19</b></p>
<ul style="list-style-type: none"> <li>• Identify different contaminants</li> <li>• Methods and procedures in determining moisture /acid content in concrete surfaces</li> <li>• Procedures in checking conditions</li> </ul>			<p><b>LO 3. Inspect and clean concrete surface.</b>  3.1 Prepare materials and tools in line with job requirement.  3.2 Check concrete surface in line with job requirement and SOPs.</p>	<p><b>TLE_IACPT9-12PSP-IIIb-f-20</b></p>

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
of tools and materials needed in inspecting concrete surfaces <ul style="list-style-type: none"> <li>• Safety and good housekeeping</li> <li>• Types of chemical reaction</li> <li>• Neutralization of acid/base</li> <li>• Uses of industrial acid</li> <li>• Ratio and proportion</li> <li>• Procedure in cleaning concrete surfaces before painting</li> <li>• Procedure in preparing concrete surfaces for painting</li> <li>• Preparing job accomplishment report</li> </ul>			3.3 Check area against paint schedule and plan. 3.4 Test concrete surface for its alkalinity in accordance with the job requirements. 3.5 Check materials and tools if they are in good working condition. 3.6 Practice safety precautions in actual work place. 3.7 Clean concrete surface according to standard operating procedures. 3.8 Apply concrete surface with neutralizer in line with job requirements. 3.9 Use PPE strictly in accordance with job requirement. 3.10 Keep worksite clean and safe-state in accordance with OHS regulations.	
<b>LESSON 8: PERFORMING PAINTING WORK (PPW)</b>				
<ul style="list-style-type: none"> <li>• Plan interpretation</li> <li>• Use of tools</li> <li>• Storing materials</li> <li>• Paints and painting materials</li> <li>• Paint preparation and mixing</li> <li>• Apply simple finish, special finish, faux finish, textured finish, and decorative finish</li> </ul>	The learner demonstrates an understanding of the basic concepts and underlying principles in painting work.	The learner independently performs painting work based on industry standards.	<b>LO 1. Identify and prepare the needed materials, tools and surface area.</b> 1.1 Identify the surface to be painted as per plan. 1.2 Select and prepare tools according to job requirements. 1.3 Properly stage materials according to SOPs. 1.4 Prepare paints according to desired workability or consistency.	<b>TLE_IACPT9-12PPW-IIIIf-h-21</b>
<ul style="list-style-type: none"> <li>• Applying base coat for regular paints, special finish, and decorative finish</li> <li>• Paint problems causes and solutions</li> <li>• Trouble shooting chart</li> </ul>			<b>LO 2. Apply base coating.</b> 2.1 Apply base coats in accordance with the job requirements. 2.2 Check painted surfaces for evenness of coating and imperfection in accordance with the standard procedure. 2.3 Remedy/correct imperfections or unevenness of paint in accordance with standard procedure.	<b>TLE_IACPT9-12PPW-IIIIh-j-IVa-d-22</b>

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
<ul style="list-style-type: none"> <li>• Applying intermediate and top coat</li> <li>• Proper handling of painting tools</li> <li>• Repair/retouch finished painted substrates</li> </ul>			<p><b>LO 3. Apply intermediate and top coating.</b></p> <p>3.1 Apply intermediate coats in line with the job requirements.</p> <p>3.2 Observe proper tool usage in line with manufacturer’s specifications.</p> <p>3.3 Select and use appropriate PPE in line with job requirements.</p> <p>3.4 Demonstrate safety regulations applicable with worksite operations.</p> <p>3.5 Comply with safety regulations applicable with worksite operations.</p> <p>3.6 Repair/Retouch all paint imperfections due to painting process.</p>	<p><b>TLE_IACPT9-12PPW-IIIh-j-IVd-j-23</b></p>

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RESOURCES			METHODOLOGY	ASSESSMENT METHOD
TOOLS	EQUIPMENT	MATERIALS		
<ul style="list-style-type: none"> <li>• Base jack</li> <li>• Belt/safety harness</li> <li>• Black plane</li> <li>• Calculator</li> <li>• Chipping hammer</li> <li>• Claw hammer</li> <li>• Cold chisel</li> <li>• Cross cut saw</li> <li>• Dust masks/Respirator</li> <li>• Gloves</li> <li>• Goggles</li> <li>• Hard hat</li> <li>• Hose couplings and fittings</li> <li>• Jack plane</li> <li>• Lumber sill</li> <li>• Nylon/paint brush</li> <li>• Overall coat</li> <li>• Paint roller/pan</li> <li>• Platforms</li> <li>• Pull push rule/tape</li> <li>• Putty knife</li> <li>• Putty pallet</li> <li>• Ripping bar/Crow bar</li> <li>• Rope</li> <li>• Safety shoes</li> <li>• Scraper</li> <li>• Screw driver set</li> <li>• Smooth plane</li> <li>• Spray gun cleaning kit</li> <li>• Steel brush or cap brush</li> <li>• Wrecking bar</li> <li>• Wrench/spanner</li> <li>• X-brace</li> </ul>	<ul style="list-style-type: none"> <li>• Compressor</li> <li>• Electrical drill</li> <li>• Ladder</li> <li>• Pulley</li> <li>• Railing system</li> <li>• Sander/Sanding Machine</li> <li>• Scaffold H frame</li> <li>• Scaffold tubular</li> <li>• Spray gun</li> <li>• Platform</li> </ul>	<ul style="list-style-type: none"> <li>• Catalyst</li> <li>• Tinting color</li> <li>• Paint (water base, oil base, solvent base)</li> <li>• Nail set</li> <li>• Sand paper</li> <li>• Neutralizer</li> <li>• Alkaline remover</li> <li>• Patching compound/Kalsomine</li> <li>• Litmus paper or PH paper</li> <li>• Water</li> <li>• Paint remover</li> <li>• Rust converter</li> <li>• Soaped water</li> <li>• Paint thinner</li> <li>• Lacquer thinner</li> <li>• Solvent</li> <li>• Floor sanding paper</li> <li>• Concrete sealer</li> <li>• Rags</li> <li>• Masking tape</li> <li>• Lumber</li> <li>• Concrete nail</li> <li>• Mixing stick</li> <li>• Mixing can</li> <li>• Measuring cups</li> <li>• Extension rod</li> </ul> <p><b>Learning Materials</b></p> <ul style="list-style-type: none"> <li>• Books in painting</li> <li>• Color guide</li> <li>• Company forms</li> <li>• Erecting scaffolding</li> <li>• Interactive instructional modules</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstration</li> <li>• Distance Learning</li> <li>• Dual training</li> <li>• E-learning</li> <li>• Film viewing</li> <li>• Modular</li> <li>• Self-paced learning</li> <li>• Interview</li> <li>• Audio-Visual</li> <li>• Discussion</li> <li>• Practical exercise</li> <li>• Simulation</li> <li>• Lecture</li> <li>• Interaction</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstration</li> <li>• Questioning</li> <li>• Interview</li> <li>• Direct observation</li> <li>• Practical exam</li> <li>• Written exam</li> </ul>

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RESOURCES			METHODOLOGY	ASSESSMENT METHOD
TOOLS	EQUIPMENT	MATERIALS		
		<ul style="list-style-type: none"> <li>• Learner’s Guide</li> <li>• Paint schedule and plans</li> <li>• Teacher’s Guide</li> <li>• Working drawing</li> </ul> <p><b>Personal Protective Equipment</b></p> <ul style="list-style-type: none"> <li>• Aprons/Coveralls</li> <li>• Body harness/Safety belt</li> <li>• Dust mask</li> <li>• Ear muff/plug</li> <li>• Gloves</li> <li>• Goggles</li> <li>• Hard hat</li> <li>• Respirator</li> <li>• Safety shoes</li> <li>• Working clothes</li> </ul>		



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**GLOSSARY**

- |     |   |   |  |
|-----|---|---|--|
| 1.  | Alkalinity                              | - | Measurement of the concentration of base or amount of free base present.   |
| 2.  | Certification                           | - | process of verifying and validating competencies of a person through assessment.   |
| 3.  | Competency                              | - | Application of knowledge, skills and attitudes to perform work activities to the standard expected in the workplace.   |
| 4.  | Element                                 | - | Building blocks of a unit of competency. It describes in outcome terms the functions that a person who works in a particular area of work is able to perform.  |
| 5.  | Evidence Guide                          | - | Guide for assessment that provides information on critical aspects of competency, underpinning knowledge, underpinning skills, resource implications, context of assessment and assessment method.   |
| 6.  | Intermediate coat                       | - | Middle layer of coating system, bond between primer and topcoat.   |
| 7.  | Level                                   | - | Category following the level of difficulty and complexity of skills and knowledge required to do the job.  |
| 8.  | Neutralizer                             | - | Substance that makes or reacts with a substrate (object to be coated) to render it neutral.  |
| 9.  | Paint                                   | - | Refers in general to all types of protective coatings, and in particular to a mixture containing a pigment and vehicle, which can be spread to a thin film on interior or exterior surfaces.   |
| 10. | Philippine TVET Qualification Framework | - | A comprehensive, nationally consistent framework for qualifications in the TVET sector. It also provides the parameter for the integration of learning and assessment in the middle skills development.  |
| 11. | Primer                                  | - | First or primary coating.  |
| 12. | Primer - surface/sealer                 | - | Intermediate or middle coating used after application of putty.  |
| 13. | Qualification                           | - | National certificate issued by the TESDA or its accredited industry organizations in recognition that a person has achieved competencies relevant to a trade or industry.  |
| 14. | Range of – Variable                     | - | Describes the circumstances or context in which the work is to be performed.   |
| 15. | Solvent                                 | - | Product contained in thinner/reducer.  |
| 16. | Solvent-based                           | - | Coating that uses as its solvent.  |
| 17. | Structural steep painting               | - | Application of paint on structural steel surfaces for one or more several reasons: preservation, sanitation, decoration, beauty, economy, and improved lighting effect, improved heating effect, improved working conditions, distribution, camouflage and identification. |
| 18. | Substrate                               | - | Type of surface to be painted.   |
| 19. | Topcoat                                 | - | Fast or outermost layer of a coating system.   |
| 20. | Stock                                   | - | Product or material kept in storage until needed for use or transferred to some ultimate point for use.  |
| 21. | Unit of Competency                      | - | Discrete aspect of work, which would normally be performed by only one person.   |
| 22. | Viscosity                               | - | Density of paint before and after mixing thinner.  |
| 23. | Water-based                             | - | Coating that uses water as its solvent.  |
| 24. | Wall                                    | - | Vertical structure or member forming an enclosure or defining  |

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**CODE BOOK LEGEND**  
Sample: TLE\_IACPT9-12PMT-Ia-1

LEGEND		SAMPLE		DOMAIN / COMPONENT	CODE
<b>First Entry</b>	Learning Area and Strand/ Subject or Specialization	Technology and Livelihood Education_ Industrial Arts Construction Painting NC II	<b>TLE_IACPT 9-12</b>	Preparing Construction Materials and Tools	PMT
	Grade Level	9/10/11/12		Observing Procedures, Specifications and Manuals of Instruction	OSM
<b>Uppercase Letter/s</b>	Domain/ Content/ Component/ Topic	Preparing Construction Materials and Tools	<b>PMT</b>	Interpreting Technical Drawings and Plans	ITD
			-	Performing Mensuration and Calculations	PMC
<b>Roman Numeral</b> <i>*Zero if no specific Quarter</i>	Quarter	First Quarter	<b>I</b>	Maintaining tools and Equipment	MTE
<b>Lowercase 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>	Preparing Tools, Painting Materials and Equipment	PME
			-	Preparing Surface for Painting	PSP
<b>Arabic Number</b>	Competency	Identify materials.	<b>1</b>	Performing Painting Work	PPW

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 Industrial Arts specialization and those that have pre-requisites. Curriculum Maps may be modified according to specializations offered by a school.

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GRADE 7/8 (EXPLORATORY)		SAMPLE INDUSTRIAL ARTS CURRICULUM MAP** (as of May 2016)			
		GRADES 9-12			
EXPLORATORY		Automotive Servicing (NC I)* <small>updated based on TESDA Training Regulations published December</small>			8 sems
		*Automotive Servicing (NC II)			8 sems
		Motorcycle/Small Engine Servicing (NC II) 4 sems	Driving (NC II) 2 sems		
		Electronic Products Assembly and Servicing (NC II)* <small>updated based on TESDA Training Regulations published December 28, 2013</small>			8 sems
		*Mechatronics Servicing (NC II)			4 sems
		*Instrumentation Control and Servicing (NC II)			4 sems
		Electrical Installation and Maintenance (NC II)			8 sems
		*Electrical Power Line Distribution Line Construction (NC II)			4 sems
		*Transmission Line Installation and Maintenance (NC II)			8 sems
		Machining (NC I)			8 sems
		*Machining (NC II)			8 sems
		Plumbing (NC I) 4 sems	*Plumbing (NC II)		4 sems
		Domestic Refrigeration and Air-conditioning Servicing (NC II)			8 sems
		*Refrigeration and Air-conditioning Servicing (PACU/CRE) (NC III)			8 sems
		Shielded Metal Arc Welding (NC I) 4 sems	*Shielded Metal Arc Welding (NC II)		4 sems
		*Gas Metal Arc Welding (GMAW) (NC II)			4 sems
		*Gas Tungsten Arc Welding (GTAW) (NC II)			4 sems
		Carpentry (NC II)			8 sems
		*Carpentry (NC III) 4 sems	Construction Painting (NC II) 2 sems		
		Furniture Making (Finishing) (NC II)			8 sems
	Masonry (NC II) 4 sems	Tile Setting (NC II)		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.

Pre-requisites of the subjects to the right should 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 Construction Painting NC II*. Taguig City, Philippines: TESDA, 2015.