

**K to 12 BASIC EDUCATION CURRICULUM**  
**JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL - TECHNICAL-VOCATIONAL LIVELIHOOD TRACK**  
**INDUSTRIAL ARTS - CARPENTRY NC III**  
(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)<br><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<br>Animal Production (Ruminants) (NC II) or<br>Animal Production (Swine) (NC II) |
| 5.  | Animal Production (Poultry-Chicken) (NC II)<br><i>updated based on TESDA Training Regulations published December 28, 2013</i> | 320 hours              |   |
| 6.  | Animal Production (Large Ruminants) (NC II)<br><i>updated based on TESDA Training Regulations published December 28, 2013</i> | 320 hours              |   |
| 7.  | Animal Production (Swine) (NC II)<br><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)<br><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)<br><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)<br><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)<br><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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**INDUSTRIAL ARTS - CARPENTRY NC III**  
(320 hours)

**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)<br><i>updated based on TESDA Training Regulations published December 28, 2013</i> | 320 hours              |                                    |
| 4.  | Computer Programming (Java) (NC III)<br><i>updated based on TESDA Training Regulations published December 28, 2013</i>            | 320 hours              |                                    |
| 5.  | Computer Programming (Oracle Database) (NC III)<br><i>updated based on TESDA Training Regulations published December 28, 2013</i> | 320 hours              |                                    |
| 6.  | Computer Systems Servicing (NC II)<br><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<br>(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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Prerequisite: Carpentry NC II

**Course Description:**

This is a specialized course which leads to a **Carpentry National Certificate Level III**. It covers six (6) basic competencies, five (5) common competencies and four (4) core competencies that a student should possess, such as 1) leading workplace communication, 2) leading small team, 3) developing and practicing negotiation skills 4) solving workplace problem related to work activities, 5) using mathematical concepts and techniques, 6) using relevant technologies, 7) performing mensuration and calculations 8) interpreting technical drawing and plans, 9) preparing construction materials and tools 10) observing procedures, specifications and manual of instructions 11) maintain tools and equipment 12) installing architectural ceiling, walls/sheats/ panels and floor finishes, 13) fabricating/installing door/window jambs and panels, 14) installing stair components and/or pre-fabricated stairs assembly, and 15) installing built-in/pre-fabricated cabinets with a total of forty three (43) learning outcomes.

The preliminaries of this specialized course include the following: (1) discussion on the core concept in Carpentry NC III, and (2) analysis on the practices and observation of key concepts relative to the course.

| CONTENT  | CONTENT STANDARD  | PERFORMANCE STANDARD  | LEARNING COMPETENCIES  | CODE                      |
|--|---|---|--|---------------------------|
| <b>Introduction</b><br>1. Basic concepts in Carpentry<br>2. Relevance of the course<br>3. Career opportunities   | The learner demonstrates an understanding of the basic concepts and underlying theories in Carpentry.       | The learner independently demonstrates common competencies in Carpentry as prescribed by TESDA Training Regulations.  | 1. Explain basic concepts in Carpentry.<br>2. Discuss the relevance of the course.<br>3. Explore career opportunities in Carpentry.  |                           |
| <b>PERSONAL ENTREPRENEURIAL COMPETENCIES AND SKILLS (PECS)</b>   |   |   |  |                           |
| 1. Assessment of Personal Entrepreneurial Competencies and Skills (PECS) vis-à-vis a practicing entrepreneur/employee<br>1.1 Characteristics<br>1.2 Attributes<br>1.3 Lifestyle<br>1.4 Skills<br>1.5 Traits<br>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 Carpentry. | <b>LO 1. Recognize Personal Entrepreneurial Competencies and Skills (PECS) needed in Carpentry NC III.</b><br>1.1 Assess one's PECS: characteristics, attributes, lifestyle, skills, and traits.<br>1.2 Assess practitioner's characteristics, attributes, lifestyle, skills, and traits.<br>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 MARKET (EM)</b>   |   |   |   |                              |
| <ol style="list-style-type: none"> <li>1. Key concepts of Environment and Market</li> <li>2. Products and 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 an understanding of the concepts environment and market and how they relate to a career choice in Carpentry. | The learner independently generates a business idea based on the analysis of environment and market in Carpentry. | <b>LO 1. Generate a business idea that relates with a career choice in carpentry.</b><br><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 the carpentry business.</li> <li>1.4 Determine profile of potential customers.</li> <li>1.5 Determine profile of potential competitors.</li> <li>1.6 Generate potential business ideas based on the SWOT analysis.</li> </ol> | <b>TLE_EM9-12-00-1</b>       |
| <b>BASIC COMPETENCIES</b>  |   |   |   |                              |
| <b>LESSON 1: LEADING WORKPLACE COMMUNICATION (LWC)</b>   |   |   |   |                              |
| <ul style="list-style-type: none"> <li>• Method of communication</li> <li>• Communication skills</li> <li>• Communication tools</li> <li>• Questioning techniques</li> </ul>   | The learner demonstrates understanding of concepts in leading workplace communication.  | The learner independently performs leading workplace communication.   | <b>LO 1. Lead workplace communication.</b><br><ol style="list-style-type: none"> <li>1.1 Select appropriate communication method.</li> <li>1.2 Communicate multiple operations involving several topic areas.</li> <li>1.3 Use question to gain extra information.</li> <li>1.4 Identify correct sources of information.</li> <li>1.5 Select and sequence information correctly when required.</li> <li>1.6 Maintain verbal and written report in both familiar and unfamiliar situation.</li> </ol>                        | <b>TLE_IACRP9-12LWC-Ia-1</b> |
| <ul style="list-style-type: none"> <li>• Method/techniques of discussion</li> <li>• How to lead discussion</li> <li>• How to solicit response</li> </ul>   |   |   | <b>LO 2. Lead workplace discussion.</b><br><ol style="list-style-type: none"> <li>2.1 Seek response to workplace issues.</li> <li>2.2 Provide sought response to workplace issues.</li> <li>2.3 Made constructive contributions to workplace discussion on such issues as production, quality and safety.</li> <li>2.4 Communicate goals and aims of actions undertaken in the workplace.</li> </ol>  | <b>TLE_IACRP9-12LWC-Ia-2</b> |

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|--|--|--|---|-------------------------------------|
| <ul style="list-style-type: none"> <li>• Identify problems and issues</li> <li>• Organizing information on problem and issues</li> <li>• Relating problems and issues</li> <li>• Communication barriers affecting workplace discussions</li> </ul>   |  |  | <p><b>LO 3. Identify and communicate issues arising in the workplace.</b></p> <p>3.1 Identify issues and problems as they arise.</p> <p>3.2 Organize coherently information regarding problems and issues to ensure clear and effective communication.</p> <p>3.3 Initiate dialog with appropriate personnel.</p> <p>3.4 Address communication problems and issues as they arise.</p> | <p><b>TLE_IACRP9-12LWC-Ia-3</b></p> |
| <b>LESSON 2: LEADING SMALL TEAM (LST)</b>  |  |  |   |                                     |
| <ul style="list-style-type: none"> <li>• Communication skills required for leading small team</li> <li>• Skills and techniques in promoting team building</li> <li>• Negotiating skills</li> <li>• Up to date dissemination of instruction and requirements to members</li> <li>• Art of listening and treating individual team members concern</li> </ul> | <p>The learner demonstrates understanding of concepts in leading small team.</p> | <p>The learner independently performs in leading small team.</p> | <p><b>LO 1. Provide team leadership.</b></p> <p>1.1 Identify and prescribe work requirements to members.</p> <p>1.2 Disseminate properly the reasons for instructions and requirements to team members.</p> <p>1.3 Recognize, discuss and deal accordingly team members questions, problems, and concerns.</p>  | <p><b>TLE_IACRP9-12LST-Ia-4</b></p> |
| <ul style="list-style-type: none"> <li>• Duties and responsibilities of each team member</li> <li>• Skills in identifying individual skills, knowledge and attitude as basis for allocating responsibilities</li> <li>• Knowledge in identifying each team member duties and responsibilities</li> </ul>   |  |  | <p><b>LO 2. Assign responsibilities among members.</b></p> <p>2.1 Allocate duties and responsibilities in respect to the skills, knowledge and attitudes of every team member.</p> <p>2.2 Allocate duties having regard to individual preference, domestic and personal considerations.</p> <p>2.3 Identify and define properly the duties and responsibilities of each member.</p>   | <p><b>TLE_IACRP9-12LST-Ib-5</b></p> |

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|---|--|---|--|-------------------------------------|
| <ul style="list-style-type: none"> <li>• Knowledge and skills in setting individual performance target/expectation</li> <li>• Team members duties and responsibilities</li> <li>• Employee policies and procedures</li> <li>• Defining performance expectations criteria</li> </ul>   |  |   | <p><b>LO 3. Set performance expectation for team members.</b></p> <p>3.1 Establish performance expectations based on client needs and according to assigned requirements.</p> <p>3.2 Base performance expectations on individual team member’s duties and responsibilities.</p> <p>3.3 Discuss and disseminate performance expectations to individual team member.</p>   | <p><b>TLE_IACRP9-12LST-Ib-6</b></p> |
| <ul style="list-style-type: none"> <li>• Knowledge and skills in monitoring team member performance</li> <li>• Monitoring team operation to ensure client needs and satisfaction</li> <li>• Methods of monitoring performance</li> <li>• Informal/formal counseling skills</li> </ul> |  |   | <p><b>LO 4. Supervise team performance.</b></p> <p>4.1 Monitor team member’s performance in respect to the defined performance criteria.</p> <p>4.2 Provide team members with feedback, positive support and advice on strategies to overcome any difficulties.</p> <p>4.3 Inform team members of any changes in the priority allocated to assignment or task.</p> <p>4.4 Provide communication follow-up on all issues affecting the team.</p>  | <p><b>TLE_IACRP9-12LST-Ib-7</b></p> |
| <b>LESSON 3: DEVELOPING AND PRACTICING NEGOTIATION SKILLS (DPN)</b>   |  |   |  |                                     |
| <ul style="list-style-type: none"> <li>• Background information on other parties to the negotiation</li> <li>• Personal attributes</li> <li>• Friendly reception</li> </ul>   | <p>The learner demonstrates understanding of concepts in developing and practicing negotiation skills.</p> | <p>The learner independently develops and practices negotiation skills.</p> | <p><b>LO 1. Plan Negotiations</b></p> <p>1.1 Identify and include information on preparing for negotiation in the plan.</p> <p>1.2 Identify and include information on creating non - verbal environments for positive negotiating in the plan.</p> <p>1.3 Identify and include information on active listening in the plan.</p> <p>1.4 Identify and include information on different questioning techniques in the plan.</p> <p>1.5 Check information to ensure it is correct and up-to-date.</p> | <p><b>TLE_IACRP9-12DPN-Ib-8</b></p> |



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|--|--|--|---|--------------------------------------|
| <ul style="list-style-type: none"> <li>• Participation in Negotiation</li> <li>• Good understanding of topic to be negotiated</li> <li>• Clear understanding of desired outcome/s</li> <li>• Analytic skills</li> </ul>  |  |  | <p><b>LO 2. Participate in Negotiation</b></p> <p>2.1 Agree upon criteria for successful outcomes by all parties.</p> <p>2.2 Consider the desired outcomes of all parties.</p> <p>2.3 Use appropriate language throughout the negotiation.</p> <p>2.4 Use a variety of questioning techniques.</p> <p>2.5 Document and agree upon the issues and processes by all parties.</p> <p>2.6 Discuss and assess possible solutions and their viability.</p> <p>2.7 Confirm and record areas of agreement.</p> <p>2.8 Agree upon follow-up action by all parties.</p> | <p><b>TLE_IACRP9-12DPN-Ic-9</b></p>  |
| <b>LESSON 4: SOLVING WORKPLACE PROBLEM RELATED TO WORK ACTIVITIES (PRW)</b>  |  |  |   |                                      |
| <ul style="list-style-type: none"> <li>• Observation, investigation &amp; analytical techniques</li> <li>• Brainstorming</li> <li>• Cause and effect diagrams</li> <li>• PARETO analysis</li> <li>• SWOT analysis</li> <li>• GANT chart PERT CPM and graph</li> <li>• SCATTER GRAMS</li> </ul> | <p>The learner demonstrates understanding of concepts in solving workplace problem related to work activities.</p> | <p>The learner independently performs in solving workplace problem related to work activities.</p> | <p><b>LO 1. Explain the analytical techniques.</b></p> <p>1.1 Explain Importance and application of analytical techniques.</p> <p>1.2 Define analytical techniques such as brainstorming, cause and effects diagrams, PARETO analysis, SWOT analysis, GANT chart, PERT CPM &amp; graphs, and scatter grams.</p>   | <p><b>TLE_IACRP9-12PRW-Ic-10</b></p> |
| <ul style="list-style-type: none"> <li>• Normal operating parameters and product quality</li> <li>• Identifying and clarifying the nature of problem</li> <li>• Application of analytical techniques</li> </ul>  |  |  | <p><b>LO 2. Identify the problem.</b></p> <p>2.1 Identify variances from normal operating parameters and product quality.</p> <p>2.2 Define extent, cause, and nature of the problem based on observation, investigation and analytical techniques.</p> <p>2.3 Clear stated and specified problems.</p>   | <p><b>TLE_IACRP9-12PRW-Ic-11</b></p> |

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|---|---|---|---|-------------------------------|
| <ul style="list-style-type: none"> <li>• Non-routine process and quality problems</li> <li>• Teamwork and work allocation problem</li> <li>• Safety and emergency situations and incidents</li> </ul> |   |   | <p><b>LO 3. Determine the possible cause/s of the problem.</b></p> <p>3.1 Identify possible cause/s of problem based on experience &amp; the use of problem solving tools/analytical techniques.</p> <p>3.2 Develop possible cause statements.</p> <p>3.3 Explain fundamental causes.</p>   | <b>TLE_IACRP9-12PRW-Ic-12</b> |
| <b>LESSON 5: USING MATHEMATICAL CONCEPTS AND TECHNIQUES (MCT)</b>   |   |   |   |                               |
| <ul style="list-style-type: none"> <li>• Four fundamental operations</li> <li>• Steps in solving a problem</li> <li>• Standard formulas</li> <li>• Conversion Measurement</li> </ul>                  | The learner demonstrates understanding of concepts in using mathematical concepts and techniques. | The learner independently performs in using mathematical concepts and techniques. | <p><b>LO 1. Identify mathematical tools and techniques to solve problems.</b></p> <p>1.1 Identify problem areas based on given condition.</p> <p>1.2 Select mathematical techniques based on the given problem.</p>   | <b>TLE_IACRP9-12MCT-Id-13</b> |
| <ul style="list-style-type: none"> <li>• Problem-based question</li> <li>• Estimation</li> <li>• Use of mathematical tools and standard formulas</li> <li>• Mathematical techniques</li> </ul>        |   |   | <p><b>LO 2. Apply mathematical procedure/solution.</b></p> <p>2.1 Identify and apply Mathematical techniques based on the problem.</p> <p>2.2 Perform mathematical computations to the level of accuracy required for the problem.</p> <p>2.3 Determine and verify results of mathematical computation based on job requirements.</p> | <b>TLE_IACRP9-12MCT-Id-14</b> |
| <ul style="list-style-type: none"> <li>• Four fundamental operations</li> <li>• Steps in solving a problem</li> <li>• Standard formulas</li> <li>• Conversion</li> <li>• Measurement</li> </ul>       |   |   | <p><b>LO 3. Analyze results.</b></p> <p>3.1 Review results of application based on expected and required specifications and outcome.</p> <p>3.2 Apply appropriate action in case of error.</p>  | <b>TLE_IACRP9-12MCT-Id-15</b> |

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|--|--|--|--|-------------------------------|
| <b>LESSON 6: USING RELEVANT TECHNOLOGIES (URT)</b>   |  |  |  |                               |
| <ul style="list-style-type: none"> <li>• Machineries/equipment and their application</li> <li>• Software/ programs</li> </ul>  | The learner demonstrates understanding of concepts in using relevant technologies. | The learner independently performs in using relevant technologies. | <b>LO 1. Study/select appropriate technology.</b><br>1.1 Study appropriate technology based on work requirements.<br>1.2 Identify and select appropriate technology based on work requirements.  | <b>TLE_IACRP9-12URT-Id-16</b> |
| <ul style="list-style-type: none"> <li>• Office technology</li> <li>• Industrial technology</li> <li>• System technology</li> <li>• Information technology</li> <li>• Training technology</li> <li>• Different software / Hardware</li> <li>• 5S (Proper House Keeping)</li> </ul> |  |  | <b>LO 2. Apply relevant technology.</b><br>2.1 Use relevant technology in carrying out function based on work requirements.<br>2.2 Use applicable software and hardware as per job requirement.<br>2.3 Observe management concept as per established industry practices.   | <b>TLE_IACRP9-12URT-Ie-17</b> |
| <ul style="list-style-type: none"> <li>• Corrective and preventive maintenance</li> <li>• Upgrading of technology</li> <li>• Communication skills</li> <li>• Organizational set – up / work flow</li> </ul>  |  |  | <b>LO 3. Maintain/enhance relevant technology.</b><br>3.1 Apply maintenance of technology in accordance with the industry standard operating procedure, manufacturer’s operating guidelines and occupational health and safety procedure.<br>3.2 Maintain updating of technology through continuing education or training in accordance with job requirement.<br>3.3 Report immediately appropriate action for technology failure/ defect to the concerned/ responsible person or section. | <b>TLE_IACRP9-12URT-Ie-18</b> |

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| <b>COMMON COMPETENCIES</b>   |   |  |  |                               |
| <b>LESSON 7. PERFORMING MENSURATIONS 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>  | The learner demonstrates understanding of concepts in Performing mensuration and calculations | The learner independently Performing mensuration and calculations. | <b>LO 1. Select measuring instruments.</b> <ol style="list-style-type: none"> <li>1.1 Identify, classify and interpret object or component to be measured according to the appropriate regular geometric shape.</li> <li>1.2 Select/identify measuring tools as per object to be measured or job requirements.</li> <li>1.3 Obtained correct specifications from relevant sources.</li> <li>1.4 Select measuring instruments according to job requirements.</li> <li>1.5 Use alternative measuring tools without sacrificing cost and quality of work.</li> <li>1.6 Obtain measurements according to job requirements.</li> </ol>  | <b>TLE_IACRP9-12PMC-If-19</b> |
| <ul style="list-style-type: none"> <li>• Trade mathematics/mensuration <ul style="list-style-type: none"> <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> </li> </ul> |   |  | <b>LO 2. Carry out measurements and calculations.</b> <ol style="list-style-type: none"> <li>2.1 Obtained accurate measurements according to job requirements.</li> <li>2.2 Use alternative measuring tools without sacrificing cost and quality of work.</li> <li>2.3 Perform calculation needed to complete work tasks using the four basic processes: addition (+), subtraction (-), multiplication (x) and division (/) including but not limited to: trigonometric functions, algebraic computations.</li> <li>2.4 Use calculations involving fractions, percentages and mixed numbers to complete workplace tasks.</li> <li>2.5 Self-check and correct numerical computation for accuracy.</li> <li>2.6 Read instruments to the limit of accuracy</li> </ol> | <b>TLE_IACRP9-12PMC-Ig-20</b> |

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|--|---|--|--|-------------------------------|
|  |   |  | of the tool.<br>2.7 Identify systems of measurement and converted according to job requirements/ISO.<br>2.8 Measure workpieces according to job requirements.  |                               |
| <b>LESSON 8: INTERPRETING TECHNICAL DRAWINGS AND PLANS (TDP)</b>   |   |  |  |                               |
| <ul style="list-style-type: none"> <li>Drawing symbols and signs</li> <li>Trade mathematics</li> </ul>   | The learner demonstrates understanding of concepts in interpreting technical drawings and plans.  | The learner independently interprets technical drawings and plans.   | <b>LO 1. Analyze signs, symbols and data</b><br>1.1 Identify signs, symbols and data according to job specifications<br>1.2 Determine signs symbols and data according to classification or as appropriate in drawing.   | <b>TLE_IACRP9-12TDP-Ih-21</b> |
| <ul style="list-style-type: none"> <li>Basic technical drawing</li> <li>Technical plans and schematic diagram</li> <li>Symbols and abbreviations</li> </ul>  |   |  | <b>LO 2. Interpret technical drawings and plans.</b><br>2.1 Identify necessary tools, materials and equipment according to the plan.<br>2.2 Recognize components, assemblies or objects as required.<br>2.3 Identify dimensions as appropriate to the plan.  | <b>TLE_IACRP9-12TDP-Ii-22</b> |
| <b>LESSON 9: PREPARING CONSTRUCTION MATERIALS AND TOOLS (CMT)</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 concepts in Preparing construction materials and tools. | The learner independently prepares construction materials and tools. | <b>LO 1. Identify Materials and tools applicable to a specific construction job.</b><br>1.1 Identify tools and materials as per job requirements.<br>1.2 Classify tools according to its function as per job requirements.<br>1.3 Classify materials according to its uses to a specific construction projects.<br>1.4 Select tools and materials as per job requirements. | <b>TLE_IACRP9-12CMT-Ij-23</b> |

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|---|--|---|---|---|
| <ul style="list-style-type: none"> <li>• Different forms <ul style="list-style-type: none"> <li>- Job order slip</li> <li>- Tools and material requisition slip</li> <li>- Borrower’s slip</li> </ul> </li> <li>• Requisition slip</li> </ul> |  |   | <p><b>LO 2. Request appropriate materials and tools.</b></p> <p>2.1 List needed materials and tools as per job requirements.</p> <p>2.2 Request materials and tools needed according to the list prepared.</p> <p>2.3 Do request as per company standard operating procedures (SOP).</p> <p>2.4 Substitute and provide materials and tools unavailable without sacrificing cost and quality of work.</p>  | <p><b>TLE_IACRP9-12CMT-IIa-24</b></p>   |
| <ul style="list-style-type: none"> <li>• Procedure in receiving tools and materials</li> <li>• Proper inspection of tools and materials received</li> <li>• Proper handling of tools and materials</li> </ul>                                 |  |   | <p><b>LO 3. Receive and inspect materials.</b></p> <p>3.1 Inspect materials and tools issued as per quantity and specification.</p> <p>3.2 Check tools, accessories and materials for damages according to enterprise procedures.</p> <p>3.3 Receive and handle materials and tools with appropriate safety devices.</p> <p>3.4 Set aside materials and tools to appropriate location nearest to the workplace.</p>   | <p><b>TLE_IACRP9-12CMT-IIa-b-25</b></p> |
| <b>LESSON 10: OBSERVING PROCEDURES, SPECIFICATIONS AND MANUALS OF INSTRUCTIONS (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>  | <p>The learner demonstrates understanding of concepts in observing procedures, specifications and manuals of instructions.</p> | <p>The learner independently observes procedures, specifications and manuals of instructions.</p> | <p><b>LO 1. Identify and access specification/manuals.</b></p> <p>1.1 Identify and access appropriate manuals as per job requirements.</p> <p>1.2 Check version and date of manual to ensure that correct specification and procedures are identified.</p> <p>1.3 Locate relevant sections, chapters of specifications/manuals in relation to the work to be conducted.</p> <p>1.4 Interpret information and procedure in the manual in accordance with industry practices.</p> | <p><b>TLE_IACRP9-12OSM-IIb-c-26</b></p> |

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| CONTENT   | CONTENT STANDARD   | PERFORMANCE STANDARD                                     | LEARNING COMPETENCIES   | CODE                             |
|---|--|--|---|----------------------------------|
| <ul style="list-style-type: none"> <li>Manual/specification application</li> </ul>  |  |  | <b>LO 2. Apply information in manual.</b><br>2.1 Identify work steps in accordance with manufacture’s specifications.<br>2.2 Apply manual data according to the given task.<br>2.3 Interpret adjustments in accordance with information contained on the manual or specifications.  | <b>TLE_IACRP9-12OSM-IIc-27</b>   |
| <ul style="list-style-type: none"> <li>Manual handling</li> </ul>   |  |  | <b>LO 3. Store manuals.</b><br>3.1 Stored manual or specification appropriately to prevent damage, ready access and updating of information when required in accordance with company requirements.  | <b>TLE_IACRP9-12OSM-IIId-28</b>  |
| <b>LESSON 11: 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 Personal Protective Equipment (PPE)</li> </ul>  | The learner demonstrates understanding of concepts in maintaining tools and equipment. | The learner independently maintains tools and equipment. | <b>LO.1 Check condition of tools and equipment.</b><br>1.1 Identify tools and equipment according to classification and job requirements.<br>1.2 Segregate and label non-functional tools and equipment according to classification.<br>1.3 Observe safety of tools and equipment in accordance with manufacturer's instructions.<br>1.4 Check condition of PPE in accordance with manufacturer's instructions. | <b>TLE_IA CRP9-12MTE-IIId-29</b> |
| <ul style="list-style-type: none"> <li>Types and uses of lubricants</li> <li>Types and uses of cleaning materials/solvent</li> <li>Types and uses of measuring instruments and equipment</li> </ul> |  |  | <b>LO 2. Perform basic preventive maintenance.</b><br>2.1 Identify appropriate lubricants according to types of equipment.<br>2.2 Lubricate tools and equipment according   | <b>TLE_IA CRP9-12MTE-IIId-30</b> |

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|--|--|---|---|---|
| <ul style="list-style-type: none"> <li>• Preventive maintenance techniques and procedures</li> <li>• OSHC workplace regulations</li> </ul>   |  |   | <p>to preventive maintenance schedule or manufacturer's specifications.</p> <p>2.3 Check and calibrate measuring instruments in accordance with manufacturer's instructions.</p> <p>2.4 Clean and lubricate tools according to standard procedures.</p> <p>2.5 Inspect and replace defective instruments, equipment and accessories according to manufacturer's specifications.</p> <p>2.6 Clean and keep work place in safe state in line with OSHA regulations.</p>   |   |
| <b>CORE COMPETENCIES</b>   |  |   |   |   |
| <b>LESSON 12: INSTALLING ARCHITECTURAL CEILING, WALL/ SHEATS/ PANELS AND FLOOR FINISHES (PFA)</b>  |  |   |   |   |
| <ul style="list-style-type: none"> <li>• Drawing details-sections-views-perspective</li> <li>• Classification of carpentry tools</li> <li>• Defects on wood</li> <li>• Material specifications</li> <li>• Necessary actions that must be taken in response to actual situation</li> <li>• Properties of wood</li> <li>• Linear measurement</li> <li>• Board foot computation</li> <li>• Preparing job documentation <ul style="list-style-type: none"> <li>- Following instructions</li> <li>- Filling-out forms</li> <li>- Reading and interpreting plans</li> </ul> </li> <li>• Leading workplace communication/writing memos and letters</li> </ul> | <p>The learner demonstrates understanding of concepts and underlying principles in the installation of architectural ceiling, wall, sheathings, panels and floor finishes.</p> | <p>The learner independently performs the installation of architectural ceiling wall/sheaths/panels and floor finishes.</p> | <p><b>LO 1. Select, check and prepare materials, tools in installing architectural ceilings, wall frames, panels and floor finishes.</b></p> <p>1.1 Identify plans and details according to job requirements.</p> <p>1.2 Interpret plans and details according to job requirements.</p> <p>1.3 Prepare appropriate materials, tools and equipment according to job specification.</p> <p>1.4 Check and re-check materials according to specifications.</p> <p>1.5 Respond to unexpected situations in line with work place requirement.</p> <p>1.6 Perform housekeeping according to safety regulations.</p> <p>1.7 Use appropriate PPE according to OSH regulations.</p> | <p><b>TLE_IACRP9-12PFA-IIf-g-31</b></p> |



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| CONTENT   | CONTENT STANDARD | PERFORMANCE STANDARD | LEARNING COMPETENCIES  | CODE                                     |
|---|------------------|----------------------|--|--|
| <ul style="list-style-type: none"> <li>• Procedures in preparing patterns for architectural finishes</li> <li>• Safety in using cutting equipment</li> <li>• Classification of carpentry hand tools and equipment</li> <li>• Types of wall, floor, and ceiling finishes</li> </ul>  |                  |                      | <p><b>LO 2. Establish lay-out of wall/floor and ceiling pattern.</b></p> <p>2.1 Lay-out wall/floor and ceiling patterns according to job specifications.</p> <p>2.2 Cut and fit materials according to required size with +3mm for squareness, plumbness, levelness and dimensions.</p> <p>2.3 Lay-out finished materials in correct positions.</p> <p>2.4 Respond to unexpected situations in line with work place requirement.</p> <p>2.5 Perform housekeeping according to safety regulations.</p> <p>2.6 Use appropriate PPE according to OSH regulations.</p>   | <p><b>TLE_IACRP9-12PFA-IIg-j-32</b></p>  |
| <ul style="list-style-type: none"> <li>• Procedure in installing architectural finishes</li> <li>• Inspection procedure</li> <li>• Action to be taken in response to actual situation</li> <li>• Reading and following instructions based on job requirement</li> <li>• Preparing job documentation <ul style="list-style-type: none"> <li>- Following instructions</li> <li>- Filling out of forms</li> <li>- reading and Interpreting manuals</li> <li>- writing reports</li> </ul> </li> </ul> |                  |                      | <p><b>LO 3. Install architectural ceiling, wall/sheats/panels and floor finishes according to job requirements.</b></p> <p>3.1 Align, tack and nail finished materials according to lay- out.</p> <p>3.2 Check installed finished materials connections, levelness, and smoothness according to job requirements.</p> <p>3.3 Clean and make safe work area according to OHS regulation.</p> <p>3.4 Make final check to ensure that work conforms with instructions and to the requirements.</p> <p>3.5 Prepare and submit completion report to appropriate personnel.</p> <p>3.6 Deal with unexpected situations according to company rules and regulations.</p> | <p><b>TLE_IACRP9-12PFA-IIIa-g-33</b></p> |

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| <b>LESSON 13: FABRICATING/INSTALLING DOOR/WINDOW JAMBS AND PANELS (FWP)</b>   |   |   |   |                                   |
| <ul style="list-style-type: none"> <li>• Interpreting plans and details</li> <li>• Identifying door/window symbols</li> <li>• Types/kinds of power/hand tools used in fabricating/installing door/window jambs and panels</li> <li>• Preparation of materials, tools and/or equipment</li> <li>• Types of defects in lumber</li> <li>• Types/kinds of PPE used in fabricating/ installing door/window jambs</li> <li>• Safety rules and regulations in using power and hand tools</li> <li>• Preparing job documentation <ul style="list-style-type: none"> <li>- following instructions</li> <li>- filling out of forms</li> <li>- reading and interpreting manuals</li> <li>- writing reports</li> </ul> </li> <li>• Leading workplace communication/writing memos and letters</li> </ul> | <p>The learner demonstrates understanding of concepts and underlying principles in fabrication and installation of door, window jambs and panels.</p> | <p>The learner independently performs the fabrication and installation of door and window jambs and panels.</p> | <p><b>LO 1. Select and prepare power/hand tools and materials required in fabricating/installing door/window jambs and panels.</b></p> <ol style="list-style-type: none"> <li>1.1 Identify plans and details according to job requirements.</li> <li>1.2 Interpret plans and details according to job requirements.</li> <li>1.3 Prepare appropriate tools and materials according to specifications.</li> <li>1.4 Check and re-check the materials specifications to ensure that they are free from defects; otherwise defects are reported to immediate supervisor for appropriate action.</li> <li>1.5 Deal with unexpected situations according to company rules and regulations.</li> <li>1.6 Select and use appropriate PPE according to safety standards and regulations.</li> </ol> | <b>TLE_IACRP9-12FWP-IIIg-j-34</b> |
| <ul style="list-style-type: none"> <li>• Interpretation of plans, details, specifications and working drawings</li> <li>• Types of tools and equipment</li> <li>• Classification of wood joints wood joints construction</li> <li>• Procedure in assembling of doors/window/jambs and panels</li> <li>• Action taken in response to actual situation</li> <li>• Preparing job documents</li> </ul>  |   |   | <p><b>LO 2. Fabricate jambs and panels of doors/windows according to plans.</b></p> <ol style="list-style-type: none"> <li>2.1 Identify plans and details according to job requirements.</li> <li>2.2 Interpret plans and details according to job requirements.</li> <li>2.3 Prepare materials, tools and equipment consistent with job requirements.</li> <li>2.4 Prepare stocks according to the required specifications with tolerances of + 5mm in tolerance and + 3mm for squareness and evenness.</li> </ol>   | <b>TLE_IACRP9-12FWP-IVa-35</b>    |

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|  |  |  | 2.5 Assemble parts according to dimensions and specifications.<br>2.6 Deal with unexpected situations according to company rules and regulations.<br>2.7 Perform housekeeping according to safety regulations.  |                                     |
| <ul style="list-style-type: none"> <li>• Interpreting plans, details, working drawings and specifications</li> <li>• Different kinds/types of moldings</li> <li>• Types of wood joints</li> <li>• Types/ kinds of door &amp; window hardware</li> <li>• Action taken in response to actual situation</li> <li>• Safety regulations and safety standards</li> <li>• Types and uses of PPE</li> <li>• Preparing job documentation               <ul style="list-style-type: none"> <li>- following instructions</li> <li>- filling out of forms</li> <li>- reading and interpreting manuals</li> <li>- writing reports</li> </ul> </li> <li>• Leading workplace Communication/Writing memos and letters</li> </ul> |  |  | <b>LO 3. Install fabricated door/window jambs/panels and pre-fabricated moldings.</b><br>3.1 Position fabricated parts according to dimensions and specifications.<br>3.2 Install fabricated jambs/panels and pre-fabricated moldings according to specified measurements with + 3mm for squareness, levelness and plumbness.<br>3.3 Remove temporary bracings without causing damage to frames 24 hours after pouring concrete/mortar.<br>3.4 Attach finishing hardware materials/accessories to installed door/window jambs/panels based on specifications.<br>3.5 Deal with unexpected situations according to company rules and regulations.<br>3.6 Perform housekeeping according to safety regulations.<br>3.7 Use appropriate PPE according to safety standards and regulation safety standards and regulations. | <b>TLE_IACRP9-12FWP-IVb-f-36</b>    |
| <b>LESSON 14: INSTALLING STAIR COMPONENTS AND/OR PRE-FABRICATED STAIRS ASSEMBLY (PSA)</b>  |  |  |   |                                     |
| <ul style="list-style-type: none"> <li>• Interpreting working drawing</li> <li>• Classification of hand tools &amp; equipment and their uses</li> <li>• Kinds/types of wood defects</li> <li>• Action taken in response to actual situation</li> </ul>   | The learner demonstrates the concepts and underlying principles in the installation of stair components and/or pre-fabricated stairs assembly. | The learner independently performs the installation of stair components and/or pre-fabricated stairs assembly. | <b>LO 1. Identify and interpret plans, working drawings, specifications, construction materials, tools and equipment according to job requirements.</b><br>1.1 Identify plans, details and working  | <b>TLE_IACRP9-12PSA-IVg-j-Ia-37</b> |

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|---|------------------|----------------------|---|--|
| <ul style="list-style-type: none"> <li>• Using specific PPE as job requirements</li> <li>• Pythagorean Theorem</li> <li>• Preparing job documentation <ul style="list-style-type: none"> <li>- following instructions</li> <li>- filling out of forms</li> <li>- reading and interpreting manuals</li> </ul> </li> <li>• Writing reports</li> <li>• Basic oral communication/ writing memos and letters</li> </ul>  |                  |                      | <p>drawings correctly according with job requirements.</p> <p>1.2 Interpret plans, details and working drawing correctly according with job requirements.</p> <p>1.3 Identify tools and equipment consistent with job requirement.</p> <p>1.4 Check and re- check materials specifications to ensure that they are free from defects; otherwise defects are reported to immediate superior for appropriate action.</p> <p>1.5 Deal with unexpected situations according to company rules and regulations.</p> <p>1.6 Select and prepare appropriate PPE in accordance with job requirements.</p>  |  |
| <ul style="list-style-type: none"> <li>• Plans and details Interpretation</li> <li>• Classification of hand tools &amp; equipment and their uses</li> <li>• Procedure in cutting stringers using patterns</li> <li>• Protection of personnel and materials damage</li> <li>• Preparing job documentation <ul style="list-style-type: none"> <li>- following instructions</li> <li>- filling out of forms</li> <li>- reading and interpreting manuals</li> <li>- writing reports</li> </ul> </li> <li>• Leading workplace communication/writing memos and letters</li> </ul> |                  |                      | <p><b>LO 2. Prepare and cut materials for installation of stairs balusters and railings.</b></p> <p>2.1 Identify plans and details according to job requirements.</p> <p>2.2 Interpret plans and details according to job requirements.</p> <p>2.3 Prepare materials, power and hand tools and equipment consistent with job requirements.</p> <p>2.4 Check and re-check materials for correct specifications to ensure that they are free from defects; otherwise defects are reported to immediate supervisor for appropriate action.</p> <p>2.5 Deal with unexpected situations according to company rules and regulations.</p> <p>2.6 Select and prepare appropriate PPEs in accordance with job requirements.</p> <p>2.7 Cut materials for installation of stairs, baluster and railing.</p> | <p><b>TLE_IACRP9-12PSA-Ia-f-38</b></p> |

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(320 hours)

| CONTENT   | CONTENT STANDARD | PERFORMANCE STANDARD | LEARNING COMPETENCIES   | CODE                                       |
|---|------------------|----------------------|---|--|
| <ul style="list-style-type: none"> <li>• Plans and details of stairs</li> <li>• Computation of total number of riser and tread</li> <li>• Computation of the total length of stringer</li> <li>• Develop templates of stair components</li> <li>• Procedure in installing baluster and railings</li> <li>• Action taken in response to actual situation</li> <li>• Types and uses of appropriate PPE</li> <li>• Principles of Inclined planes</li> <li>• Linear measurement</li> <li>• Pythagorean theorem</li> <li>• Preparing job documentation <ul style="list-style-type: none"> <li>- following instructions</li> <li>- filling out of forms</li> <li>- reading and interpreting manuals</li> <li>- writing reports</li> </ul> </li> <li>• Board foot computation</li> <li>• Leading workplace communication/ writing memos and letters</li> </ul> |                  |                      | <p><b>LO 3. Fabricate stair components and/or stairs assembly.</b></p> <ul style="list-style-type: none"> <li>3.1 Identify staircase requirements from working drawings and specifications</li> <li>3.2 Determine the height and number of risers and width of tread are according to working drawing and specifications.</li> <li>3.3 Construct stringer or stair horse in accordance with the height and number of risers and width of tread.</li> <li>3.4 Prepare and cut steps/ baluster/ railings using prescribed pattern with +1 mm tolerance for squareness, evenness and smoothness and other dimensions.</li> <li>3.5 Deal with unexpected situations according to company rules and regulations.</li> <li>3.6 Perform housekeeping according to safety regulations.</li> <li>3.7 Use appropriate PPE according to safety standards and regulations.</li> </ul> | <p><b>TLE_IACRP9-12PSA-If-j-IIa-39</b></p> |
| <ul style="list-style-type: none"> <li>• Procedure in installing stairs balusters and railings and/or pre-fabricated stairs assembly</li> <li>• Different types of wood joints</li> <li>• Fitting of mortise and tenon joints</li> <li>• OHS rules and regulations</li> <li>• Standard Operating Procedures in checking assembled stair components</li> <li>• Safety in workplace</li> <li>• Application of 5s</li> </ul>   |                  |                      | <p><b>LO 4. Install wooden stairs, balusters and railings and/or pre-fabricated stairs assembly.</b></p> <ul style="list-style-type: none"> <li>4.1 Set-out and install stair components and/or pre-fabricated stairs assembly in accordance with working drawings and specifications.</li> <li>4.2 Clean and make safe work area in accordance with safety rules and regulations.</li> <li>4.3 Make sure that the final checking so that work conforms with instructions and in</li> </ul>   | <p><b>TLE_IACRP9-12PSA-IIa-f-40</b></p>    |

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| CONTENT   | CONTENT STANDARD   | PERFORMANCE STANDARD  | LEARNING COMPETENCIES  | CODE                                   |
|---|--|---|--|--|
| <ul style="list-style-type: none"> <li>• Use of appropriate PPE</li> <li>• Preparing job documentation <ul style="list-style-type: none"> <li>- following instructions filling out of forms</li> <li>- reading and interpreting manuals</li> <li>- writing reports</li> </ul> </li> <li>• Leading workplace Communication/Writing memos and letters</li> </ul>  |  |   | <p>accordance with requirements.</p> <p>4.4 Deal with unexpected situations according to company rules and regulations.</p> <p>4.5 Perform housekeeping according to safety regulations.</p> <p>4.6 Use appropriate PPE according to safety standards and regulations.</p>   |  |
| <b>LESSON 15: INSTALLING BUILT-IN/PRE-FABRICATED CABINETS (BPC)</b>   |  |   |  |  |
| <ul style="list-style-type: none"> <li>• Planning section, detail and oblique drawing built-in/pre-fabricated cabinets</li> <li>• Materials and for specification, built-in / pre-fabricated cabinets</li> <li>• Classification of hand tools and equipment and their uses</li> <li>• Action taken in response to actual situation</li> <li>• Observing safety practices</li> <li>• Preparing job documentation <ul style="list-style-type: none"> <li>- following instructions</li> <li>- filling out of forms</li> <li>- reading and interpreting manuals</li> <li>- writing reports</li> </ul> </li> <li>• Lead workplace communication/writing memos and letters</li> </ul> | The learner demonstrates the concepts and underlying principles in the installation of built-in / pre-fabricated cabinets. | The learner independently performs the installation of built-in/ pre-fabricated cabinets. | <p><b>LO 1. Prepare materials, tools and equipment for installing built-in and/or pre-fabricated cabinets.</b></p> <p>1.1 Identify plans and details correctly according to job requirements.</p> <p>1.2 Interpret plans and details correctly according to job requirements.</p> <p>1.3 Prepare materials, tools and equipment consistent with job requirements.</p> <p>1.4 Check and re-check materials for correct specifications to ensure that they are free from defects; otherwise defects are reported to immediate supervisor for appropriate action.</p> <p>1.5 Deal with unexpected situations according to company rules and regulations.</p> <p>1.6 Select appropriate PPE according to safety standards and regulations.</p> | <b>TLE_IACRP9-12BPC-IIj-j-41</b>       |
| <ul style="list-style-type: none"> <li>• Interpreting working drawing</li> <li>• Procedure in laying-out and assembling on the location of cabinets</li> <li>• Preparing cabinet components fabrication</li> <li>• Woodworking processes</li> <li>• Classification of wood joints and</li> </ul>  |  |   | <p><b>LO 2. Fabricate/assemble built-in cabinet components and/or pre-fabricated cabinet.</b></p> <p>2.1 Identify cabinet location from working drawings and specifications.</p> <p>2.2 Prepare and assemble cabinet components are fabricated and/or pre-fabricated cabinet according to working drawings</p>   | <b>TLE_IACRP9-12PBPC-IIj-IIIa-g-42</b> |

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| CONTENT   | CONTENT STANDARD | PERFORMANCE STANDARD | LEARNING COMPETENCIES  | CODE   |
|---|------------------|----------------------|--|--|
| <ul style="list-style-type: none"> <li>their uses</li> <li>• Action to be taken in response to actual situation</li> <li>• Preparing job documentation <ul style="list-style-type: none"> <li>- following instructions</li> <li>- filling out of forms</li> <li>- reading and interpreting manuals</li> <li>- writing reports</li> </ul> </li> <li>• Leading workplace communication/writing memos and letters</li> </ul>   |                  |                      | <ul style="list-style-type: none"> <li>and specifications.</li> <li>2.3 Deal unexpected situation in accordance with company rules and regulations.</li> <li>2.4 Perform housekeeping according to safety regulations.</li> <li>2.5 Use appropriate PPE according to job requirements and safety regulations.</li> </ul>   |  |
| <ul style="list-style-type: none"> <li>• Interpreting plans, working drawings and specifications</li> <li>• Different types of cabinet components</li> <li>• Different types of wood filler</li> <li>• Classification of cabinet hardware and their uses</li> <li>• Necessary action must be taken in response to actual situation</li> <li>• Proper Use of PPE</li> <li>• Preparing job documentation <ul style="list-style-type: none"> <li>- following instructions</li> <li>- filling out of forms</li> <li>- reading and interpreting manuals</li> <li>- writing reports</li> </ul> </li> <li>• Leading workplace communication/writing memos and letters</li> </ul> |                  |                      | <p><b>LO 3. Assemble and install built-in and pre-fabricated cabinet components.</b></p> <ul style="list-style-type: none"> <li>3.1 Set-out built-in cabinet components and/or pre-fabricated cabinet assembly in accordance with working drawings and specifications.</li> <li>3.2 Install built-in cabinet components and/or pre-fabricated cabinet assembly in accordance with working drawings and specifications.</li> <li>3.3 Install finishing hardware's as per working drawings.</li> <li>3.4 Deal with unexpected situation in accordance with company rules and regulations.</li> <li>3.5 Perform housekeeping according to safety regulations.</li> <li>3.6 Use appropriate PPE is used according to job requirements and safety regulations.</li> </ul> | <p><b>TLE_IA CRP9-12BPC-IIIg-IVa-f-43</b></p> <p><b>32 Hours</b></p> |

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| RESOURCES  |  |  | METHODOLOGY  | ASSESSMENT METHOD  |
|--|--|--|--|--|
| TOOLS  | EQUIPMENT  | MATERIALS  |  |  |
| <ul style="list-style-type: none"> <li>• Cross cut saw</li> <li>• Claw hammers 16 oz.</li> <li>• Chalk line reel</li> <li>• Pencil</li> <li>• Nylon string</li> <li>• Pull-push rule, 15 meters</li> <li>• Crow bar</li> <li>• Framing square</li> <li>• Try square</li> <li>• Spirit level, 36 in.</li> <li>• Automatic level</li> <li>• Nail pouch</li> <li>• Nail set</li> <li>• Chisel, 2"</li> <li>• Adjustable wrench,</li> <li>• Combination spanner</li> <li>• Transparent hose</li> <li>• Miter box</li> <li>• Key hole saw</li> <li>• Screw driver( Phillip or Flat)</li> <li>• Plane</li> <li>• Plumb bob</li> <li>• Riveter</li> <li>• Ramset</li> <li>• Staple gun</li> </ul> | <p><b>Portable Power Tools</b></p> <ul style="list-style-type: none"> <li>• H-frame scaffolds,</li> <li>• Portable electric drill with bits</li> <li>• Portable planer</li> <li>• Portable circular saw</li> <li>• Router with bits</li> <li>• Ladder</li> <li>• Nail gun</li> <li>• Jigsaw</li> </ul> <p><b>Personal Protective Equipment</b></p> <ul style="list-style-type: none"> <li>• Hard hat</li> <li>• Mask</li> <li>• Goggles</li> <li>• Gloves</li> <li>• Safety Shoes</li> <li>• Earmuff</li> <li>• Apron</li> </ul> <p><b>Learning Equipment</b></p> <ul style="list-style-type: none"> <li>• LCD Projector</li> <li>• Computer Unit</li> <li>• Television</li> </ul> | <p><b>Construction Materials</b></p> <ul style="list-style-type: none"> <li>• Lumber</li> <li>• Ply board/ Gypsum</li> <li>• Plywood/Hardiflex</li> <li>• Laminated veneer</li> <li>• Wood molding/Cornice</li> <li>• Formica</li> <li>• Wood filler</li> <li>• Tape</li> <li>• Polyurethane/polyvinyl</li> <li>• Door knobs</li> <li>• Locks</li> <li>• Catches</li> <li>• Foot bolt</li> <li>• Door/eye viewer</li> <li>• Door stopper</li> <li>• Nails</li> <li>• Screws</li> <li>• Bolts</li> <li>• Adhesive</li> <li>• Sand Paper</li> <li>• Hinges</li> </ul> <p><b>Learning Materials</b></p> <ul style="list-style-type: none"> <li>• Plan and working Drawing</li> <li>• Bond paper</li> <li>• Pencil</li> <li>• Ball pen</li> <li>• Whiteboard marker</li> <li>• CDs</li> <li>• Drawing instruments</li> <li>• Calculator</li> </ul> | <ul style="list-style-type: none"> <li>• Modular (self-paced learning)</li> <li>• Electronic learning</li> <li>• Industry immersion</li> <li>• Demonstration</li> <li>• Film-viewing/Audio-Visual</li> <li>• Simulation</li> </ul> | <ul style="list-style-type: none"> <li>• Interview (oral/questionnaire)</li> <li>• Direct observation</li> <li>• Demonstration of practical skills</li> <li>• Portfolio (credentials)</li> <li>• Written test</li> </ul> |



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**GLOSSARY**

- |  |  |
|--|--|
| 1. Batter board                            | - Temporary framework erected to hold the stretched lines of a building layout.  |
| 2. Competency                              | - Application of knowledge, skills and attitudes to perform work activities to the standard expected in the workplace.   |
| 3. Certification                           | - Process of verifying and validating competencies of a person through assessment.   |
| 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. Floor Joist                             | - Structural member of a building that carries the wood flooring.  |
| 7. Handrail                                | - Rail running parallel with the inclination of the stairs that hold the balusters.  |
| 8. Level                                   | - Category following the level of difficulty and complexity of skills and knowledge required to do the job.  |
| 9. Philippine TVET Qualification Framework | - 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.                              |
| 10. Qualification                          | - Piece of lumber whose thick ranges from 4 to 13 cm.<br>- 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. |
| 11. Range of Variable                      | - Describes the circumstances or context in which the work is to be performed.   |
| 12. Riser                                  | - Vertical pace of stair steps.  |
| 13. Scaffolding                            | - Elevated temporary-working platform.   |
| 14. Step                                   | - Stair, which consists of one tread and one riser.  |
| 15. Stud                                   | - Structural member of a building where the siding or partition board is nailed  |
| 16. Staircase                              | - Whole set of a stair.  |
| 17. Stringer                               | - Inclined plane that supports or holds the tread and the risers of a stair.   |
| 18. Unit of Competency                     | - Discrete aspect of work, which would normally be performed by only one person  |

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**CODE BOOK LEGEND**  
Sample: **TLE\_IACRP9-12LWC-Ia-1**

| LEGEND  |   | SAMPLE  |                           |
|---|---|---|---------------------------|
| <b>First Entry</b>  | Learning Area and Strand/ Subject or Specialization | Technology and Livelihood Education_Industrial Arts Carpentry | <b>TLE_IA<br/>CRP9-12</b> |
|   | Grade Level   | 9/10/11/12  |                           |
| <b>Uppercase Letter/s</b>   | Domain/ Content/ Component/ Topic                   | Leading Workplace Communication                               | <b>LWC</b>                |
|   |   |   | -                         |
| <b>Roman Numeral</b><br><i>*Zero if no specific Quarter</i>   | Quarter   | First Quarter   | <b>I</b>                  |
| <b>Lower case letter/s</b><br><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  | Lead workplace communication.                                 | <b>1</b>                  |

| DOMAIN / COMPONENT   | CODE |
|--|------|
| Leading Workplace Communication  | LWC  |
| Leading Small Team   | LST  |
| Developing and Practicing Negotiation Skills                             | DPN  |
| Solving Workplace Problem Related to Work Activities                     | PRW  |
| Using Mathematical Concepts and Techniques                               | MCT  |
| Using Relevant Technologies  | URT  |
| Performing Mensurations and Calculations                                 | PMC  |
| Interpreting Technical Drawings and Plans                                | TDP  |
| Preparing Construction Materials and Tools                               | CMT  |
| Observing Procedures, Specifications and Manuals of Instructions         | OSM  |
| Maintaining Tools and Equipment  | MTE  |
| Installing Architectural Ceiling, Walls/Sheats/Panels and Floor Finishes | PFA  |
| Fabricating /Installing Door/Window Jambs and panels                     | FWP  |
| Installing Stair Components and /or Pre-Fabricated Stairs Assembly       | PSA  |
| Installing Built-in/Pre-Fabricated Cabinets                              | BPC  |

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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SAMPLE INDUSTRIAL ARTS CURRICULUM MAP\*\* (as of May 2016)

| GRADE 7/8 (EXPLORATORY) |           | GRADES 9-12   |   |  |           |
|-------------------------|-----------|---|---|--|-----------|
| EXPLORATORY             |           | Automotive Servicing (NC I)*<br><small>updated based on TESDA Training Regulations published December</small>                                 |   |  | 8<br>sems |
|                         |           | *Automotive Servicing (NC II)   |   |  | 8<br>sems |
|                         |           | Motorcycle/Small Engine Servicing (NC II)<br>4<br>sems  | Driving (NC II)<br>2<br>sems                                      |  |           |
|                         |           | Electronic Products Assembly and Servicing (NC II)*<br><small>updated based on TESDA Training Regulations published December 28, 2013</small> |   |  | 8<br>sems |
|                         |           |   | *Mechatronics Servicing (NC II)                                   |  | 4<br>sems |
|                         |           |   | *Instrumentation Control and Servicing (NC II)                    |  | 4<br>sems |
|                         |           |   | Electrical Installation and Maintenance (NC II)                   |  | 8<br>sems |
|                         |           |   | *Electrical Power Line Distribution Line Construction (NC II)     |  | 4<br>sems |
|                         |           |   | *Transmission Line Installation and Maintenance (NC II)           |  | 8<br>sems |
|                         |           |   | Machining (NC I)  |  | 8<br>sems |
|                         |           |   | *Machining (NC II)  |  | 8<br>sems |
|                         |           |   | Plumbing (NC I)<br>4<br>sems                                      | *Plumbing (NC II)                          | 4<br>sems |
|                         |           |   | Domestic Refrigeration and Air-conditioning Servicing (NC II)     |  | 8<br>sems |
|                         |           |   | *Refrigeration and Air-conditioning Servicing (PACU/CRE) (NC III) |  | 8<br>sems |
|                         |           |   | Shielded Metal Arc Welding (NC I)<br>4<br>sems                    | *Shielded Metal Arc Welding (NC II)        | 4<br>sems |
|                         |           |   |   | *Gas Metal Arc Welding (GMAW) (NC II)      | 4<br>sems |
|                         |           |   |   | *Gas Tungsten Arc Welding (GTAW) (NC II)   | 4<br>sems |
|                         |           |   | Carpentry (NC II)   |  | 8<br>sems |
|                         |           |   | *Carpentry (NC III)<br>4<br>sems                                  | Construction Painting (NC II)<br>2<br>sems |           |
|                         |           |   | Furniture Making (Finishing) (NC II)                              |  | 8<br>sems |
|                         | 4<br>sems | Masonry (NC II)<br>4<br>sems  | Tile Setting (NC II)  | 4<br>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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(320 hours)

**Reference:**

Technical Education and Skills Development Authority-Qualification Standards Office. *Training Regulations for Carpentry NC III*. Taguig City, Philippines: TESDA, 2006.