

K to12 BASIC EDUCATION CURRICULUM
JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL TECHNICAL-VOCATIONAL LIVELIHOOD TRACK
INDUSTRIAL ARTS – CARPENTRY

These are the list of specializations and their pre-requisites.

		Specialization	Number of Hours	Pre-requisite
1.	AGRI-FISHERY ARTS	Animal Production (NC II)	480 hours	
2.		Aquaculture (NC II)	320 hours	
3.		Artificial Insemination (Ruminants) (NC II)	160 hours	Animal Production
4.		Artificial Insemination (Swine) (NC II)	160 hours	Animal Production
5.		Crop Production (NC I)	320 hours	
6.		Fish Nursery Operation (NC II)	160 hours	
7.		Fish or Shrimp Grow Out Operation (Non NC)	160 hours	Aquaculture
8.		Fish Wharf Operation (NC I)	160 hours	Fish or Shrimp Grow Out Operation
9.		Food (Fish) Processing (NC II)	640 hours	
10.		Horticulture (NC II)	640 hours	
11.		Landscape Installation and Maintenance (NC II)	320 hours	Crop Production
12.		Organic Agriculture (NC II)	320 hours	Crop Production
13.		Pest Management (NC II)	320 hours	Crop Production
14.		Rice Machinery Operation (NC II)	320 hours	Crop Production
15.		Slaughtering Operation (NC II)	160 hours	Animal Production
1.	HOME ECONOMICS	Beauty/Nail Care (NC II)	160 hours	40 hours of the subject during exploratory Grade 7/8
2.		Attractions and Theme Parks (NC II)	160 hours	
3.		Bread and Pastry Production (NC II)	160 hours	
4.		Caregiving (NC II)	640 hours	40 hours of the subject during exploratory Grade 7/8
5.		Cookery (NC II)	320 hours	40 hours of the subject during exploratory Grade 7/8
6.		Dressmaking (NC II)	320 hours	
7.		Food and Beverage Services (NC II)	160 hours	
8.		Front Office Services (NC II)	160 hours	40 hours of the subject during exploratory Grade 7/8
9.		Hairdressing (NC II)	320 hours	
10.		Handicraft (Basketry, Macrame) (Non-NC)	160 hours	
11.		Handicraft (Fashion Accessories, Paper Craft) (Non-NC)	160 hours	
12.		Handicraft (Needlecraft) (Non-NC)	160 hours	
13.		Handicraft (Woodcraft, Leathercraft) (Non-NC)	160 hours	
14.		Household Services (NC II)	320 hours	40 hours of the subject during exploratory Grade 7/8
15.		Housekeeping (NC II)	160 hours	
16.		Tailoring (NC II)	320 hours	40 hours of the subject during exploratory Grade 7/8
17.		Tour Guiding Services (NC II)	160 hours	
18.		Tourism Promotion Services (NC II)	160 hours	
19.		Travel Services (NC II)	160 hours	
20.		Wellness Massage (NC II)	160 hours	

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	Specialization	Number of Hours	Pre-requisite
1.	Computer Hardware Servicing (NC II)	320 hours	
2.	Animation (NC II)	320 hours	
3.	Computer Programming (NC IV)	320 hours	
4.	Contact Center Services (NC II)	320 hours	
5.	Illustration (NC II)	320 hours	
6.	Medical Transcription (NC II)	320 hours	
7.	Technical Drafting (NC II)	320 hours	
1.	Automotive Servicing (NC I)	640 hours	
2.	Carpentry (NC II)	640 hours	
3.	Consumer Electronics Servicing (NC II)	640 hours	
4.	Electrical Installation and Maintenance (NC II)	640 hours	
5.	Masonry (NC II)	320 hours	
6.	Plumbing (NC I)	320 hours	
7.	Plumbing (NC II)	320 hours	Plumbing (NC I)
8.	Refrigeration and Airconditioning Servicing (NC II)	640 hours	
9.	Shielded Metal Arc Welding (NC I)	320 hours	
10.	Shielded Metal Arc Welding (NC II)	320 hours	Shielded Metal Arc Welding (NC I)
11.	Tile Setting (NC II)	320 hours	

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INDUSTRIAL ARTS – CARPENTRY
Grade 7/ 8 (Exploratory)

Course Description:

This is an exploratory and introductory course which leads to **Carpentry** National Certificate Level II (NC II). It covers **five** common competencies that the **Grade 7/Grade 8** Technology and Livelihood Education (TLE) student ought to possess: (1) using tools, equipment and paraphernalia; (2) performing mensuration and calculation; (3) practicing Occupational Health and Safety (OHS) procedures; (4) maintaining tools, equipment and paraphernalia; and (5) interpreting technical drawing and plans.

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

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
Introduction 1. Basic concepts in carpentry 2. Relevance of the course 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 2. Discuss the relevance of the course 3. Explore career opportunities in carpentry	
PERSONAL ENTREPRENEURIAL COMPETENCIES (PeCS)				
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 carpentry.	LO 1. Recognize Personal Entrepreneurial Competencies and Skills (PeCS) needed in carpentry 1.1 Assess one's PeCS: characteristics, attributes, lifestyle, skills, traits 1.2 Assess practitioner's: characteristics, attributes, lifestyle, skills, traits 1.3 Compare one's PeCS with that of a practitioner /entrepreneur	TLE_PECS7/8-00-1

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
ENVIRONMENT AND MARKET (EM)				
<ol style="list-style-type: none"> 1. Key concepts of Environment and Market 2. Products & 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 carpentry.	The learner independently generates a business idea based on the analysis of environment and market in carpentry.	LO 1. Generate a business idea that relates with a career choice in carpentry 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	TLE_EM7/8-00-1
LESSON 1: PREPARE CONSTRUCTION MATERIALS AND TOOLS (UT)				
<ol style="list-style-type: none"> 1. Carpentry tools and construction materials 2. Requisition procedure 3. Inventory of tools and materials <ol style="list-style-type: none"> 3.1 receiving 3.2 inspecting 3.3 recording 	The learner demonstrates an understanding of the underlying principles in the preparation of carpentry tools and construction materials.	The learner independently prepares carpentry tools and construction materials based on industry standards.	LO 1. Identify materials and tools for a task 1.1 Describe tools and materials used in carpentry 1.2 Prepare tools and materials for a task	TLE_IACP7/8UT-0a-1
			LO 2. Request appropriate materials and tools 2.1. Fill out forms in requesting for carpentry tools and materials as required for a task	TLE_IACP7/8UT-0b-2

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			LO 3. Receive and inspect materials 3.1 Check requested tools and materials in accordance with request form	TLE_IACP7/8UT-0b-3
LESSON 2: MAINTAIN TOOLS AND EQUIPMENT (MT)				
1. Hand tools and equipment	The learner demonstrates an understanding of the underlying principles in the maintenance of carpentry tools and equipment.	The learner independently performs maintenance of carpentry tools and equipment based on industry standards.	LO 1. Check condition of tools and equipment 1.1 Segregate defective tool from functional ones 1.2 Label defective tool 1.3 Report the list of defective tools	TLE_IACP7/8MT-0c-1
			LO 2. Perform basic preventive maintenance 2.1 Repair defective tools 2.2 Conduct preventive maintenance of carpentry tools	TLE_IACP7/8MT-0c-2
LESSON 3: PERFORM MENSURATION AND CALCULATION (MC)				
1. Measuring tools and equipment 2. Systems of measurement	The learner demonstrates an understanding of the concepts and underlying principles in performing measurements and calculations.	The learner independently performs accurate measurements and calculation based on a given task.	LO 1. Select measuring instruments 1.1 Identify linear measuring instrument appropriate for a given task	TLE_IACP7/8MC-0d-1
			LO 2. Carry out measurements and calculations 2.1. Measure given materials 2.2. Convert measurements to its equivalent unit/system 2.3. Calculate amount of materials for a specific task	TLE_IACP7/8MC-0d-e-2

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
LESSON 4: INTERPRET DRAWINGS AND PLANS (ID)				
1. Alphabet of lines 2. Isometric and orthographic drawings. 3. Drawing symbols and signs	The learner demonstrates an understanding of the concepts in interpreting technical drawing signs and symbols in carpentry.	The learner independently reads and interprets simple technical drawing signs and symbols based on standard specifications.	LO 1. Analyze signs, symbols and data 1.1 Explain the importance of signs, symbols and data in interpreting a work plan 1.2 Determine appropriate signs and symbols needed in the plan	TLE_IACP7/8ID-0f-1
			LO 2. Interpret technical drawings and plans 2.1 Read working plan 2.2 Interpret working plan	TLE_IACP7/8ID-0f-2
			LO 3. Apply freehand sketching 3.1 Perform freehand sketching exercises 3.2 Draw simple carpentry plans based on given tasks	TLE_IACP7/8ID-0g-h-3
LESSON 5: PRACTICE OCCUPATIONAL HEALTH AND SAFETY PROCEDURE (OS)				
1. Hazards and risks. 2. Safety Regulations. 3. 5S (Seiri, Seiso, Seiton, Seiketsu and Shitsuke)	The learner demonstrates an understanding of the concepts of occupational health and safety procedures.	The learner independently prepares an occupational health and safety checklist being applied in carpentry.	LO 1. Identify hazards and risks 1.1 List down the different health hazards and risks found in the workplace 1.2 Discuss the effects of health hazards and occupational risks	TLE_IACP7/8ID-0i-1

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			LO 2. Control hazards and risks 2.1 Formulate safety nets to control hazards and risks in the work place	TLE_IACP7/8ID-0i-2
			LO 3. Maintain occupational health and safety awareness 3.1 Explain the advantages and disadvantages of practicing OHS in the work 3.2 Develop checklist on maintaining OHS	TLE_IACP7/8ID-0j-3

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INDUSTRIAL ARTS – CARPENTRY
(160 hours)

Course Description:

This is a specialized course which leads to a **Carpentry** National Certificate Level II (NCII). It covers three core competencies that a high school student ought to possess: (1) preparing/staking out building lines, 2) fabricating formworks, and (3) installing formworks components.

The preliminaries of this specialized course include: (1) discussion on the core concepts in carpentry, and (2) explanation and observation of key concepts relative to the course.

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
Introduction 1. Core concepts in carpentry 2. Relevance of the course 3. Career opportunities	The learner demonstrates an understanding of the core concept and underlying theories in carpentry.	The learner independently demonstrates the core competencies in carpentry as prescribed by TESDA Training Regulations.	1. Explain core concepts in carpentry 2. Discuss the relevance of the course 3. Explore career opportunities in carpentry	
PERSONAL ENTREPRENEURIAL COMPETENCIES (PeCS)				
1. Assessment of Personal Competencies and Skills (PeCS) vis-à-vis a practicing entrepreneur/ employee in locality/town. 1.1 Characteristics 1.2 Attributes 1.3 Lifestyle 1.4 Skills 1.5 Traits 2. Analysis of PeCS in relation to a practitioner 3. Align, strengthen and develop ones PeCS based on the results	The learner demonstrates an understanding of one's Personal Competencies and Skills (PeCS) in carpentry.	The learner recognizes his/her Personal Entrepreneurial Competencies and Skills (PeCS) and prepares an activity plan that aligns with that of a practitioner/entrepreneur in carpentry.	LO 1. Recognize Personal Entrepreneurial Competencies and Skills (PeCS) needed in carpentry 1.1 Assess one's PeCS: characteristics, attributes, lifestyle, skills, traits 1.2 Assess practitioner's: characteristics, attributes, lifestyle, skills, traits 1.3 Compare one's PECSS with that of a practitioner /entrepreneur 1.4 Align one's PECSS with that of a practitioner/entrepreneur	TLE_PECS9-12-I0-1
ENVIRONMENT AND MARKET (EM)				
Market (Town) 1. Key concepts of Environment and Market	The learner demonstrates an understanding of the concepts environment and market in the	The learner independently creates a business vicinity map reflective of the potential	LO 1. Recognize and understand the market in Carpentry 1.1 Identify the players/ competitors within	TLE_EM9-12-I0-1

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
2. Players in the Market (Competitors) 3. Products & services available in the market	field of carpentry, particularly in one's town/municipality.	carpentry market within the locality/town.	the town 1.2 Identify the different products/services available in the market	
Market (Customer) 4. Key concepts in Identifying and Understanding the Consumer 5. Consumer Analysis through: 5.1 Observation 5.2 Interviews 5.3 Focus group discussion (FGD) 5.4 Survey			LO 2. Recognize the potential customer/market in Carpentry 2.1 Identify the profile of potential customers 2.2 Identify the customer's needs and wants through consumer analysis 2.3 Conduct consumer/market analysis	TLE_EM9-12-II0-2
6. Generating Business Ideas 6.1 Key concepts in generating business ideas 6.2 Knowledge, skills, passions and interests 6.3 new application 6.4 Irritants 6.5 Striking ideas (new concept) 6.6 Serendipity Walk			LO 3. Create new business ideas in the carpentry business by using various techniques 3.1 Explore ways of generating business idea from one's own characteristics/attributes 3.2 Generate business ideas using product innovation from irritants, trends and emerging needs 3.3 Generate business ideas using Serendipity Walk	TLE_EM9-12-III0-IV0-3

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
PREPARE / STAKEOUT BUILDING LINES (BL)				
1. Tools, materials and equipment for staking out building lines 2. Materials estimates 3. Properties of wood for staking-out building lines 4. Economic use of materials 5. Basic geometrical construction 6. Board foot computation 7. Job documentation preparation	The learner demonstrates an understanding in staking out building lines.	The learner independently prepares materials and stakes out building lines in carpentry based on construction standards.	LO 1. Prepare tools, equipment and materials for staking out building lines 1.1 Identify tools and materials for staking out building lines 1.2 Prepare tools and materials for staking out building lines 1.3 Select appropriate Personal Protective Equipment (PPE)	TLE_IACP9-12BL-Ia-h-1
8. Concepts of setting batter boards 9. Work inspection procedure 10. Types and uses of materials and tools			LO 2. Stake out and set batter boards 2.1 Set out stakes from pre-determined building lines 2.2 Measure, lay out and cut batter board according to specifications 2.3 Set stakes at 0.75-1.00 meter away from the pre-determined building lines 2.4 Secure batter boards with tolerance for dimensions at +/- 5 mm, and levelness of +/- 3 mm 2.5 Use PPE according to job requirements	TLE_IACP9-12BL-Ii-IIb-2
11. Types and functions of testing tools 12. Occupational health and safety procedures in the workplace 13. Work inspection procedure			LO 3. Fix building lines 3.1 Square building lines with end tolerance of +/- 3 mm 3.2 Measure and set building lines 3.3 Use PPE according to job requirements	TLE_IACP9-12BL-IIc-h-3

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
Lesson 2 : FABRICATE FORMWORKS (FW)				
1. Tools, materials and equipment for fabricating formworks 2. Materials estimates 3. Properties of wood for fabricating formworks 4. Economic use of materials 5. Linear measurement 6. Board foot computation 7. Job documentation preparation	The learner demonstrates an understanding of the concepts and underlying principles in fabricating formworks.	The learner independently fabricates formworks based on construction standards.	LO 1. Prepare tools, equipment and materials for fabricating formworks according to job requirements 1.1 Identify tools and materials for fabricating formworks 1.2 Prepare tools and materials for fabricating formworks 1.3 Select appropriate PPE	TLE_IACP9-12FW-IIIi-IIIId-1
8. Woodworking processes 9. Procedure in laying out and cutting of formworks 10. Linear measurement/board foot measure 11. Job documentation preparation			LO 2. Lay-out and cut to dimension of form sheathing and stiffeners 2.1 Lay out form sheathing and stiffeners with tolerances of +3 mm for all measurements and for squareness 2.2 Mark form sheathing and stiffeners according to job requirements 2.3 Cut form sheathing and stiffeners according to dimension 2.4 Use appropriate PPE	TLE_IACP9-12FW-IIIe-j-2
12. Procedure in laying out of formworks 13. Standards spacing of stiffeners 14. Procedure in assembling form panels and stiffeners 15. Practical solutions to problems encountered			LO 3. Assemble form panels 3.1 Lay out form panels and stiffeners for pre-assembly 3.2 Pre-assemble form panels and stiffeners 3.3 Check form panels and stiffeners for squareness according to job requirements 3.4 Assemble form panels and stiffeners 3.5 Use appropriate PPE	TLE_IACP9-12FW-IVa-j-3

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INDUSTRIAL ARTS – CARPENTRY
(160 hours)

Course Description:

This is a specialized course which leads to a **Carpentry**, National Certificate Level II (NCII). It covers one (1) core competency that a high school student ought to possess—namely, installing formworks components.

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

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
Introduction 1. Core concepts in carpentry 2. Relevance of the course 3. Career opportunities	The learner demonstrates an understanding of the core concepts and underlying theories in carpentry.	The learner independently demonstrates the core competency in carpentry as prescribed by TESDA Training Regulations.	1. Explain core concepts in carpentry 2. Discuss the relevance of the course 3. Explore career opportunities in carpentry	
PERSONAL ENTREPRENEURIAL COMPETENCIES (PeCS)				
1. Assessment of Personal Competencies and Skills (PeCS) vis-à-vis a practicing entrepreneur/employee in a province. 1.1 Characteristics 1.2 Attributes 1.3 Lifestyle 1.4 Skills 1.5 Traits 2. Analysis of PeCS in relation to a practitioner 3. Strengthening and further development of one's PeCS	The learner demonstrates an understanding of one's Personal Competencies and Skills (PeCS) in carpentry.	The learner independently creates a plan of action that strengthens/ further develops one's PeCS in carpentry.	LO 1. Develop and strengthen personal competencies and skills (PeCS) needed in carpentry 1.1 Identify areas for improvement, development and growth 1.2 Align one's PeCS according to his/her business/career choice 1.3 Create a plan of action that ensures success of his/her business/career choice	TLE_PECS9-12-IO-1

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
ENVIRONMENT AND MARKET (EM)				
1. Product Development 2. Key concepts in developing a product 3. Finding Value 4. Innovation 5. Unique Selling 5.1 Proposition (USP)	The learner demonstrates an understanding of the concepts environment and market in the field of carpentry, particularly in one's town/municipality.	The learner independently creates a business vicinity map reflective of the potential carpentry market within the locality/town.	LO 1. Develop a product/ service in Carpentry 1.1 Identify what is of "Value" to the customer 1.2 Identify the customer 1.3 Explain what makes a product unique and competitive 1.4 Apply creative and innovative techniques to develop marketable product 1.5 Employ a Unique Selling Proposition (USP) to the product/service	TLE_EM9-12-IO-II0-1
6. Selecting a Business Idea 7. Key concepts in selecting a business idea 7.1 Criteria 7.2 Techniques			LO 2. Select a business idea based on the criteria and techniques set 2.1 Enumerate various criteria and steps in selecting a business idea 2.2 Apply the criteria/steps in selecting a viable business idea 2.3 Determine a business idea based on the criteria/techniques set	TLE_EM9-12-III0-2

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
8. Branding			LO 3. Develop a brand for the product 3.1 Identify the benefits of having a good brand 3.2 Enumerate recognizable brands in the town/province 3.3 Enumerate the criteria for developing a brand 3.4 Generate a clear appealing product brand	TLE_EM9-12-IV0-3
INSTALL FORMWORKS COMPONENTS (IF)				
1. Materials, power and hand tools and equipment uses and specifications 2. Properties of wood and other materials	The learner demonstrates an understanding of the concepts and underlying principles in installing formwork components.	The learner independently installs formwork components based on construction standards.	LO 1. Prepare tools and materials for installing formworks components/form panels 1.1 Identify tools, equipment and materials for job requirements 1.2 Prepare tools, equipment and materials job requirements 1.3 Select appropriate PPE	TLE_IACP9-12IF-Ia-j-1
3. Assembling and disassembling scaffolding 4. Different scaffold locks, connectors and their uses 5. Equilibrium and stability of a structure			LO 2. Lay-out/assemble scaffolds and braces 2.1 Prepare work areas for safe laying out and assembling of scaffolds and braces 2.2 Assemble scaffolds and braces safely and securely: 2.2.1 free of interference 2.2.2 properly balanced 2.3 Secure connectors, locks and screws 2.4 Select appropriate PPE	TLE_IACP9-12IF-IIa-IVj-2
6. Steps in setting and fixing formwork /components assembly			LO 3. Set/fix formworks components/form panels 3.1 Lay out formworks components/form panels with tolerance of +3 mm for measurement,	TLE_IACP9-12IF-IIa-IVj-3

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
7. Proper use of leveling instruments 8. Stress on materials 9. Flexibility 10. Elasticity 11. Axial forces 12. Shear forces			alignment, levelness and plumbness 3.2 Set/fix formworks/form panel according to required job 3.3 Install braces to support the formworks 3.4 Apply form oil to the formworks 3.5 Re-check formworks components/form panels for squareness, levelness and plumbness 3.6 Use appropriate PPE	

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INDUSTRIAL ARTS – CARPENTRY
(160 hours)

Course Description:

This is a specialization course which leads to a **Carpentry** National Certificate Level II (NC II). It covers two core competencies that a high school student ought to possess: (1) stripping formwork components, and (2) installing framing works. The preliminaries of this specialized course include the following: (1) discussion on the relevance of the course, (2) explanation of key concepts relative to the course, and (3) exploration on career opportunities.

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
Introduction 1. Core concepts in carpentry 2. Relevance of the course 3. Career opportunities	The learner demonstrates an understanding of the core concepts and underlying theories in carpentry.	The learner independently demonstrates the core competencies in carpentry as prescribed by TESDA Training Regulations.	1. Explain the core concepts in carpentry 2. Discuss the relevance of the course 3. Explore career opportunities in carpentry	
STRIPPING FORMWORK COMPONENTS (SF)				
1. Interpreting working drawings/plans 2. Proper storage and inventory of formwork components 3. Types/kinds of power and hand tools/equipment 4. Selection and preparation of power and hand tools/equipment consistent with job requirement 5. Necessary action to be taken in response to actual situation 6. Safe practices in the job site 6. Types of PPE 7. OHS specification relevant to job requirement 8. Basic oral communication/ writing memos and letters 9. Preparing job documentation	The learner demonstrates an understanding of the underlying principles in stripping formwork components.	The learner independently strips formwork components in carpentry based on industry standards.	LO 1. PREPARE STAGING AREA, TOOLS AND EQUIPMENT 1.1. Identify formwork components and staging area 1.2. Select formwork components power tools, hand tools and equipment 1.3. Prepare formwork components based on job requirements	TLE_IACP9-12SF-Ia-j-1

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
10. Following instructions 11. Filling-out forms 12. Reading and interpreting plans				
13. Cement curing 14. Procedure in stripping formworks 15. Storage and inventory of formwork components 16. Different types and uses of cleaning materials and equipment 17. Safety procedures 18. OHS regulations 19. Lever/simple machine 20. Effect of moisture on wood quality 21. Deforming forces on wood 22. Proper waste disposal 23. Basic oral communication/ writing memos and letters 24. Preparing job documentation 25. Following instructions 26. Filling-out forms 27. Reading and interpreting plans 28. Steps in shoring and re-shoring 29. Storage & inventory of tools & equipment 30. Necessary action to be taken in response to actual situation 31. Safety practices observed in the jobsite			<p>LO 2. STRIP FORMWORKS OF BUILDING COMPONENTS</p> 2.1. Remove formwork components and accessories safely and sequentially after curing period 2.2. Sort, arrange and stage formwork components and accessories according to standard operating procedure 2.3. Clean, oil and store formwork components and accessories according to standard operating procedure 2.4. Repair or discard formwork components and accessories 2.5. Perform proper housekeeping (5S) <p>LO 3. SHORE AND RE-SHORE BUILDING COMPONENTS</p> 3.1. Shore and re-shore formworks components in accordance with stripping procedures 3.2. Remove shores in accordance with standard dismantling procedures 3.3. Clean, maintain and store shores, tools, equipment according to company rules and regulations 3.4. Perform proper housekeeping (5S) 3.5. Use appropriate PPE	<p>TLE_IACP9-12SF-IIa-j-2</p> <p>TLE_IACP9-12SF-IIIa-IVj-3</p>

**K to12 BASIC EDUCATION CURRICULUM
 JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL TECHNICAL-VOCATIONAL LIVELIHOOD TRACK
 INDUSTRIAL ARTS – CARPENTRY**

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
32. Lever/simple machines 33. Basic oral communication/ writing memos and letters 34. Reading and interpreting brochures and manuals				

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INDUSTRIAL ARTS – CARPENTRY
(160 hours)

Course Description:

This is a specialization course which leads to a **Carpentry** National Certificate Level II (NC II). It covers two (2) core competencies that a high school student ought to possess: 1) stripping formwork components and 2) installing framing works. The preliminaries of this specialized course include the following: (1) discussion on the relevance of the course, (2) explanation of key concepts relative to the course, and (3) exploration on career opportunities

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
Introduction 1. Core concepts in carpentry 2. Relevance of the course 3. Career opportunities	The learner demonstrates an understanding of the core concepts and underlying theories in carpentry.	The learner independently demonstrates the core competencies in carpentry as prescribed by TESDA Training Regulations.	1. Explain the core concepts in carpentry 2. Discuss the relevance of the course 3. Explore career opportunities in carpentry	
INSTALLING FRAMING WORKS (IF)				
1. Classification of Philippine lumber 2. Different materials, sizes, grades and uses	The learner demonstrates an understanding of the underlying principles in installing framing works.	The learner independently installs framing works based on industry standards.	LO 1. PREPARE APPROPRIATE TOOLS, EQUIPMENT AND MATERIALS FOR INSTALLING FRAMING WORKS 1.1. Identify tools, equipment and materials for job requirements 1.2. Prepare tools, equipment and materials in accordance with the job requirement 1.3. Select appropriate PPE.	TLE_IACP9-12IF-Ia-h-1
3. Procedure in erecting posts, installing girts and girders			LO 2. LAY-OUT/ERECT AND ASSEMBLE POST AND GIRTS 2.1. Lay out, mark and cut posts and girts according to working drawings and specifications with tolerance of +3mm on all measurements, plumbness, and levelness 2.2. Erect posts vertically based on plans and specifications with a tolerance of +3mm on all measurements 2.3. Attach girts and girders to posts horizontally according to plans and specifications	TLE_IACP9-12IF-Ii-IId-2

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			2.4. Perform proper housekeeping (5S) 2.5. Use appropriate PPE	
4. Procedure in installing floor joists 5. Procedure in cutting materials 6. Standard size of floor openings/manhole			LO 3. LAY-OUT/INSTALL FLOOR JOISTS 3.1. Measure and cut lateral support of floor joist 3.2. Lay out and fix lateral support of floor joists at +3mm on all measurements and levelness in accordance with working drawings and specifications 3.3. Trim joists for openings and fixed with fastenings according to the requirements of the working drawings and specifications 3.4. Perform proper housekeeping (5S) 3.5. Use appropriate PPE	TLE_IACP9-12IF-IIe-j-3
7. Procedure in installing vertical/horizontal wall studs			LO 4. LAY OUT/INSTALL WALL STUDS 4.1. Measure and cut wall studs based on working drawings and specifications with tolerance of + 3mm maximum on all measurements 4.2. Lay out horizontal studs 4.3. Install horizontal studs with specification of +3mm maximum tolerance on all measurements based on job requirements 4.4. Perform proper housekeeping (5S) 4.5. Use appropriate PPE	TLE_IACP9-12IF-IIIa-h-4

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
8. Different types of roof designs 9. Procedures in fabricating and installing roof frames 10. Parts of a roof 11. Stress in a structure 12. Tension and compression of parts			LO 5. LAY-OUT/FABRICATE/INSTALL ROOF FRAMES 5.1. Layout and fabricate roof components according to working drawings and specifications with tolerance of + 3mm on all measurements, plumbness, levelness and squareness 5.2. Install roof components according to working drawings and specifications 5.3. Perform housekeeping 5.4. Use appropriate PPE	TLE_IACP9-12IF-IIIi-IVd-5
13. Procedures in installing ceiling joists			LO 6. LAY-OUT/INSTALL CEILING JOIST 6.1. Measure, and cut ceiling joists according to working drawings and specifications with a tolerance of + 3mm on all measurements, levelness and squareness 6.2. Lay out and install ceiling joists according to working drawings and specifications with a tolerance of + 3mm on all measurements, levelness and squareness	TLE_IACP9-12IF-IVe-j-6

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INDUSTRIAL ARTS – CARPENTRY
GLOSSARY**

**K to12 BASIC EDUCATION CURRICULUM
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 INDUSTRIAL ARTS – CARPENTRY
 Code Book Legend**

Sample: TLE_IACP9-12IF-IIa-IVj-2

LEGEND		SAMPLE	
First Entry	Learning Area and Strand/ Subject or Specialization	Technology and Livelihood Education_Industrial Arts Carpentry	TLE_IA CP 9-12
	Grade Level	Grade 9/10/11/12	
Uppercase Letter/s	Domain/Content/ Component/ Topic	Install Formworks Components	IF
			-
Roman Numeral <i>*Zero if no specific quarter</i>	Quarter	Second to Fourth Quarter	II-IV
Lowercase Letter/s <i>*Put a hyphen (-) in between letters to indicate more than a specific week</i>	Week	Week One to Ten	a-j
			-
Arabic Number	Competency	Lay-out/ Assemble scaffolds and braces	2

DOMAIN/ COMPONENT	CODE
Personal Entrepreneurial Skills	PECS
Environment and Marketing	EM
Prepare Construction Materials and Tools	UT
Perform Mensuration Calculation	MC
Interpret Drawings and Plans	ID
Practice Occupational Health and Safety Procedure	OS
Prepare/ Stakeout Building Lines	BL
Fabricate Formworks	FW
Install Formworks Components	IF

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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 INDUSTRIAL ARTS – CARPENTRY**

SAMPLE INDUSTRIAL ARTS CURRICULUM MAP

No.	Grade 7/8	Grade 9	Grade 10	Grade 11	Grade 12
1			*Automotive Servicing (NC I)		8 sems
2			*Carpentry (NC II)		8 sems
3			*Consumer Electronics Servicing (NC II)		8 sems
4			*Electrical Installation and Maintenance (NC II)		8 sems
5	EXPLORATORY	**Plumbing (NC I)		**Plumbing (NC II)	
6			4 sems		4 sems
7		*Refrigeration and Airconditioning (NC II)			8 sems
8		**Shielded Metal Arc Welding (NC I)		**Shielded Metal Arc Welding (NC II)	
9			4 sems		4 sems
10					
11		**Masonry (NC II)	4 sems	**Tile Setting (NC II)	4 sems

- * Students must complete four years to take the NC Exam.
- ** Students must complete two years to take the NC Exam.