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

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

AGRI-FISHERY ARTS

	Specialization	Number of Hours	Pre-requisite
1.	Agricultural Crops Production (NC I)		
2.	Agricultural Crops Production (NC II)++	480 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 (NC II)
5.	Animal Production (NC II) + *When updated, this CG will become the following:* *1. Animal Production (Poultry-Chicken) (NC II);* *2. Animal Production (Ruminants) (NC II); and* *3. Animal Production (Swine) (NC II)*	480 hours	
6.	Aquaculture (NC II)	640 hours	
7.	Artificial Insemination (Ruminants) (NC II)	160 hours	Animal Production (NC II)
8.	Artificial Insemination (Swine) (NC II)	160 hours	Animal Production (NC II)
9.	Agricultural Crops Production (NC I)	320 hours	
10.	Fish Capture (NC II) ++	640 hours	
11.	Fishing Gear Repair and Maintenance (NC III)	320 hours	
12.	Fish-Products Packaging (NC II)	320 hours	
13.	Fish Wharf Operation (NC I)	160 hours	
14.	Food (Fish) Processing (NC II)	640 hours	
15.	Horticulture (NC II) +	640 hours	
16.	Horticulture (NC III)	640 hours	Horticulture (NC II)
17.	Landscape Installation and Maintenance (NC II)	320 hours	Agricultural Crops Production (NC I)
18.	Organic Agriculture (NC II)	320 hours	Agricultural Crops Production (NC I)
19.	Pest Management (NC II)	320 hours	Agricultural Crops Production (NC I)
20.	Rice Machinery Operation (NC II)	320 hours	Agricultural Crops Production (NC I)
21.	Rubber Processing (NC II)	320 hours	
22.	Rubber Production (NC II)	320 hours	
23.	Slaughtering Operation (NC II)	160 hours	Animal Production (NC II)

+CG to be updated by December 2015
++CG to be uploaded by December 2015

HOME ECONOMICS

	Specialization	Number of Hours	Pre-requisite
1.	Attractions and Theme Parks (NC II)	160 hours	
2.	Barbering (NC II)	320 hours	
3.	Bartending (NC II)	320 hours	
4.	Beauty/Nail Care (NC II)	160 hours	40 hours of the subject during exploratory Grade 7/8
5.	Bread and Pastry Production (NC II)	160 hours	
6.	Caregiving (NC II)	640 hours	40 hours of the subject during exploratory Grade 7/8
7.	Commercial Cooking (NC III)	320 hours	Cookery (NC II)
8.	Cookery (NC II)	320 hours	40 hours of the subject during exploratory Grade 7/8
9.	Dressmaking (NC II)	320 hours	40 hours of the subject during exploratory Grade 7/8
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) [+]	160 hours	
13.	Front Office Services (NC II)	160 hours	40 hours of the subject during exploratory Grade 7/8
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) [+]	160 hours	
21.	Local Guiding Services (NC II)	160 hours	
22.	Tailoring (NC II)	320 hours	40 hours of the subject during exploratory Grade 7/8
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 – CARPENTRY (NC II)

INDUSTRIAL ARTS

	Specialization	Number of Hours	Pre-requisite
1.	Automotive Servicing (NC 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.	Consumer Electronics Servicing (NC II) [+]	640 hours	
7.	Domestic Refrigeration and Airconditioning (DOMRAC) Servicing (NC II)	640 hours	
8.	Driving (NC II)	160 hours	
9.	Electrical Installation and Maintenance (NC II)	640 hours	
10.	Electric Power Distribution Line Construction (NC II)	320 hours	Electrical Installation and Maintenance (NC II)
11.	Electronic Products Assembly and Servicing (NC II) [++] *(CG under construction based on Consumer Electronics Servicing (NC II) CG)*	640 hours	
12.	Furniture Making (Finishing) (NC II) [+]	480 hours	
13.	Instrumentation and Control Servicing (NC II)	320 hours	Electronic Products Assembly and Servicing (EPAS) (NC II)
14.	Gas Metal Arc Welding (GMAW) (NC II)	320 hours	Shielded Metal Arc Welding (SMAW) (NC II)
15.	Gas Tungsten Arc Welding (GTAW) (NC II)	320 hours	Shielded Metal Arc Welding (GMAW) (NC II)
16.	Machining (NC I) [++]	640 hours	
17.	Machining (NC II)	640 hours	Machining (NC I)
18.	Masonry (NC II)	320 hours	
19.	Mechatronics Servicing (NC II)	320 hours	Consumer Electronics Servicing (NC II)
20.	Motorcycle/Small Engine Servicing (NC II)	320 hours	
21.	Plumbing (NC I)	320 hours	
22.	Plumbing (NC II)	320 hours	Plumbing (NC I)
23.	Refrigeration and Air-Conditioning (Packaged Air-Conditioning Unit [PACU]/Commercial Refrigeration Equipment [CRE]) Servicing (NC III)	640 hours	Domestic Refrigeration and Airconditioning (DOMRAC) Servicing (NC II)
24.	Shielded Metal Arc Welding (NC I)	320 hours	
25.	Shielded Metal Arc Welding (NC II)	320 hours	Shielded Metal Arc Welding (NC I)
26.	Tile Setting (NC II)	320 hours	
27.	Transmission Line Installation and Maintenance (NC II)	640 hours	Electrical Installation and Maintenance (NC II)

[+]CG to be updated by December 2015
[++]CG to be uploaded by December 2015

INFORMATION, COMMUNICATIONS AND TECHNOLOGY (ICT)

	Specialization	Number of Hours	Pre-requisite
1.	Animation (NC II)	320 hours	
2.	Broadband Installation (Fixed Wireless Systems) (NC II)	160 hours	1. Telecom OSP and Subscriber Line Installation (Copper Cable/POTS and DSL) (NC II) 2. Telecom OSP Installation (Fiber Optic Cable) (NC II)
3.	Computer Hardware Servicing (NC II) [+]	320 hours	
4.	Computer Programming (NC IV) [+] *When updated, this CG will become the following:* *1. Programming (.net Technology) (NC II)[++]* *2. Programming (Java) (NC II)[++]* *3. Programming (Oracle Database) (NC II)[++]*	320 hours	
5.	Computer System Servicing (NC II) [++] *(CG under construction based on Computer Hardware Servicing (NC II) CG)*	320 hours	
6.	Contact Center Services (NC II)	320 hours	
7.	Illustration (NC II)	320 hours	
8.	Medical Transcription (NC II)	320 hours	
9.	Technical Drafting (NC II)	320 hours	
10.	Telecom OSP and Subscriber Line Installation (Copper Cable/POTS and DSL) (NC II)	320 hours	Computer Hardware Servicing (NC II)
11.	Telecom OSP Installation (Fiber Optic Cable) (NC II)	160 hours	Telecom OSP and Subscriber Line Installation (Copper Cable/POTS and DSL) (NC II)

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JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL TECHNICAL-VOCATIONAL LIVELIHOOD TRACK
INDUSTRIAL ARTS – CARPENTRY (NC II)
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**

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
ENVIRONMENT AND MARKET (EM)				
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)				
1. Carpentry tools and construction materials 2. Requisition procedure 3. Inventory of tools and materials 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**

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	**TLE_IACP7/8MC-0d-e-2**

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			2.3. Calculate amount of materials for a specific task	
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**

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 (NC II)
(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	The learner demonstrates an understanding of the	The learner independently creates a business vicinity map	**LO 1. Recognize and understand the market in Carpentry**	**TLE_EM9-12-I0-1**

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
Environment and Market 2. Players in the Market (Competitors) 3. Products & services available in the market	concepts environment and market in the field of carpentry, particularly in one's town/municipality.	reflective of the potential carpentry market within the locality/town.	1.1 Identify the players/ competitors within 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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INDUSTRIAL ARTS – CARPENTRY (NC II)

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**

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
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**
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-IIi-IIId-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**

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
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 (NC II)

(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-I0-1**

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INDUSTRIAL ARTS – CARPENTRY (NC II)

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-I0-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**

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			**LO 3. Set/fix formworks components/form panels**	**TLE_IACP9-12IF-IIa-IVj-3**

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
/components assembly 7. Proper use of leveling instruments 8. Stress on materials 9. Flexibility 10. Elasticity 11. Axial forces 12. Shear forces			3.1 Lay out formworks components/form panels with tolerance of +3 mm for measurement, 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	

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

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
memos and letters 9. Preparing job documentation 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			**LO 2. STRIP FORMWORKS OF BUILDING COMPONENTS** 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) **LO 3. SHORE AND RE-SHORE BUILDING COMPONENTS** 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	**TLE_IACP9-12SF-IIa-j-2** **TLE_IACP9-12SF-IIIa-IVj-3**

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
actual situation 31. Safety practices observed in the jobsite 32. Lever/simple machines 33. Basic oral communication/ writing memos and letters 34. Reading and interpreting brochures and manuals				

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JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL TECHNICAL-VOCATIONAL LIVELIHOOD TRACK
INDUSTRIAL ARTS – CARPENTRY (NC II)
(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	**TLE_IACP9-12IF-Ii-IId-2**

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			specifications 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**

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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JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL TECHNICAL-VOCATIONAL LIVELIHOOD TRACK
INDUSTRIAL ARTS – CARPENTRY (NC II)
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_IACP 9-12**
	Grade Level	Grade 9/10/11/12	
Uppercase Letter/s	Domain/Content/ Component/ Topic	Install Formworks Components	**IF**
			-
Roman Numeral **Zero if no specific quarter*	Quarter	Second to Fourth Quarter	**II-IV**
Lowercase Letter/s **Put a hyphen (-) in between letters to indicate more than a specific week*	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.

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

SAMPLE INDUSTRIAL ARTS CURRICULUM MAP** (as of November 2015)

GRADE 7/8 (EXPLORATORY)	GRADES 9-12			
EXPLORATORY 4 sems	Automotive Servicing (NC I)+			8 sems
	*Automotive Servicing (NC II)			8 sems
	Motorcycle/Small Engine Servicing (NC II) 4 sems	Driving (NC II) 2 sems		
	Consumer Electronics Servicing (NC II)+			8 sems
		*Mechatronics Servicing (NC II)		4 sems
	Electronic Products Assembly and Servicing (NC II)++			8 sems
		*Instrumentation Control and Servicing (NC II)		4 sems
	Electrical Installation and Maintenance (NC II)			8 sems
		*Electrical Power Line Distribution Line Construction (NC II)		4 sems
		*Transmission Line Installation and Maintenance (NC II)		4 sems
	Machining (NC I)++			8 sems
	*Machining (NC II)			8 sems
	Plumbing (NC I) 4 sems	*Plumbing (NC II)		4 sems
	Domestic Refrigeration and Airconditioning Servicing (NC II)			8 sems
	*Domestic Refrigeration and Airconditioning Servicing (PACU/CRE) (NC III)			8 sems
	Shielded Metal Arc Welding (NC I) 4 sems	*Shielded Metal Arc Welding (NC II)		4 sems
		*Gas Metal Arc Welding (GMAW) (NC II)		4 sems
		*Gas Tungsten Arc Welding (GTAW) (NC II)		4 sems
	Carpentry (NC II)			8 sems
	*Carpentry (NC III) 4 sems	Construction Painting (NC II) 2 sems		
	Furniture Making (Finishing) (NC II) +		6 sems	
	Masonry (NC II) 4 sems	Tile Setting (NC II)		4 sems

* Please note that these subjects have pre-requisites mentioned in the CG.
Other specializations with no pre-requisites may be taken up during these semesters.
Pre-requisites of the subjects to the right should be taken up during these semesters.

\+ CG to be updated by December 2015

++ CG to be uploaded by December 2015

****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.**