

**K TO 12 BASIC EDUCATION CURRICULUM**  
**JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD TRACK AND SENIOR HIGH SCHOOL – TECHNICAL-VOCATIONAL LIVELIHOOD TRACK**  
**INFORMATION AND COMMUNICATIONS TECHNOLOGY – TELECOM OSP INSTALLATION (FIBER OPTIC CABLE) NC II**  
(160 hours)

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

**AGRI-FISHERY ARTS**

	<b>Specialization</b>	<b>Number of Hours</b>	<b>Pre-requisite</b>
1.	Agricultural Crops Production (NC I)	320 hours	
2.	Agricultural Crops Production (NC II) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	640 hours	
3.	Agricultural Crops Production (NC III)	640 hours	Agricultural Crops Production (NC II)
4.	Animal Health Care Management (NC III)	320 hours	Animal Production (Poultry-Chicken) (NC II) or Animal Production (Ruminants) (NC II) or Animal Production (Swine) (NC II)
5.	Animal Production (Poultry-Chicken) (NC II) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	320 hours	
6.	Animal Production (Large Ruminants) (NC II) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	320 hours	
7.	Animal Production (Swine) (NC II) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	320 hours	
8.	Aquaculture (NC II)	640 hours	
9.	Artificial Insemination (Large Ruminants) (NC II)	160 hours	Animal Production (Large Ruminants) (NC II)
10.	Artificial Insemination (Swine) (NC II)	160 hours	Animal Production (Swine) (NC II)
11.	Fish Capture (NC II)	640 hours	
12.	Fishing Gear Repair and Maintenance (NC III)	320 hours	
13.	Fish-Products Packaging (NC II)	320 hours	
14.	Fish Wharf Operation (NC I)	160 hours	
15.	Food Processing (NC II)	640 hours	
16.	Horticulture (NC III)	640 hours	Agricultural Crops Production (NC II)
17.	Landscape Installation and Maintenance (NC II)	320 hours	
18.	Organic Agriculture (NC II)	320 hours	
19.	Pest Management (NC II)	320 hours	
20.	Rice Machinery Operations (NC II)	320 hours	
21.	Rubber Processing (NC II)	320 hours	
22.	Rubber Production (NC II)	320 hours	
23.	Slaughtering Operations (Hog/Swine/Pig) (NC II)	160 hours	

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**HOME ECONOMICS**

	<b>Specialization</b>	<b>Number of Hours</b>	<b>Pre-requisite</b>
1.	Attractions and Theme Parks Operations with Ecotourism (NC II)	160 hours	
2.	Barbering (NC II)	320 hours	
3.	Bartending (NC II)	320 hours	
4.	Beauty/Nail Care (NC II)	160 hours	
5.	Bread and Pastry Production (NC II)	160 hours	
6.	Caregiving (NC II)	640 hours	
7.	Commercial Cooking (NC III)	320 hours	Cookery (NC II)
8.	Cookery (NC II)	320 hours	
9.	Dressmaking (NC II)	320 hours	
10.	Events Management Services (NC III)	320 hours	
11.	Fashion Design (Apparel) (NC III)	640 hours	Dressmaking (NC II) or Tailoring (NC II)
12.	Food and Beverage Services (NC II) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	160 hours	
13.	Front Office Services (NC II)	160 hours	
14.	Hairdressing (NC II)	320 hours	
15.	Hairdressing (NC III)	640 hours	Hairdressing (NC II)
16.	Handicraft (Basketry, Macrame) (Non-NC)	160 hours	
17.	Handicraft (Fashion Accessories, Paper Craft) (Non-NC)	160 hours	
18.	Handicraft (Needlecraft) (Non-NC)	160 hours	
19.	Handicraft (Woodcraft, Leathercraft) (Non-NC)	160 hours	
20.	Housekeeping (NC II) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	160 hours	
21.	Local Guiding Services (NC II)	160 hours	
22.	Tailoring (NC II)	320 hours	
23.	Tourism Promotion Services (NC II)	160 hours	
24.	Travel Services (NC II)	160 hours	
25.	Wellness Massage (NC II)	160 hours	

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**INDUSTRIAL ARTS**

	<b>Specialization</b>	<b>Number of Hours</b>	<b>Pre-requisite</b>
1.	Automotive Servicing (NC I) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	640 hours	
2.	Automotive Servicing (NC II)	640 hours	Automotive Servicing (NC I)
3.	Carpentry (NC II)	640 hours	
4.	Carpentry (NC III)	320 hours	Carpentry (NC II)
5.	Construction Painting (NC II)	160 hours	
6.	Domestic Refrigeration and Air-conditioning (DOMRAC) Servicing (NC II)	640 hours	
7.	Driving (NC II)	160 hours	
8.	Electrical Installation and Maintenance (NC II)	640 hours	
9.	Electric Power Distribution Line Construction (NC II)	320 hours	Electrical Installation and Maintenance (NC II)
10.	Electronic Products Assembly and Servicing (NC II) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	640 hours	
11.	Furniture Making (Finishing) (NC II)	640 hours	
12.	Instrumentation and Control Servicing (NC II)	320 hours	Electronic Products Assembly and Servicing (EPAS) (NC II)
13.	Gas Metal Arc Welding (GMAW) (NC II)	320 hours	Shielded Metal Arc Welding (SMAW) (NC II)
14.	Gas Tungsten Arc Welding (GTAW) (NC II)	320 hours	Shielded Metal Arc Welding (GMAW) (NC II)
15.	Machining (NC I)	640 hours	
16.	Machining (NC II)	640 hours	Machining (NC I)
17.	Masonry (NC II)	320 hours	
18.	Mechatronics Servicing (NC II)	320 hours	Electronic Products Assembly and Servicing (EPAS) (NC II)
19.	Motorcycle/Small Engine Servicing (NC II)	320 hours	
20.	Plumbing (NC I)	320 hours	
21.	Plumbing (NC II)	320 hours	Plumbing (NC I)
22.	Refrigeration and Air-Conditioning (Packaged Air-Conditioning Unit [PACU]/Commercial Refrigeration Equipment [CRE]) Servicing (NC III)	640 hours	Domestic Refrigeration and Air-conditioning (DOMRAC) Servicing (NC II)
23.	Shielded Metal Arc Welding (NC I)	320 hours	
24.	Shielded Metal Arc Welding (NC II)	320 hours	Shielded Metal Arc Welding (NC I)
25.	Tile Setting (NC II)	320 hours	
26.	Transmission Line Installation and Maintenance (NC II)	640 hours	Electrical Installation and Maintenance (NC II)

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**INFORMATION, COMMUNICATIONS AND TECHNOLOGY (ICT)**

	<b>Specialization</b>	<b>Number of Hours</b>	<b>Pre-requisite</b>
1.	Animation (NC II)	320 hours	
2.	Broadband Installation (Fixed Wireless Systems) (NC II)	160 hours	Computer Systems Servicing (NC II)
3.	Computer Programming (.Net Technology) (NC III) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	320 hours	
4.	Computer Programming (Java) (NC III) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	320 hours	
5.	Computer Programming (Oracle Database) (NC III) <i>updated based on TESDA Training Regulations published December 28, 2013</i>	320 hours	
6.	Computer Systems Servicing (NC II) <i>updated based on TESDA Training Regulations published December 28, 2007</i>	640 hours	
7.	Contact Center Services (NC II)	320 hours	
8.	Illustration (NC II)	320 hours	
9.	Medical Transcription (NC II)	320 hours	
10.	Technical Drafting (NC II)	320 hours	
11.	Telecom OSP and Subscriber Line Installation (Copper Cable/POTS and DSL) (NC II)	320 hours	Computer Systems Servicing (NC II)
12.	Telecom OSP Installation (Fiber Optic Cable) (NC II)	160 hours	Computer Systems Servicing (NC II)

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(160 hours)

Pre-requisite: Computer Systems Servicing NC II

**Course Description:**

This is a specialization course that leads to a Telecom OSP Installation (Fiber Optic Cable) National Certificate Level II (NC II). Two (2) core competencies that a student ought to possess are identified, namely: 1) installing and splicing/joining aerial/underground fiber optic cables, and 2) performing optical testing and repair. The preliminaries of this specialization course include the following: 1) discussion of the relevance of the course, 2) explanation of key concepts of common competencies, 3) explanation of core competencies relative to the course, and 4) exploration of career opportunities.

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
<p><b>Introduction</b></p> <ol style="list-style-type: none"> <li>1. Relevance of the course</li> <li>2. Concepts and core competencies in Telecom OSP Installation (Fiber Optic Cable)</li> <li>3. Career opportunities</li> </ol>	<p>The learner demonstrates an understanding of key concepts, underlying principles and core competencies in Telecom OSP Installation (Fiber Optic Cable).</p>	<p>The learner independently creates/provides quality and marketable product and/or service in Telecom OSP Installation (Fiber Optic Cable), as prescribed by TESDA Training Regulations.</p>	<ol style="list-style-type: none"> <li>1. Discuss the relevance of the course.</li> <li>2. Explain key concepts of common competencies.</li> <li>3. Explain core competencies of Telecom OSP Installation (Fiber Optic Cable).</li> <li>4. Explore job opportunities for Telecom OSP Installation (Fiber Optic Cable) as a career.</li> </ol>	
<b>PERSONAL ENTREPRENEURIAL COMPETENCIES (PECS)</b>				
<ol style="list-style-type: none"> <li>1. Assessment of Personal Competencies and Skills (PECS) vis-à-vis a practicing entrepreneur/employee in locality/town <ol style="list-style-type: none"> <li>1.1 Characteristics</li> <li>1.2 Attributes</li> <li>1.3 Lifestyle</li> <li>1.4 Skills</li> <li>1.5 Traits</li> </ol> </li> <li>2. Analysis of PECS in relation to a practitioner</li> <li>3. Alignment, strengthening and development of one's PECS based on the result</li> </ol>	<p>The learner demonstrates an understanding of one's PECS in Telecom OSP Installation (Fiber Optic Cable)</p>	<p>The learner recognizes is/her PECS and prepares an activity plan that aligns with that of a practitioner/entrepreneur in Telecom OSP Installation (Fiber Optic Cable).</p>	<p><b>LO 1. Recognize PECS needed in Telecom OSP Installation (Fiber Optic Cable).</b></p> <ol style="list-style-type: none"> <li>1.1 Assess one's PECS: characteristics, attributes, lifestyle, skills, and traits.</li> <li>1.2 Assess practitioner's: characteristics, attributes, lifestyle, skills, traits.</li> <li>1.3 Compare one's PECS with that of a practitioner/entrepreneur.</li> <li>1.4 Align one's PECS with that of a practitioner/entrepreneur.</li> </ol>	<b>TLE_PECS9-12-00-1</b>

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
<b>ENVIRONMENT AND MARKET (EM)</b>				
<ol style="list-style-type: none"> <li>1. Market (Locality/town)</li> <li>2. Key concepts of market</li> <li>3. Players in the market (Competitors)</li> <li>4. Products and services available in the market</li> </ol>	The learner demonstrates an understanding of environment and market in Telecom OSP Installation (Fiber Optic Cable) in one’s locality/town.	The learner independently creates a business vicinity map reflective of potential market in Telecom OSP Installation (Fiber Optic Cable) in a locality/town.	<p><b>LO 1. Recognize and understand the market in Telecom OSP Installation (Fiber Optic Cable).</b></p> <ol style="list-style-type: none"> <li>1.1 Identify the players/competitors with in the town.</li> <li>1.2 Identify the different products/services available in the market.</li> </ol>	<b>TLE_EM9-12-00-1</b>
<ol style="list-style-type: none"> <li>1. Market (Customer)</li> <li>2. Key concepts of identifying and understanding the consumer</li> <li>3. Consumer Analysis through: <ol style="list-style-type: none"> <li>3.1 Observation</li> <li>3.2 Interviews</li> <li>3.3 Focus Group Discussion (FGD)</li> <li>3.4 Survey</li> </ol> </li> </ol>			<p><b>LO 2. Recognize the potential customer/market in Telecom OSP Installation (Fiber Optic Cable).</b></p> <ol style="list-style-type: none"> <li>2.1 Identify the profile of potential customers.</li> <li>2.2 Identify the customer’s needs and wants through consumer analysis.</li> <li>2.3 Conduct consumer/market analysis.</li> </ol>	<b>TLE_EM9-12-00-2</b>
<b>CORE COMPETENCIES</b>				
<b>LESSON 1: INSTALLING AND SPLICING/JOINING AERIAL/UNDERGROUND FIBER OPTIC CABLES (ISF)</b>				
<ul style="list-style-type: none"> <li>• Basics of fiber optics</li> <li>• Optical fiber components</li> <li>• Tools, equipment and PPE for fiber optics cabling</li> <li>• Cable preparation and installation requirements</li> <li>• Constraints from plan and site inspection</li> <li>• Receiving fiber optic cable and equipment on Site</li> <li>• Handling of fiber optic</li> </ul>	The learner demonstrates an understanding of the concepts and principles in installing and splicing/joining aerial/underground fiber optic cables.	The learner independently performs installation and splicing/joining aerial/underground fiber optic cables based on TESDA Training Regulation.	<p><b>LO 1. Prepare for fiber optic cable layout and installation.</b></p> <ol style="list-style-type: none"> <li>1.1 Prepare the necessary tools, equipment, materials and personal protective equipment (PPE) in line with job requirements.</li> <li>1.2 Identify cable preparation and installation and constraints from plan and site inspection as per job requirements.</li> <li>1.3 Set up cable preparation and installation equipment in accordance with</li> </ol>	<b>TLE ICTFOC9-12ISF-Ia-e-1</b>

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
cables <ul style="list-style-type: none"> <li>• Support structures</li> <li>• Site safety</li> <li>• Cable route</li> </ul>			manufacturer's and job requirements. 1.4 Make site safe and secure for cable installation. 1.5 Select suitable protective clothing and use required safety devices. 1.6 Assess support structure in line with job requirements. 1.7 Check and clear cable route for obstructions and vertical clearances from street level using suitable methods and in coordination with authorities concerned. 1.8 Lay out optic cable in line with installation plan.	
<ul style="list-style-type: none"> <li>• Fiber optic cable construction</li> <li>• Fiber optic cable types</li> <li>• Preparing the fibers</li> <li>• Bend radius</li> <li>• Tensile rating</li> </ul>			<b>LO2. Prepare fiber optic cable for splicing and joining.</b> 2.1 Install sheath opening of the cable and strengthen member as required per outside plant standards. 2.2 Secure buffer tubes and fiber strands and align/position assembly of fiber optic organizer in accordance with standard installation procedures. 2.3 Strip, clean and cleave fiber strands in accordance with established procedures. 2.4 Observe loop and bending radius tolerance for cable materials at all times.	<b>TLE ICTFOC9-12ISF-If-j-2</b>
<ul style="list-style-type: none"> <li>• Splicing</li> <li>• Splice performance               <ul style="list-style-type: none"> <li>- Intrinsic</li> <li>- Extrinsic</li> </ul> </li> <li>• Reflectance</li> <li>• Fusion splice process</li> <li>• Fusion machine</li> <li>• Safety standards in using</li> </ul>			<b>LO 3. Splice/Join fibers and install protection sleeves using fusion machine.</b> 3.1 Follow occupational safety & health standard (OSHS) policies and procedures based on safety requirements. 3.2 Perform insertion of fibers strand to the fusion machine (automatic operation) in accordance with procedural standards and	<b>TLE ICTFOC9-12ISF-IIa-e-3</b>

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the fusion machine <ul style="list-style-type: none"> <li>• Parts of a fusion machine</li> <li>• Operation of fusion machine</li> <li>• Documentation and accomplishment reports</li> </ul>			product/equipment specification. 3.3 Protect and organize spliced fiber strands as per procedure and job requirements. 3.4 Apply loop and bending radius tolerance in line with established standards. 3.5 Report problems encountered as per standard operating procedures (SOP). 3.6 Report/document accomplishment reports accurately in accordance with job requirements.	
<ul style="list-style-type: none"> <li>• Mechanical splicing</li> <li>• Alignment mechanisms</li> <li>• Mechanical splicing methods</li> <li>• Using a visual fault locator</li> <li>• Documentation and accomplishment reports</li> </ul>			<b>LO 4. Splice/Join fibers and install protection sleeves using mechanical method.</b> 4.1 Follow occupational health & safety (OH&S) policies and procedures based on safety requirements. 4.2 Follow placement of prepared fiber in mechanical splicing kit as per established procedure. 4.3 Protect and organize spliced fiber strands as per procedure and job requirements. 4.4 Apply loop and bending radius tolerance in line with established standards. 4.5 Report problems encountered as per standard operating procedures (SOP). 4.6 Report/document accomplishment accurately in accordance with job requirements.	<b>TLE ICTFOC9-12ISF-IIIf-j-4</b>
<ul style="list-style-type: none"> <li>• Connector types</li> <li>• Connector termination</li> <li>• Installation hardware</li> <li>• Installation methods</li> <li>• Fire resistance and grounding</li> <li>• Flash test</li> </ul>			<b>LO 5. Install cable closure and support (aerial and underground).</b> 5.1 Place cable inside and properly attach and close the cable cover in accordance with product specification. 5.2 Report problems encountered as per standard operating procedures (SOP).	<b>TLE ICTFOC9-12ISF-IIIIa-e-5</b>



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			5.3 Flash test the completed closure according to job requirements and SOP to prevent water and moisture entry. 5.4 Attach spliced cables to messenger wire/pole or cable rack for support in line with job requirements and product specifications.	
<ul style="list-style-type: none"> <li>• Proper storage of tools and equipment</li> <li>• Proper waste disposal</li> <li>• Government regulations and environmental requirements on waste management</li> </ul>			<b>LO 6. Wrap up job.</b> 6.1 Gather and bring tools, equipment and materials back to the service vehicle for storage. 6.2 Remove and dispose of waste materials from work place in accordance with government regulations and environmental requirements. 6.3 Restore changes made on the work area during installation, splicing and re-splicing as job requirements and procedure.	<b>TLE ICTFOC9-12ISF-IIIE-g-6</b>
<b>LESSON 2: PERFORMING OPTICAL TESTING AND REPAIR (POT)</b>				
<ul style="list-style-type: none"> <li>• Interpreting test and repair documents</li> <li>• Enterprise procedures</li> <li>• Materials, tools and equipment: uses and specifications</li> <li>• Personal Protective Equipment (PPE)</li> </ul>	The learner demonstrates an understanding of the concepts and principles of fiber optic testing and repair.	The learner independently performs fiber optic testing and repair based on TESDA Training Regulations.	<b>LO 1. Prepare for optical fiber testing and repair.</b> 1.1 Acquire and interpret documentation in accordance with enterprise procedures. 1.2 Identify necessary tools, equipment, materials and personal protective equipment (PPE) in line with job requirements.	<b>TLE ICTFOC9-12POT-IIIE-h-j-7</b>

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<ul style="list-style-type: none"> <li>• Preparation of tools, equipment for use in optical fiber testing and repair activities</li> <li>• Fiber strands identification</li> </ul>			1.3 Prepare necessary tools, equipment, materials and personal protective equipment (PPE) in line with job requirements. 1.4 Perform fiber strands identification and preparation in accordance with job requirements and assignments.	<b>TLE_ICTFOC9-12POT-IVa-b-8</b>
<ul style="list-style-type: none"> <li>• Observing safety precautions</li> <li>• Proper handling and use of tools and equipment</li> <li>• Uses of optical time domain reflectometer (OTDR).</li> <li>• Fiber optic cable faults</li> <li>• Localization of cable faults</li> <li>• Standard operating procedures (SOP) in testing and repair</li> <li>• Reports and documentation of testing and repair</li> <li>• Communicating effectively</li> <li>• Re-splicing procedure</li> </ul>			<b>LO 2. Test and repair fiber strands.</b> 2.1 Follow occupational health & safety (OH&S) policies and procedures based on safety requirements. 2.2 Perform identification of optical cable faults and error in line with OTDR manual. 2.3 Perform localization of optical cable faults in accordance with standard industry practices. 2.4 Re-splice faulty fiber optic strands in accordance with established procedures. 2.5 Report problems encountered as per standard operating procedures (SOP). 2.6 Document testing properly according to job requirements and SOP.	<b>TLE_ICTFOC9-12POT-IVb-h-9</b>
<ul style="list-style-type: none"> <li>• Proper storage of tools and equipment</li> <li>• Proper waste disposal</li> </ul>			<b>LO 3. Wrap up job.</b> 3.1 Gather and bring tools, equipment and materials back to the service vehicle for storage. 3.2 Remove and dispose of waste materials from work place in accordance with environmental health and safety requirements.	<b>TLE_ICTFOC9-12POT-IVh-j-10</b>

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RESOURCES			METHODOLOGY	ASSESSMENT METHOD
TOOLS	EQUIPMENT	MATERIALS		
<ul style="list-style-type: none"> <li>• Set of wrenches</li> <li>• Set of screwdrivers</li> <li>• Torque wrench</li> <li>• F-open wrench</li> <li>• Bolt cutter</li> <li>• Cable cutter/slitter</li> <li>• NT cutter / blade cutter</li> <li>• Polyethylene knife</li> <li>• Cable prep tool</li> <li>• Set of hammer</li> <li>• Set of pliers</li> <li>• Boring tools</li> <li>• Hacksaw</li> <li>• Cable tensioner/ratchet/ coping jack</li> <li>• Fiber optic stripper</li> <li>• Cable guide</li> <li>• Aerial hand-line</li> <li>• Buffer tube cutter</li> <li>• Tape linen/steel tape</li> <li>• Multiple cable puller*</li> <li>• Come-a-long/guy grip*</li> <li>• Manhole ladder</li> <li>• Fixing brackets/ clamps</li> <li>• Lay-up stick / cable lifter</li> <li>• drill/electric drill (w/ bits of various sizes)</li> <li>• Adjustable wrench</li> <li>• Extension ladders (24 ft. length)</li> <li>• Bender board/cable form</li> <li>• Messenger wire raising tool</li> </ul>	<ul style="list-style-type: none"> <li>• Cable roller block (single or multiple cable)*</li> <li>• Service vehicle*</li> <li>• Power meter</li> <li>• OTDR</li> <li>• Visual fault locator</li> <li>• Kevlar cutter</li> <li>• Alcohol dispenser</li> <li>• Laser source</li> <li>• Fusion machine</li> <li>• Mechanical splicing kit</li> </ul> <p><b>Personal Protective Equipment (PPE)</b></p> <ul style="list-style-type: none"> <li>• Body belt &amp; strap</li> <li>• Hard hat/ helmet</li> <li>• Set of gloves</li> <li>• Safety shoes</li> <li>• Safety goggles</li> <li>• Tool pouch/holster</li> <li>• Safety cones/other collapsible signs</li> <li>• Rubber boots</li> </ul>	<ul style="list-style-type: none"> <li>• Set of suspension clamps</li> <li>• Pole extension arm</li> <li>• Cable-loop form / X-frame</li> <li>• Ground/guying insulator</li> <li>• Pole clamps of various sizes</li> <li>• Guy protector</li> <li>• Set of guy grips</li> <li>• Cable clip</li> <li>• Lag screws</li> <li>• Sets of washer, bolts and nuts, machine bolts</li> <li>• Stainless lashing wire</li> <li>• Lashing wire clamps</li> <li>• Screw hooks</li> <li>• Bonding clamp</li> <li>• Anchor and grounding rods</li> <li>• Cable spacer</li> <li>• Grounding wire (gauge 12, stranded)</li> <li>• Adhesive tape</li> <li>• Cable tie 6"</li> <li>• Optical closure kit</li> <li>• Patchcord</li> <li>• Pigtail</li> <li>• Protection sleeves</li> <li>• Tissue paper</li> <li>• Alcohol 99.9%</li> <li>• Fiber optic cable 12C</li> <li>• Mechanical connector</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Demonstration</li> <li>• Viewing multimedia</li> <li>• Hands-on practice / Simulation</li> <li>• Field trip</li> <li>• Plant visit</li> </ul>	<ul style="list-style-type: none"> <li>• Observation in work place</li> <li>• Demonstration</li> <li>• Oral questioning</li> <li>• Written test</li> </ul>

**K TO 12 BASIC EDUCATION CURRICULUM**  
**JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD TRACK AND SENIOR HIGH SCHOOL – TECHNICAL-VOCATIONAL LIVELIHOOD TRACK**  
**INFORMATION AND COMMUNICATIONS TECHNOLOGY – TELECOM OSP INSTALLATION (FIBER OPTIC CABLE) NC II**  
(160 hours)

**GLOSSARY**

1. Buffer tube cutter - used to cut and separate buffer from fiber optic strands
2. Cable - used for distribution to provide communication
3. Cable Slitter - tool used to slit or open FO cable
4. Cleaver - used to cut fiber strands
5. Crimping - proper preparation of cable, appropriate type of connectors
6. Drop cable - a small-diameter cable leading from the tap-off in the cable plant to the subscribers' TV receivers. A drop cable used by the CATV system should be either RG-59 or RG-6, 75-ohms coaxial cable (foam).
7. Environment - area surrounding the work site which can be directly or indirectly affected by occurrences at the work site. It includes the atmosphere, soils, drains, underground water tables, and the ecosystem. Protection of the environment would require the proper disposal of waste materials, restriction of burning, correct handling of toxic substances, containment of CFCs and the like.
8. Established procedures - formal arrangements of an organization, enterprise or statutory authority of how work is to be done.
9. Fiber optics - a technology that transmits light rather than electricity through a fiber made of thin, flexible glass or plastic. Fiber optic cables are replacing older copper cables for most telecommunications applications.
10. Fiber optic cable - set of individual optical fibers bundled together. Fiber optic cables have higher bandwidth than standard copper cable.
11. Fiber optic stripper - used to strip fiber coating
12. Hazardous materials - flammable gases and vapors and combustible dusts
13. Headend - the main site at which all the signals from the various program sources are received, assembled, processed and combined for transmission through the distribution network. It is the originating point for all services carried on a cable television system.
14. Mechanical connector - connectors used to join fiber through mechanical crimping method.
15. Modifications - make changes on the physical parameters or operational function of a device, component or piece of equipment or apparatus.
16. Notification (notified) - includes verbal, written, electronic or recorded information at completion of work which may be required to be completed in accordance with established procedures.
17. OH&S policies and procedures - Arrangements of an organization or enterprise to meet their legal and ethical obligations of ensuring the work place is safe and without risk to health.
18. Outside plant (OSP) - a part of telephone network system that provides for the distribution of voice and data channels to the paying subscribers
19. OTDR - Optical Time Domain Reflectometer used to test or locate fiber optic faults.
20. Requirements - that to which equipment and procedures and their outcomes must conform and includes statutory obligations and regulations and standards called up by legislation or regulations.
21. Servicing - undertaking routine inspection, repair and maintenance of circuits, systems or apparatus, maintaining, fault-finding and repair of equipment, plant and machinery
22. Splicing - the act or process of creating a physical connection between two separate pieces of optical fiber. Optical fibers should only be spliced by a technician who possesses the required skills and interconnection technology.
23. Standards - technical documents, which set out specifications and other criteria forequipment, materials, and methods to ensure they consistently perform as intended.
24. Subscriber - a person who pays a fee for voice and data services.
25. Subscriber terminal - the telephone network system terminal to which a subscriber's equipment is connected.

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- 26. Supervised industry training (SIT) - similar to on-the-job training– an approach in training designed to enhance the knowledge and skills of the trainee through actual experience in the workplace to acquire specific competencies prescribed in the training regulations.
- 27. System - a group or combination of inter-related, inter-dependent or interlocking elements forming a collective entity. It includes circuits, apparatus, equipment and the like.
- 28. Telecom - refers to telecommunication. It is the process of transmitting information to a receiver by means of electric current or pulses of light.
- 29. Termination - the act by means of which an electrical connection to an apparatus is established; specifically a prepared joint or connection between a cable, cord or conductor and a point in an electrical circuit such as a terminal or connection point. Such terminations include soldering, crimping, clamping, wire wrapping, insulation piercing/compression.
- 30. Testing devices - devices and instruments used to ensure safety requirements and operational functions are met, and to diagnose faults in apparatus, circuits or systems.
- 31. Visual fault locator - used to locate/trace fibers fault (open fault)

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**CODE BOOK LEGEND**

Sample: **TLE\_ICTFOC9-12ISF-Ia-e-1**

LEGEND		SAMPLE	
<b>First Entry</b>	Learning Area and Strand/ Subject or Specialization	Technology and Livelihood Education_ Information and Communications Technology Telecom OSP Installation (Fiber Optic Cable) NC II	<b>TLE_ICT FOC 9-12</b>
	Grade Level	9 to 12	
<b>Uppercase Letter/s</b>	Domain/ Content/ Component/ Topic	Installing and Splicing/Joining Aerial/ Underground Fiber Optic Cable	<b>ISF</b>
			-
<b>Roman Numeral</b> <i>*Zero if no specific Quarter</i>	Quarter	Quarter One	<b>I</b>
<b>Lower case letter/s</b> <i>*Put an en-dash (-) in between letters to indicate more than a specific week</i>	Week	Week one to five	<b>a-e</b>
			-
<b>Arabic Number</b>	Competency	Prepare for fiber optic cable layout and installation.	<b>1</b>

DOMAIN / COMPONENT	CODE
Installing And Splicing/Joining Aerial/Underground Fiber Optic Cables	ISF
Performing Optical Testing And Repair	POT

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

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**SAMPLE ICT CURRICULUM MAP\*\* (as of May 2016)**

Grade 7/8 (EXPLORATORY)	GRADES 9-12			
<b>EXPLORATORY</b>	<b>Computer Systems Servicing (NC II)+</b> updated based on TESDA Training Regulations released December 28, 2007			<b>8 sems</b>
				<b>*Telecom OSP and Subscriber Line Installation (Copper Cable/POTS and DSL) (NC II)</b> <b>4 sems</b>
				<b>*Telecom OSP Installation (Fiber Optic Cable)</b> <b>2 sems</b>
	<b>Illustration (NC II)</b> <b>4 sems</b>	<b>Technical Drafting (NC II)</b> <b>4 sems</b>		
	<b>Computer Programming (.Net Technology) (NC III)+</b> updated based on TESDA Training Regulations released December 28, 2013 <b>4 sems</b>	<b>Contact Center Services (NC II)</b> <b>4 sems</b>		
	<b>Computer Programming (Java) (NC III)+</b> <b>4 sems</b>	<b>Animation (NC II)</b> <b>4 sems</b>		
	<b>Computer Programming (Oracle Database) (NC III)+</b> <b>4 sems</b>	<b>Medical Transcription (NC II)</b> <b>4 sems</b>		

\* Please note that these subjects have pre-requisites mentioned in the CG.

+ CG updated based on new Training Regulations of TESDA.

█ Pre-requisites of the subjects to the right should be taken up during these semesters.

**\*\*This is just a sample. Schools make their own curriculum maps considering the specializations to be offered. Subjects may be taken up at any point during Grades 9-12.**

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**Reference:**

Technical Education and Skills Development Authority-Qualification Standards Office. *Training Regulations for Telecom OSP Installation (Fiber Optic Cable) NC II*. Taguig City, Philippines: TESDA, 2011.