

**K to 12 BASIC EDUCATION CURRICULUM
TECHNOLOGY AND LIVELIHOOD EDUCATION
AGRI – FISHERY - ARTS – AGRICULTURAL CROP PRODUCTION
Grade 7/8 (Exploratory)**

Course Description:

This Module is an exploratory and introductory course which leads to an **Agricultural Crop Production** National Certificate Level II (**NC II**). It covers **four** common competencies that a 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; and 4) 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 agricultural crop production 2. Relevance of the course 3. Career opportunities	The learner demonstrates an understanding of basic concepts and underlying theories in agricultural crop production.	The learner independently demonstrates common competencies in agricultural crop production as prescribed by TESDA Training Regulations.	1. Explain basic concepts in agricultural crop production 2. Discuss the relevance of the course 3. Explore career opportunities in agricultural crop production	
PERSONAL ENTREPRENEURIAL COMPETENCIES				
1. Assessment of Personal Competencies and Skills (PeCS) vis-à-vis PeCs of a practicing entrepreneur/employee : 1.1. characteristics 1.2. attributes 1.3. lifestyle 1.4. skills 1.5. traits 2. Analysis of learner's PeCS in relation to those of a practicing entrepreneur/employee	The learner demonstrates an understanding of one's Personal Competencies and Skills (PeCS)	The learner recognizes his/her Personal Competencies and Skills (PeCS) and is able to compare these with the PeCS of a practicing entrepreneur/ employee involved in agricultural crop production	LO 1. Recognize Personal Competencies and Skills (PeCS) needed in agricultural crop production 1.1. Identify and assess one's PeCS 1.2. Identify and assess a practitioner's PeCS 1.3. Compare self with a practicing entrepreneur/employee 1.4. Identify areas for improvement, development and growth	TLE_PECS7/8-0k-1

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
LESSON 1: USE OF FARM TOOLS AND EQUIPMENT AND MAINTENANCE (UT)				
1. Farm tools 2. Defects and remedies 3. Farm tools safety 4. Manual of farm equipment and specification 5. Parts and functions of equipment 6. Pre-operation check-up 7. Safety practice during operation of farm equipment 8. Preventive maintenance 9. Regular maintenance of equipment	Learner demonstrates an understanding of concepts, underlying theories and principles in the use of farm tools and equipment.	Learner uses farm tools and equipment in agricultural crop production.	LO 1. Select and use farm tools 1.1. Identify farm tools according to use 1.2. Check farm tools for faults 1.3. Use appropriate tools for the job requirement according to manufacturer's specifications and instructions	TLE_AFAC7/8UT-0a-1
			LO 2. Select farm equipment 2.1. Identify appropriate farm equipment 2.2. Follow the guidelines in the instructional manual of farm equipment 2.3. Conduct pre-operation check-up in line with the manufacturer's manual 2.4. Identify faults in farm equipment and facilities 2.5. Use farm equipment according to their function	TLE_AFAC7/8UT-0b-2

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			<p>LO 3. Perform preventive maintenance 3.1. Clean tools and equipment after use in line with farm procedures. 3.2. Perform routine check-up and maintenance. 3.3. Follow procedures in sharpening and oiling farm tools and equipment.</p>	<p>TLE_AFAC7/8MT-0c-3</p>
LESSON NO. 2: PERFORM ESTIMATION AND BASIC CALCULATION (MC)				
<ol style="list-style-type: none"> 1. Farm inputs 2. Labor requirement 3. Estimating farm inputs and labor requirements 4. Perform calculation 5. System of measurement 6. Units of measurement 7. Conversion of units 8. Fraction and decimals 9. Percentage and ratio 	<p>Learner demonstrates an understanding of estimation and basic calculation.</p>	<p>Learner accurately performs estimation and basic calculation.</p>	<p>LO 4. Perform estimation 4.1. Identify job requirement from written and oral communications 4.2. Estimate the quantity of materials and resources required to complete a work/ task 4.3. Estimate time needed to complete a work/activity 4.4. Calculate the duration of work completion 4.5. Follow procedures in reporting to appropriate persons the estimate of materials and resources.</p>	<p>TLE_AFAC7/8MC-0d-4</p>

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			<p>LO 5. Perform basic workplace calculation</p> <p>5.1. Identify calculations to be done according to the job requirement</p> <p>5.2. Determine correct methods of calculation</p> <p>5.3. Ascertain systems and units of measurement to be followed</p> <p>5.4. Perform calculations needed to complete a task using the four basic mathematical operations</p> <p>5.5. Employ different techniques in checking accuracy of result</p> <p>5.6. Use appropriate operations to comply with the job requirement</p>	<p>TLE_AFAC7/8MC-0e-5</p>
LESSON 3: INTERPRET PLANS AND DRAWINGS (ID)				
<ol style="list-style-type: none"> 1. Farm plans and layout 2. Planting system 3. Farm layout 4. Government plans 5. Crops arrangement 6. Layout plan of irrigation system 7. Types of irrigation systems 8. Essential features of a plan 9. Different designs of irrigation system 	<p>The learner demonstrates an understanding of interpreting plans and drawings.</p>	<p>The learner interprets plans and drawings relative to agricultural crop production.</p>	<p>LO 6. Layout garden plots</p> <p>6.1. Design farm plans and layouts according to crop grown</p> <p>6.2. Follow strictly planting system and practices according to approved cultural practices</p> <p>6.3. Interpret irrigation system plan according to established procedures</p> <p>6.4. Differentiate designs of irrigation systems</p>	<p>TLE_AFAC7/8ID-0fg-6</p>

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
LESSON 4: APPLY SAFETY MEASURES IN FARM OPERATIONS (OS)				
<ol style="list-style-type: none"> 1. Applying safety measures 2. 0.Hazards, risks and exposure in the farm 3. Chemicals 4. Personal protective equipment (PPE) 5. Basic first aid 6. Farm emergency 7. Cleaning, storing and waste management 8. Procedure and technique in storing materials and chemicals 9. Government requirement regarding farm waste disposal 10. Water management system 	<p>The learner demonstrates an understanding of applying safety measures in the farm.</p>	<p>The learner consistently applies safety measures in the farm.</p>	<p>LO 7. Apply appropriate safety measures while working in farm</p> <ol style="list-style-type: none"> 7.1. Apply safety measures based on work requirement and farm procedures 7.2. Utilize tools and materials in accordance with farm requirements 7.3. Explain the importance of wearing work outfit in accordance with farm requirements 7.4. Check shelf life and/or expiration of materials and supplies against manufacturer’s specifications 7.5. Identify risks and hazards in the workplace and report them in accordance with farm guidelines 	<p>TLE_AFAC7/8OS-0h-7</p>

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			LO 8. Safely keep/dispose tools, materials and outfit 8.1. Observe procedures in cleaning used outfits in line with farm procedure before storing 8.2. Follow the guidelines in labeling unused materials to be stored according to manufacturer’s recommendation and farm requirements. 8.3. Dispose waste materials according to manufacturer’s, government and farm requirements	TLE_AFAC7/8OS-0i-8

**AGRI – FISHERY ARTS – CROP PRODUCTION
Grade 9 (Specialization)**

Course Description:

This module covers the skills and knowledge required to support **horticultural** and **nursery** production under supervision. It requires the ability to prepare materials, tools and equipment for horticultural production and nursery work practices; ensure hygiene and quality control; undertake routine production assistance work; handle materials and equipment; and perform thorough cleanups upon completion of the work. Supporting horticultural and nursery production work requires knowledge of safe work practices relating to (1) basic crop and nursery plant maintenance activities (2) basic stock control procedures (3) **propagation** and **handling** techniques—including planting, maintaining, picking and packing, loading and unloading, and (4) using associated farm tools and equipment.

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
Introduction 1. Support agricultural crop work 2. Support nursery work 3. Career opportunities	The learner demonstrates an understanding of concepts, principles, underlying theories, and actual application in crop production and nursery work.	The learner independently demonstrates common competencies in crop production and nursery work as prescribed by TESDA Training Regulations.	1. Explain the cultural methods and practices in crop production 2. Formulate adaptive cultural practices in the care and maintenance of a school nursery 3. Explore career opportunities in agricultural crop production	

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
PERSONAL ENTREPRENEURIAL COMPETENCIES				
1. Assessment of Personal Competencies and Skills (PeCS) vis-à-vis PeCS of a practicing entrepreneur/employee in the town. <ol style="list-style-type: none"> 1.1. characteristics 1.2. attributes 1.3. lifestyle 1.4. skills 1.5. traits 2. Analysis of PeCS in relation to those of a practicing entrepreneur/employee 3. Align, strengthen and develop ones PeCS based on the results	The learner demonstrates an understanding of one's Personal Competencies and Skills (PeCS) and what it takes to become successful in the field.	The learner recognizes his/her Personal Competencies and Skills (PeCS) and is able to compare these with the PeCS of a practicing entrepreneur/ employee involved in the Agricultural Crop Production	LO 1. Develop and strengthen Personal Competencies and Skills (PeCS) needed in agricultural crop production <ol style="list-style-type: none"> 1.1. Identify and assess one's PeCS: characteristics, attributes, lifestyle, skills, traits 1.2. Identify successful entrepreneurs/ employees in the town. 1.3. Identify and assess a practitioner's PeCS: characteristics, attributes, lifestyle, skills, traits 1.4. Compare self with a practitioner. 1.5. Identify areas for improvement, development and growth 1.6. Align, strengthen, develop areas based on the results of the PeCS Assessment 	TLE_PECS9-0k-1
ENVIRONMENT AND MARKET				
THE MARKET (The Town) <ol style="list-style-type: none"> 1. Key concepts of the Market 2. Players in the Market (Competitors) 3. Products and services available in the market. 	The learner demonstrates an understanding of the market of agricultural crop production from the context of the town.	The learner independently identifies the products/services available and the competitors within the agricultural crop production market from the context of the town.	LO 2. Recognize and understand the market for agricultural crop production <ol style="list-style-type: none"> 2.1. Identify the players/ competitors within the town. 2.2. Identify the different products/services available in the market. 2.3. Enumerate the differences between these products/ services. 	TLE_EM9-Ik-2

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
<p>THE MARKET – CUSTOMER</p> <ol style="list-style-type: none"> 1. Key concepts in identifying and understanding the Consumer 2. Consumer analysis through: <ol style="list-style-type: none"> 2.1. observation 2.2. interviews 2.3. FGDs (Focused Group Discussions) 2.4. Surveys 	<p>The learner demonstrates an understanding of the customers of agricultural crop production.</p>	<p>The learner independently identifies the customers in the agricultural crop production market.</p>	<p>LO 3. Recognize the customers of the agricultural crop production market</p> <ol style="list-style-type: none"> 3.1. Identify the different customers of the market 3.2. Identify the customers needs and wants through consumer analysis. 3.3. Conduct observation exercises, interviews, FGDs and surveys. 	<p>TLE_EM9-IIk-3</p>
<p>THE MARKET - GENERATING BUSINESS IDEAS</p> <ol style="list-style-type: none"> 1. Key concepts in generating business ideas 2. Knowledge, skills, passions, and interests 3. New applications 4. Irritants 	<p>The learner demonstrates an understanding of the techniques of generating business ideas.</p>	<p>The learner independently generates business ideas using the various techniques available.</p>	<p>LO4. Create new business ideas using the various techniques and based on the analyses of the market for Agricultural Crop Production.</p> <ol style="list-style-type: none"> 4.1. Generate business ideas using knowledge, skills, passions, and interests. 4.2. Generate business ideas using new applications (finding new use for existing products/materials) 4.3. Generate business ideas from one's Irritants. 	<p>TLE_EM9-IIIk-4</p>
<p>THE MARKET - GENERATING BUSINESS IDEAS</p> <ol style="list-style-type: none"> 1. Key concepts in generating 	<p>The learner demonstrates an understanding of the techniques of generating business ideas.</p>	<p>The learner independently generates business ideas using the various techniques available.</p>	<p>LO5. Create new business ideas using the various techniques based on the analyses of the market for Agricultural Crop</p>	<p>TLE_EM9-IIIk-5</p>

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
business Ideas 2. Striking ideas (new concepts) 3. Serendipity Walk			Production 5.1. Generate business ideas based on striking Ideas 5.2. Generate business ideas using the Serendipity Walk.	
QUARTER 1 and 2 Lesson 1. Support horticultural crop work <i>(Note: Research component should be included in the activities)</i>				
1. Types and selection of materials, tools, and equipment 2. Routine check-up of tools and equipment 3. Manual handling procedures and techniques 4. Personal protective equipment and occupational health and safety requirements 5. Common OHS hazards, risks and its control	The learner demonstrates an understanding of concepts, underlying theories and principles in the preparation of farm materials, tools and equipment and occasional health and safety operations in crop production.	The learner uses farm materials, tools, and equipment and applies occupational health and safety practices in crop production.	L01 Prepare materials, tools and equipment for horticultural production work 1.1. Identify the required materials, tools and equipment according to lists provided and/or teacher's/supervisor's instructions. 1.2. Check farm tools, materials and equipment for faults and defects based on manufacturer's lists and pre-operating procedures. 1.3. Demonstrate the correct manual handling procedures and techniques when loading and unloading materials to minimize damage to the load and vehicle. 1.4. Select and check the suitable personal protective equipment (PPE), as required by the job. 1.5. Provide the work support in accordance with OHS requirements and the workplace information. 1.6. Identify OHS hazards and file a report based on OHS requirements and company	TLE_AFAC9HC-Ia-e-1

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			reporting procedures.	
<ol style="list-style-type: none"> 1. Common horticultural production work 2. Safe work practices 3. Proper use of horticultural tools and equipment 4. Procedures for land preparation, sowing/planting, crop maintenance, fertilization, loading and unloading, harvesting/picking, sorting and packing 5. Planting, picking, packing, loading and transporting techniques 6. Environmental aspects of horticultural production work 7. Interpersonal relationships and communication (oral and written) 			<p>LO 2. Undertake horticultural production work as directed</p> <ol style="list-style-type: none"> 2.1. Follow and clarify instructions and directions based on authority requirements and workplace procedures. 2.2. Undertake work in a safe and environmentally-sound manner according to enterprise guidelines. 2.3. Interact with other staff and customers in a positive and professional manner as specified in the employee manual. 2.4. Observe workplace practices, handling and disposal of materials following enterprise policy and procedures. 2.5. Report problems or difficulties in completing work to required standards or timelines to authority based on company reporting procedures. 	TLE_AFAC9HC-If-j-2
<ol style="list-style-type: none"> 1. Proper use/handling of materials and equipment 2. Storage practices and principles for materials and equipment 3. Waste materials management 4. Occupational health and 			<p>LO 3. Handle materials and equipment</p> <ol style="list-style-type: none"> 3.1. Store waste material in a designated area according to workplace procedure/OHS procedure. 3.2. Handle and transport materials, equipment and 	TLE_AFAC9HC-IIa-e-3

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
safety procedures 5. Routine maintenance of workplace			machinery according to enterprise guidelines. 3.3. Maintain a clean and safe work site while working in accordance with OHS procedures.	
1. Procedures for storage of excess materials 2. Procedures for disposal of waste materials 3. Routine cleaning, maintenance and storage of tools and equipment 4. Report preparation of work outcomes			LO 4. Cleanup on completion of work 4.1. Return materials to store or dispose of according to company standard procedures. 4.2. Clean, maintain and store tools and equipment according to manufacturers' specifications. 4.3. Report work outcomes to the authority following established reporting formats.	TLE_AFAC9HC-IIf-j-4
Quarter 3 and 4 Lesson 2: Support nursery work <i>(Note: Research component should be included in the activities)</i>				
1. Types and selection of materials, tools, and equipment appropriate to nursery work 2. Routine check-up of tools and equipment 3. Manual handling procedures and techniques 4. Personal protective	The learner demonstrates an understanding of concepts, underlying theories and principles in nursery work.	The learner uses farm materials, tools and equipment for nursery work.	LO 1. Prepare materials, tools and equipment for nursery work 1.1. Identify the required materials, tools and equipment based on lists provided and/or authority's instructions. 1.2. Check the materials, tools and equipment based on	TLE_AFAC9NW-IIIf-a-e-1

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
<p>equipment and occupational health and safety requirements</p> <p>5. Common OHS hazards and its control</p>			<p>manufacturer’s lists and pre-operating procedures and report those with insufficient or faulty items to the authority.</p> <p>1.3. Demonstrate correct manual handling procedures and techniques when loading and unloading materials to minimize damage to the load and vehicle.</p> <p>1.4. Select and check the suitable personal protective equipment (PPE), as required by the job.</p> <p>1.5. Provide nursery support according to OHS requirements and workplace information.</p> <p>1.6. Identify and report OHS hazards to the authority based on OHS requirements and company reporting procedures.</p>	
<p>1. Common nursery work</p> <p>2. Safe work practices</p> <p>3. Proper use of nursery tools and equipment</p> <p>4. Nursery hygiene and quality control</p> <p>5. Nursery plant maintenance activities</p> <p>6. Propagation techniques</p> <p>7. Environmental aspects of nursery work</p>			<p>LO 2. Undertake nursery work as directed</p> <p>2.1. Follow and clarify instructions and directions based on authority requirements and workplace procedures.</p> <p>2.2. Undertake nursery work in a safe, appropriate and environmentally-sound manner according to nursery guidelines.</p>	<p>TLE_AFAC9NW-IIIIf-j-2</p>

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
8. OHS legislative requirements and codes of practice 9. Interpersonal relationships and communication (oral and written)			2.3. Interact with other staff and customers in a positive and professional manner as specified in the employee manual. 2.4. Observe good workplace practice in handling and disposing of materials following nursery policy, procedures and OHS requirements. 2.5. Report problems or difficulties in completing work to required standards or timelines to authority, based on company reporting procedures	
1. Basic stock control procedures 2. Recycling/composting practices and procedures 3. Proper stockpiling of surplus materials 4. Storage practices and principles for materials 5. Waste materials management 6. Routine maintenance of workplace			LO 3. Store and stockpile materials 3.1. Store plant debris and waste material produced during nursery activities according to nursery /OHS procedure. 3.2. Prepare and process plant debris and waste materials in an appropriate and safe manner according to accepted recycling/composting practices and procedures. 3.3. Stockpile all surplus materials according to company disposition guidelines. 3.4. Maintain a clean and safe	TLE_AFAC9NW-IVa-e-3

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			work site while completing nursery activities following routine maintenance procedures.	
<ol style="list-style-type: none"> 1. OHS Requirements 2. Procedures for storage of plants and materials 3. Routine cleaning, maintenance and storage of tools and equipment 4. Report preparation of work outcomes 			<p>LO 4. Cleanup on completion of nursery work</p> <ol style="list-style-type: none"> 4.1. Store plants and materials according to company storage guidelines and OHS requirements. 4.2. Clean, maintain and store tools and equipment according to manufacturers' specifications. 4.3. Report work outcome to the supervisor following established reporting formats. 	TLE_AFAC9NW-IVf-j-4

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AGRI – FISHERY - ARTS – AGRICULTURAL CROP PRODUCTION
AGRI- FISHERY ARTS – CROP PRODUCTION
Grade 10 (Specialization)**

Course Description:

This module covers the skills and knowledge required to support agronomic cropping work under supervision. It requires the ability to prepare materials, tools and equipment for cropping work; undertake cropping activities; and handle materials and equipment. Supporting agronomic cropping work requires knowledge of safe work practices, cropping practices and related tools and equipment.

This also covers the skills and knowledge required to support the installation, operation and maintenance of watering and drainage systems under direct supervision. It requires the ability to prepare materials, tools and equipment for irrigation work, undertake irrigation activities, handle materials and equipment, and perform thorough cleanups upon completion of the work. Supporting irrigation work requires knowledge of safe work practices, irrigation work techniques, irrigation tools and equipment, and repair and maintenance of irrigation components and systems.

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
<p>Introduction</p> <ol style="list-style-type: none"> 1. Support agronomic crop work 2. Support irrigation work 3. Career opportunities 	<p>The learner demonstrates an understanding of concepts and principles, underlying theories, and actual application in agronomic crop production and irrigation work.</p>	<p>The learner independently demonstrates common competencies in agronomic crop production and irrigation work as prescribed by TESDA Training Regulations.</p>	<ol style="list-style-type: none"> 1. Explain the cultural methods and practices in agronomic crop production 2. Discuss the relevance of the course 3. Explore career opportunities in the field after taking the course 	
PERSONAL ENTREPRENEURIAL COMPETENCIES				
<ol style="list-style-type: none"> 1. Assessment of Personal Competencies and Skills (PeCS) vis-à-vis PeCS of a practicing entrepreneur/employee in the province. <ol style="list-style-type: none"> 1.1. characteristics 1.2. attributes 1.3. lifestyle 1.4. skills 1.5. traits 	<p>The learner demonstrates an understanding of one's Personal Competencies and Skills (PeCS) and what it takes to become successful in the field.</p>	<p>The learner recognizes his/her Personal Competencies and Skills (PeCS) and is able to compare these with the PeCS of a practicing entrepreneur/ employee involved in agricultural crop production.</p>	<p>LO 1. Develop and strengthen Personal Competencies and Skills (PeCS) needed in agricultural crop production</p> <ol style="list-style-type: none"> 1.1. Identify and assess one's PeCS: Characteristics, Attributes, Lifestyle, Skills, Traits 1.2. Identify successful entrepreneurs/ employees in the province. 1.3. Identify and assess a 	<p>TLE_PECS10-0k</p>

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
2. Analysis of PeCS in relation to a practitioner 3. Align, strengthen and develop one's PeCS based on the results			practitioner's PeCS: Characteristics, Attributes, Lifestyle, Skills, Traits 1.4. Compare self with a practitioner. 1.5. Identify areas for improvement, development and growth. 1.6. Align, strengthen, develop areas based on the results of the PeCS assessment.	
ENVIRONMENT AND MARKET				
THE MARKET (The Province) 1. Key concepts of the Market 2. Players in the Market (Competitors) 3. Products and services available in the market.	The learner demonstrates an understanding of the market of agricultural crop production from the context of the province.	The learner independently identifies the products/services available and the competitors within the agricultural crop production market from the context of the province.	LO 2. Recognize and understand the market for agricultural crop production. 2.1. Identify the players/competitors within the province. 2.2. Identify the different products/services available in the market. 2.3. Enumerate the differences between these products/services.	TLE_EM10-Ik-2
THE MARKET – PRODUCT DEVELOPMENT 1. Key concepts of developing a product 2. Finding Value 3. Innovation 4. Unique Selling Proposition (USP)	The learner demonstrates an understanding of developing a product in agricultural crop production	The learner independently identifies the customers in the agricultural crop production market.	LO 3. Develop a product for the agricultural crop production market. 3.1. Identify what is of "value" to the customer. 3.2. Identify the Customer. 3.3. Define and identify what makes a product different 3.4. Enumerate and apply creativity and innovation	TLE_EM10-IIk-3

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			techniques in order to develop a product that stands out 3.5. Identify the Unique Selling Proposition (USP) of the product.	
THE MARKET - SELECTING BUSINESS IDEA 1. Key concepts in Selecting a Business Idea 2. Criteria 3. Techniques	The learner demonstrates an understanding of the techniques of selecting business ideas.	The learner independently selects a viable business idea.	LO 4. Select a business idea based on the criteria and techniques provided for the agricultural crop production market. 4.1. Identify potential business ideas to select from 4.2. Enumerate the various criteria and steps to selecting a business idea 4.3. Apply the criteria/steps in order to select a viable business idea 4.4. Identify a business idea based on the criteria/steps provided.	TLE_EM10-IIIk-4
THE MARKET – BRANDING 1. Key concepts of Branding	The learner demonstrates an understanding of branding and develops a brand for their business idea.	The learner independently generates a brand for their business idea.	LO 5. Develop a brand for the product. 5.1. Identify the benefits of having a good brand 5.2. Enumerate recognizable brands in the town/province 5.3. Enumerate the criteria for developing a brand 5.4. Generate a brand that is clear	TLE_EM10-IVk-5

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			and follows the techniques of generating a brand	
QUARTER 1 and 2 Lesson 1: C (Note: Research component should be included in the activities)				
<ol style="list-style-type: none"> 1. Types and selection of materials, tools, and equipment appropriate to agronomic production 2. Routine check-up of tools and equipment 3. Manual handling procedures and techniques 4. Personal protective equipment and occupational health and safety requirements 5. Common OHS hazards and its control 	<p>The learner demonstrates an understanding of concepts, underlying theories and principles in the preparation of materials, tools and equipment in agronomic crop production.</p>	<p>The learner prepares farm tools and equipment for agronomic crop production based on required task.</p>	<p>LO 1. Prepare materials, tools and equipment for agronomic crop work</p> <ol style="list-style-type: none"> 1.1. Identify the required materials, tools and equipment according to lists provided and/or authority instructions. 1.2. Check materials, tools and equipment for sufficient quantity, faults/defects based on manufacturer’s lists and pre-operating procedures 1.3. Demonstrate correct manual handling procedures and techniques when loading and unloading materials to minimize damage to the load to the materials, tools and equipment 1.4. Select and check suitable personal protective equipment (PPE) prior to use according to job requirements 1.5. Provide cropping support according to OHS requirements and workplace information. 1.6. Identify OHS hazards and 	<p>TLE_AFAC10CW-Ia-e -1</p>

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			report to the teacher/ supervisor based on OHS requirements and company reporting procedures.	
<ol style="list-style-type: none"> 1. Common agronomic crop work 2. Safe work practices in agronomic operation 3. Proper use of farm tools and equipment 4. Cropping practices 5. Procedures for land preparation, seeding, crop maintenance, fertilization, loading and unloading, harvesting/picking, baling, raking, sorting and packing of agronomic crops 6. Planting, picking, packing, loading and transporting techniques for agronomic crops 7. Environmental aspects of agronomic crop work 8. Interpersonal relationships and communication (oral and written) 			<p>LO 2. Undertake agronomic crop work as directed</p> <ol style="list-style-type: none"> 2.1. Follow and clarify instructions and directions based on supervisor’s requirements and workplace procedures. 2.2. Undertake cropping work in a safe and environmentally-responsible manner according to enterprise guidelines. 2.3. Interact with other staff and customers in a positive and professional manner as specified in the employee manual. 2.4. Observe good workplace practice in handling and disposing of materials following enterprise policy and procedures. 2.5. Report problems or difficulties in completing work to required standards or timelines to authority, based on company reporting procedures. 	TLE_AFAC10CW-If-j -2
<ol style="list-style-type: none"> 1. Proper use/handling of materials and equipment 2. Storage practices and principles for materials 			<p>LO 3. Handle materials and equipment</p> <ol style="list-style-type: none"> 3.1. Store/dispose of waste material and debris in a 	TLE_AFAC10CW-IIa-e -3

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
and equipment 3. Waste materials management 4. Routine maintenance of sheds and other workplaces 5. Repair and maintenance of structures 6. Occupational health and safety procedures			designated area according to workplace procedure/OHS procedure. 3.2. Handle and transport materials, equipment and machinery according to enterprise guidelines. 3.3. Maintain a clean and safe work site while undertaking irrigation activities in accordance with OHS procedures.	
1. Procedures for storage of excess materials 2. Procedures for disposal of waste materials 3. Routine cleaning, maintenance and storage of tools and equipment 4. Report preparation of work outcomes			LO 4. Cleanup on completion of cropping work 4.1. Return, storage cabin or dispose of materials according to company standard procedures. 4.2. Clean, maintain and store tools and equipment according to manufacturers' specifications. 4.3. Report work outcomes to the authority following established reporting formats.	TLE_AFAC10CW-IIIf-j -4
Quarter 3 and 4 Lesson 2. Support Irrigation Works <i>(Note: Research component should be included in the activities)</i>				
1. Types and selection of materials, tools, and equipment 2. Routine check-up of tools and equipment 3. Different irrigation systems and components	The learner demonstrates an understanding of safety precautions in preparation of materials and handling of irrigation work.	The learner practices safety precautions in preparation of materials and handling of irrigation work for agronomic crop production as stipulated in the manual.	LO 1. Prepare materials, tools and equipment for irrigation work. 1.1. Identify required materials, tools and equipment according to lists provided and/or authority's	TLE_AFAC10IW-IIIa-e -1

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
4. Personal protective equipment and occupational health and safety requirements 5. OHS hazards/ general OH & S principles and legislation 6. Accident/hazard reporting procedures			instructions. 1.2. Check materials, tools and equipment for insufficient quantity or faults/defects and report to the authority based on manufacturer’s lists and pre-operating procedures. 1.3. Demonstrate correct manual handling and techniques used when loading and unloading materials to minimize damage to the materials, tools and equipment 1.4. Follow material and equipment handling procedures. 1.5. Select and check suitable personal protective equipment (PPE) prior to use and according to job requirements. 1.6. Provide irrigation support according to OHS requirements and according to workplace information. 1.7. Identify and report to the supervisor the OHS hazards based on OHS requirements and company reporting procedures.	
1. Safe work practices 2. Basic irrigation principles and practices 3. Basic construction techniques			LO 2. Undertake irrigation work as directed 2.1. Follow and clarify instructions and directions based on	TLE_AFAC10IW-IIIIf-j -2

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
4. Irrigation tools and equipment 5. Installation of irrigation and/or drainage pipes 6. Environmental aspects of irrigation work 7. Repair and maintenance of irrigation components and systems 8. Interpersonal relationships and communication (oral and written)			authority's requirements and workplace procedures 2.2. Undertake irrigation work in a safe and environmentally appropriate manner according to enterprise guidelines 2.3. Carry out in a positive and professional manner the interactions with other staff and customers as specified in the employee manual 2.4. Observe handling and disposal practices of materials for irrigation work, following engineering and enterprise policy and procedures 2.5. Report problems or difficulties in completing work to required standards or timelines to authority based on company reporting procedures	
1. Proper use/handling of materials and equipment 2. Storage practices for materials and equipment 3. Waste materials storage and disposition 4. Routine maintenance of irrigation and/or drainage systems and components 5. Repair, maintenance, and storage of infrastructures, materials, tools and			LO 3. Handle materials and equipment 3.1. Store waste material and debris in the designated area according to workplace procedure/OHS procedure. 3.2. Handle and transport materials, equipment and machinery according to enterprise guidelines. 3.3. Maintain a clean and safe work site while undertaking	TLE_AFAC10IW-IVa-e -3

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
equipment			irrigation activities in accordance with OHS procedures.	
<ol style="list-style-type: none"> 1. Procedures for storage of excess materials 2. Procedures for disposal of waste materials 3. Routine cleaning, maintenance and storage of tools and equipment 4. Environmental requirements relative to irrigation 5. Report preparation of work outcomes 6. Accident/hazard reporting procedures 			<p>LO 4. Cleanup on completion of irrigation activities</p> <ol style="list-style-type: none"> 4.1. Return to storage cabin or dispose the materials according to company standard procedures and supervisor’s instructions. 4.2. Clean, maintain and store the tools and equipment according to manufacturers’ specifications and supervisors’ instructions. 4.3. Make the site clean according to authorities' instructions and good environmental practices 4.4. Report work outcomes to the authority following established reporting formats. 	TLE_AFAC10IW-IVf-j -4

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GLOSSARY

Agricultural Crop Production	The cultivation of grains, fruits and the like.
Agronomic	Of or relating to or promoting agronomy.
Agronomic Crop Production	The cultivation of field crops such as grains, root crops, legumes and other commercial crops.
Branding	The process involved in creating a unique name and image for a product in the consumers' mind, mainly through advertising campaigns with a consistent theme. Branding aims to establish a significant and differentiated presence in the market that attracts and retains loyal customers.
Competencies	The quality of being adequately or well-qualified, physically and intellectually.
Composting	(1) To fertilize with a mixture of decaying organic matter. (2) To convert (vegetable matter) to compost.
Consumer	A person that consumes, especially one that acquires goods or services for direct use or ownership rather than for resale or use in production and manufacturing.
Consumer analysis	Initial steps in the marketing research that identify and collect information on the target market's needs, profiles, and consumer behaviors in order to establish market segmentation.
Cropping	(1) The cultivated produce of the ground, while growing or when gathered; (2) The yield of such produce for a particular season.
Entrepreneur	A person who organizes, operates, and assumes the risk for a business venture.
Exposure	The condition of being exposed, especially to severe weather or other forces of nature.
Farm inputs	The resources that are used in farm production, such as chemicals, equipment, feed, seed, and energy.
Focused Group Discussion (FGD)	(1) An effective way to gather input on a selected topic, feedback on the launch of a new program and possible impacts on stakeholders. During a focus group, discussion information is shared with a group of six to ten participants to solicit their feedback through focused questions.. (2) A form of qualitative research in which a group of people are asked about their perceptions, opinions, beliefs, and attitudes towards a product, service, concept, advertisement, idea, or packaging. Questions are asked in an interactive group setting where participants are free to talk with other group members.
Handling	(1) A touching, feeling, or manipulating with the hands; (2) The process of packing and distributing merchandise (3) The process of packing and distributing merchandise.
Hazard	(1) A chance of being injured or harmed; (2) danger; (3) A possible source of danger.
Horticultural	Of or relating to the cultivation of plants such as vegetables, fruit trees, flowers and ornamental plants
Innovation	The action or process of innovating; (2) the application of better solutions that meet new requirements, unarticulated needs, or existing market needs; (3) It is accomplished through more effective products, processes, services, technologies, or ideas that are readily available to markets, governments and society; (4) something original and, as consequence, new that "breaks into" the market or into society
Irrigation	To supply (dry land) with water by means of ditches, pipes, or streams; (2) the artificial application of water to land or soil.
Irrigation work	The process of pumping water to areas of farmland that require it or by allowing the natural downward flow of water to break up into smaller streams in order to supply irrigation water.
Irritants	(1) tending to cause irritation; irritating. (2) anything that irritates (3) a biological, chemical, or physical agent that stimulates a characteristic function or elicits a response, especially an inflammatory response

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Land preparation	A process which typically involves plowing, harrowing, and leveling the field to make it suitable for crop establishment; (2) The mechanical manipulation of soil that is, performed to achieve a desired seedbed which provides the optimum environment for seed germination.
Market	A public gathering held for buying and selling merchandise; (2) A place where goods are offered for sale. (3) A store or shop that sells a particular type of merchandise.
NC II	National Certificate II issued by TESDA
Nursery	(1) A place where plants are grown for sale, transplanting, or experimentation. (2) a place where plants, young trees, etc., are grown commercially.
Occupational Health and Safety (OHS)	An area concerned with protecting the safety, health and welfare of people engaged in work or employment; Its goals include fostering a safe and healthy work environment; it may also protect co-workers, family members, employers, customers, and many others who might be affected by the workplace environment.
Personal Competencies and Skills (PeCS)	These are the traits and characteristics possessed by a person that differentiate him from the others.
Personal Protective equipment (PPE)	Refers to protective clothing, helmets, goggles, or other garments or equipment designed to protect the wearer's body from injury; addresses hazards by protective equipment, including physical, electrical, heat, chemicals, biohazards, and airborne particulate matter.
Plant growth	An irreversible increase in the size of the plant; involves an increase in cell numbers by cell division and an increase in cell size.
Player	An important participant (as in a business deal).
Propagation	(1) Multiplication or increase, as by natural reproduction; (2) The process of spreading to a larger area or greater number; (3) Dissemination.
Recycled material	Include those used in manufacturing processes and those used in consumer products.
Recycling	The collection and often reprocessing of discarded materials for reuse;
Risks	The potential of loss (an undesirable outcome, however not necessarily so) resulting from a given action, activity and/or inaction.
Serendipity Walk	(1) To walk around places in order to discover new ideas; (2) An activity that a person should make in order to create or discover a good technological idea. Serendipity is the act of making a discovery by accident.
Shelf life	The length of time that a commodity may be stored without it becoming unfit for use or consumption.; it applies to food, beverages, pharmaceutical drugs, chemicals, and many other perishable items.
Stockpiling	(1) The supply of essential materials held in reserve, especially for use during a shortage; (2) The accumulation and storage of reserve supply.
TESDA	Technical Education and Skills Development Authority.
Unique Selling Proposition (USP)	The factor or consideration presented by a seller as the reason that one product or service is different from and better than that of the competitor.
Value	An amount, as of goods, services, or money, considered to be a fair and suitable equivalent for something else; a fair price or return.
Waste disposal	The act of taking items that no longer have value to be destroyed;
Waste Material	Any material that is unused or rejected as worthless or unwanted.
Work Practices	(1)The way that work is usually done in a particular company or organization; (2) Certain accepted parameters whereby a person has to work within.

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CODE BOOK LEGEND

Sample: TLE_AFAC10IW-IIIa-e -1

LEGEND		SAMPLE	
First Entry	Learning Area and Strand/ Subject or Specialization	Technology and Livelihood Education_Agri-Fishery Agri-Crop Production	TLE_AF PA 10
	Grade Level	Grade 10	
Uppercase Letter/s	Domain/Content/ Component/ Topic	Support Irrigation Works	IW
			-
Roman Numeral <i>*Zero if no specific quarter</i>	Quarter	Third Quarter	III
Lowercase Letter/s <i>*Put a hyphen (-) in between letters to indicate more than a specific week</i>	Week	Week one to five	a-e
			-
Arabic Number	Competency	Prepare materials, tools and equipment for irrigation work	1

DOMAIN/ COMPONENT	CODE
Personal Entrepreneurial Skills	PECS
Environment and Marketing	EM
Use and Maintain Farm Tools and Equipment	UT
Perform Estimation and Basic Calculation	MC
Interpret Plans and Drawings	ID
Apply Safety Measures in Farm Operations	OS
Support Horticultural Crop Work	HC
Support Nursery Work	NW
Support Nursery Work	CW
Support Irrigation Works	IW