

**K to 12 BASIC EDUCATION CURRICULUM
 JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL TECHNICAL-VOCATIONAL-LIVELIHOOD TRACK
 AGRI-FISHERY ARTS – ANIMAL PRODUCTION**

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

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

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

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AGRI-FISHERY ARTS – ANIMAL PRODUCTION
Grades 7/8 (Exploratory)

Course Description:

This Module is an exploratory and introductory course which leads to **Animal 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) interpreting plans and drawing; and 4) apply safety measures in farm operation.

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 animal production 2. Relevance of the course 3. Career opportunities	The learner demonstrates an understanding of basic concepts and underlying theories in animal production.	The learner independently demonstrates common competencies in animal production as prescribed by TESDA Training Regulations.	1. Explain basic concepts in animal production 2. Discuss the relevance of the course 3. Explore career opportunities in animal production	
Personal Entrepreneurial Competencies (PECS)				
<ul style="list-style-type: none"> • Assessment of Personal Competencies and Skills (PeCS) vis-à-vis a practicing entrepreneur/employee <ul style="list-style-type: none"> 1.1. Characteristics 1.2. Attributes 1.3. Lifestyle 1.4. Skills 1.5. Traits • Analysis of PeCS in relation to that 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 animal production.	LO 1. Recognize Personal Competencies and Skills (PeCS) needed in animal production 1.1. Identify and assess one's PeCS: Characteristics, Attributes, Lifestyle, Skills, Traits 1.2. Identify and assess a practitioner's PeCS: Characteristics, Attributes, Lifestyle, Skills, Traits 1.3. Compare self with a practitioner 1.4. Identify areas for improvement, development and growth	TLE_PECS7/8-00-1
Environment and Marketing (EM)				
1. Key concepts of Environment & Market	Learner demonstrates understanding of the	The learner independently identifies the products/services	LO 1. Recognize and Understand the market for	TLE_EM7/8-00-1

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
2. Products & services available in the market 3. Concept of differentiation of products & services 4. Concept of Customers and the reasons they buy products & services 5. Competitors in the market	environment and market of animal production.	available, the customers, and the competition within the animal production market.	animal production 1.1 Identify the different products/services available in the market 1.2 Enumerate the differences between these products 1.3 Identify the customers and the reason these products/services are purchased 1.4 Identify the companies selling these products/services in the market	
LESSON 1: USE AND MAINTAIN FARM TOOLS AND EQUIPMENT (UT)				
1. Farm tools 2. Safety practices 3. Functions 4. Facilities 5. Preventive maintenance	The learner demonstrates an understanding of tools and equipment used in animal production.	The learner uses tools and equipment in animal production.	LO 1. Select and use farm tools 1.1 Identify appropriate farm tools and equipment according to function 1.2 Check farm tools for faults and defects and report them in accordance with farm procedures 1.3 Use appropriate tools according to job requirements and manufacturers' instructions	TLE_AFPA7/8UT-0a-1
			LO 2. Select and operate farm equipment 2.1. Identify farm equipment and facilities 2.2. Observe carefully the guidelines in the instructional manual of farm equipment prior to operation	TLE_AFPA7/8UT-0b-c-2

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			2.3. Conduct pre-operation check-up in line with manufacturer's manual of instructions 2.4. Identify farm equipment and facilities in line with farm procedures 2.5. Use farm equipment according to their functions 2.6. Follow safety procedures	
			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 of tools and equipment in line with farm procedures 3.3. Discuss ways of storing tools and equipment in designated areas in line with farm procedures	TLE_AFPA7/8MT-0d-3
LESSON 2: PERFORM ESTIMATION AND BASIC CALCULATION (MC)				
1. Basic mathematical operations 2. Procedures in problem solving 3. Systems of measurement 4. Fraction and decimals 5. Percentages and ratios 6. Basic record keeping	The learner demonstrates understanding of basic estimation and calculation used in animal production.	The learner performs estimation and basic calculation relative to animal production.	LO 1. Perform Estimation 1.1 Identify job requirements 1.2 Estimate quantities and resources required to complete a task 1.3 Calculate the duration of work completion	TLE_AFPA7/8MC-0e-1
			LO 2. Perform basic workplace calculation 2.1. Identify calculations to be made according to the job requirement 2.2. Determine correct methods of	TLE_AFPA7/8MC-0f-2

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			calculation 2.3. Ascertain systems and units of measurement to be followed 2.4. Perform calculations needed to complete a task using the four basic mathematical operations 2.5. Use appropriate operations to comply with the job requirement 2.6. Employ different techniques in checking accuracy of result	
LESSON 3: INTERPRET PLANS AND DRAWINGS (ID)				
1. Types of housing 2. Components of housing 3. Building codes 4. Signs and symbols in building codes	The learner demonstrates an understanding of interpreting plans and drawings related to animal production.	The learner interprets plans and drawings relative to animal production on his/her own.	LO 1. Draw layout plan of different types of housing 1.1 Identify types of housing and their components in poultry and livestock 1.2 Design different houses used in poultry and livestock production	<i>EASE Module 10</i> TLE_AFP7/8ID-0g-1
			LO 2. Enumerate the provisions of the building code in constructing poultry and livestock houses 2.1. Discuss building code in constructing poultry and livestock houses 2.2. Interpret signs and symbols of building code	<i>EASE Module 10</i> TLE_AFP7/8ID-0h-2
LESSON 4: APPLY SAFETY MEASURES IN FARM OPERATIONS				
1. Safety Measures 2. Apply safety measures 3. Safekeeping/disposal of tools, materials and outfit	The learner demonstrates an understanding of concepts, underlying theories and principles in applying safety measures in animal production.	The learner independently observes safety measures in animal production.	LO 1. Apply appropriate safety measures 1.1 Identify work tasks 1.2 Determine place and time for safety measures	TLE_AFP7/8OS-0i-1

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			1.3 Prepare appropriate tools, materials and outfits 1.4 Use tools and materials accordingly 1.5 Identify hazards 1.6 Wear outfits accordingly 1.7 Observe shelf life 1.8 Follow emergency procedures	
			LO 2. Safekeeping/disposal of tools, materials and outfit 2.1. Explain how to clean used tools and outfit in line with farm procedures before storing 2.2. Label unused materials and supplies according to manufacturer's recommendation before storing 2.3. Observe how to dispose waste materials according to manufacturers, government and farm requirements	TLE_AFPA7/8OS-0j-2

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AGRI-FISHERY ARTS – ANIMAL PRODUCTION
(160 hours)

Course Description:

This is a specialization course which leads to **Animal Production** National Certificate Level II (NC II). It covers a core competency in poultry raising that a high school student ought to possess.

The preliminaries of this 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. Concepts of Animal Production 2. Relevance of the course 3. Business opportunities	The learner demonstrates an understanding of concepts and underlying theories in animal production.	The learner independently demonstrates core competencies in animal production as prescribed by TESDA Training Regulations.	1. Explain concepts in animal production 2. Discuss the relevance of the course 3. Explore business opportunities for animal production	
Personal Entrepreneurial Competencies (PECS)				
1. Assessment of Personal Competencies and Skills (PeCS) vis-à-vis a practicing entrepreneur/employee in the town. 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 one's PeCS based on the results	The learner demonstrates an understanding of ones 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 animal production.	LO 1. Develop and Strengthen Personal Competencies and Skills (PeCS) needed animal production 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_PECS9-12IO-1

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
Environment and Marketing (EM)				
THE MARKET (The Town) 1. Key concepts of the Market 2. Players in the Market (Competitors) 3. Products & services available in the market.	The learner demonstrates an understanding of the market of animal production in the context of the town.	The learner independently identifies the products/services available and the competitors within the animal production market in the context of the town.	LO 1. Recognize and understand the market in Animal Production 1.1 Identify the players/competitors within the town 1.2 Identify the different products/services available in the market	TLE_EM9-12I0-1
THE MARKET – CUSTOMER 1. Key concepts in Identifying and Understanding the Consumer 2. Consumer Analysis through: 2.1. Observation 2.2. Interviews 2.3. FGDs (Focused Group Discussions) 3. Surveys	The learner demonstrates an understanding of the customers of animal production.	The learner independently identifies the customers in the animal production market.	LO 2. Recognize the potential customer/market in Animal Production 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_EM9-12II0-2
THE MARKET - GENERATING BUSINESS IDEA 1. Key concepts of Generating Business Ideas 2. Knowledge & Skills, Passions, Interests 3. new application 4. Irritants 5. Striking ideas (new concept) 6. Serendipity Walk	The learner demonstrates an understanding of the techniques in generating business ideas.	The learner independently generates business ideas using the various techniques available.	LO 3. Create new business ideas in Animal Production business by using various techniques 3.1. Explore ways of generating business idea from ones’ 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_EM9-12III0-3

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
LESSON 1: RAISE POULTRY (RP) <i>(Note: Research components should be included in all activities)</i>				
<ol style="list-style-type: none"> 1. Different breeds and strains of poultry 2. Desirable and undesirable characteristics 3. Selection and culling 4. Confidence in selection 	The learner demonstrates an understanding of the selection and procurement of stocks of poultry to raise.	The learner demonstrates independently selects breeds of poultry.	<p>LO 1. Select and procure stock, breeds/strains for poultry raising</p> <ol style="list-style-type: none"> 1.1. Secure breeds according to type 1.2. Identify breeds that are suitable to the local condition 1.3. Identify sources of stocks for egg/meat production 1.4. Evaluate status of the breed/strain of stocks to raise 	TLE_AFP A9-12RP-Ia-c-1
<ol style="list-style-type: none"> 1. Purposes of feeding 2. Functions of feeds 3. Essential nutrients for poultry 4. Sources and functions of essential nutrients for poultry 5. Kinds of feeds for poultry 6. Feeding system 7. Feeding guide 8. Feed formulation 	The learner demonstrates understanding and skills required in providing feeds and implementing feeding practices	The learner independently apply knowledge and skills in providing feeds and implementing feeding practices of poultry	<p>LO2. Provide feed and implement feeding practices</p> <ol style="list-style-type: none"> 2.1. Discuss the purposes of feeding 2.2. Explain the functions of feeds 2.3. Enumerate/discuss the essential nutrients needed by poultry 2.4. Discuss sources and functions of essential nutrients for poultry are discussed 2.5. Identify the different kinds of feeds for poultry 2.6. observe feeds and water consumption guide strictly 2.7. Observe feeding practices in poultry properly 2.8. Formulate a simple ration for poultry 	TLE_AFP A9-12RP-Id-j-2
<ol style="list-style-type: none"> 1. Types of brooding 2. System of brooding 3. Brooder preparation 4. Materials needed in brooding 5. Kinds of chick to brood 6. Requirements and conditions in brooding 7. Required temperature 	The learner demonstrates understanding and skills on proper brooding of chicks.	The learner independently demonstrates the skills and attitudes required in brooding.	<p>LO 3. Brooding</p> <ol style="list-style-type: none"> 3.1. Differentiate the types of brooding 3.2. Explain the system of brooding 3.3. Perform brooder preparations 3.4. Secure/collect all materials needed in brooding 3.5. Determine the number of chicks 	TLE_AFP A9-12RP-IIa-g-3

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
8. Behavior of chicks			to brood 3.6. Identify/determine the requirements and conditions needed in brooding 3.7. Observe/maintain required temperature in the brooder 3.8. Monitor/observe behavior of chicks	
1. Flock uniformity 2. Lighting program 3. Debeaking 4. Culling 5. Molting	The learner demonstrates understanding and skills required in proper flock management.	The learner independently performs and maintains proper flock management.	LO 4. Maintain proper flock management 4.1. Discuss flock uniformity in egg production 4.2. Observe proper lighting to the laying flock 4.3. Perform debeaking of chicks and pullets 4.4. Demonstrate proper culling procedures 4.5. Monitor possible indications of molting	TLE_AFP9-12RP-IIh-j-IIIa-c-4
1. Harvest, sort, and store eggs 2. Grading/sorting and handling poultry products 3. Marketing poultry products 4. Inventory reports and production records 5. proper monitoring of production activities 6. Profitability of the operation	The learner demonstrates independently the knowledge, skills and attitudes required in the successful pre and post-harvest.	The learner independently performs pre and post-harvest activities in poultry production properly.	LO 5. Pre and Post Harvest Activities 5.1. Harvest/collect eggs once or twice a day using appropriate materials 5.2. Apply proper handling, sorting and classify eggs according to industry standards 5.3. Store eggs at room temperature 5.4. Process eggs to extend storage life and add value 5.5. Describe the desirable market features of meat type chicken 5.6. and other poultry products 5.7. Identify/accomplish record to be kept	TLE_AFP9-12RP-IIId-h-5

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			5.8. Analyze record kept 5.9. Evaluate the viability of the enterprise	
1. Common pest and diseases of poultry 2. Prevention and control of parasites and diseases 3. Vaccination and medication program	The learner demonstrates understanding in the effective health and sanitation management program and practices for successful poultry production.	The learner independently demonstrates the knowledge, skills and attitudes required to perform effective preventive and therapeutic measures in poultry production.	LO 6. Perform Preventive and Therapeutic Measures 6.1. Determine poultry parasites and diseases based on the signs and symptoms 6.2. Apply preventive and control measures in accordance with the industry and farm production standard 6.3. Observe precautionary measures in the use of biologics 6.4. Implement medication and vaccination program in accordance with industry standard	TLE_AFP9-12RP-IIIi-j-IVa-j-6

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(160 hours)

Course Description:

This is a specialization course which leads to **Animal Production** National Certificate Level II (NC II). It covers one core competency that a high school student ought to possess—raising small **ruminants**.

The preliminaries of this 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 business opportunities.

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
Introduction 1. Concepts of animal production 2. Relevance of the course 3. Business opportunities	The learner demonstrates an understanding of the concepts and underlying theories in animal production.	The learner independently demonstrates core competencies in animal production as prescribed by TESDA Training Regulations.	1. Explain concepts in Animal Production 2. Discuss the relevance of the course 3. Explore on opportunities for animal production as a business	
Personal Entrepreneurial Competencies (PECS)				
1. Assessment of Personal Competencies and Skills (PeCS) vis-à-vis a practicing entrepreneur/employee in the province. 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 animal production.	LO 1. Develop and Strengthen Personal Competencies and Skills (PeCS) needed animal production 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 & Assess a practitioner's: Characteristics, Attributes, Lifestyle, Skills, Traits 1.4. Compare self with a practitioner 1.5. Identify areas for improvement, development and growth	TLE_PECS9-12-I0-1

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			1.6. Align, strengthen, develop areas based on the results of the PeCS Assessment	
THE MARKET (The Province) 1. Key concepts of the Market 2. Players in the Market (Competitors) 3. Products & services available in the market	The learner demonstrates an understanding of the market of animal production in the context of the province.	The learner independently identifies the products/services available and the competitors of the animal production market in the context of the province.	LO 1. Recognize and Understand the market for animal production 1.1 Identify the players/competitors within the province 1.2 Identify the different products/services available in the market 1.3 Enumerate the differences between these products/services	TLE_EM9-12-I0-1
THE MARKET – PRODUCT DEVELOPMENT 1. Key concepts of developing a product 2. Finding Value 3. Innovation 4. Unique Selling Proposition (USP)	The learner demonstrates understanding of developing a product in animal production.	The learner independently identifies the customers within the animal production market.	LO 2. Develop a product for the animal production market 2.1. Identify what is of "Value" to the customer 2.2. Identify the Customer 2.3. Define and identify what makes a product different 2.4. Enumerate and apply creativity and innovation techniques to develop a product that stands out 2.5. Identify the Unique Selling Proposition (USP) of the product	TLE_EM9-12-II0-2
THE MARKET - SELECTING BUSINESS IDEA 1. Key concepts of Selecting a Business Idea 2. Criteria 3. Techniques	The learner demonstrates an understanding of the techniques in selecting business ideas.	The learner independently selects a viable business idea.	LO 3. Select a business idea for the animal production market based on the criteria and techniques provided 3.1. Identify potential business ideas to select from 3.2. Enumerate the various criteria	TLE_EM9-12-III0-3

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			<p>and steps to selecting a business idea</p> <p>3.3. Apply the criteria/steps in order to select a viable business idea</p> <p>3.4. Identify a business idea based on the criteria/steps provided</p>	
<p>THE MARKET – BRANDING Key concepts of Branding</p>	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.	<p>LO 4. Develop a brand for the product</p> <p>4.1. Identify the benefits of having a good brand</p> <p>4.2. Enumerate recognizable brands in the town/province</p> <p>4.3. Enumerate the criteria for developing a brand</p> <p>4.4. Generate a brand that is clear and follows the techniques of generating a brand</p>	TLE_EM9-12-IV0-4
LESSON 1: RAISE SMALL RUMINANTS (SM) <i>(Note: Research components should be included in all activities)</i>				
<ol style="list-style-type: none"> 1. Breeds of goat and sheep based on breeding records 2. Proper selection of goat/sheep breeds 3. Manage breeder goat/sheep 4. Signs of heat 5. Unproductive animals 6. Preparation of inventory reports, production and performance records, and financial analysis 7. Computation of feed requirements and biological space requirement for individual animals and stocking density based on recommended standards and 	The learner demonstrates an understanding of goat and sheep breeds based on industry specifications.	The learner independently selects breeds of small ruminants based on their characteristics.	<p>LO 1. Select and manage breeder goats and sheep</p> <p>1.1. Identify suitable and superior breeds of goats and sheep based on industry standard</p> <p>1.2. Feed bucks and rams</p> <p>1.3. Perform regular grooming</p> <p>1.4. Detect signs of heat among sexually mature does and ewes</p> <p>1.5. Mate breeder does and ewes with genetically superior rams/bucks</p> <p>1.6. Diagnose/confirm pregnant animals</p> <p>1.7. Cull unproductive buck/ram and does/ewes</p>	TLE_AFP9-12SM-Ia-e-1

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 AGRI-FISHERY ARTS – ANIMAL PRODUCTION**

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
BAI requirements			1.8. Detect signs of pre-heat, standing heat, post-heat 1.9. House breeder buck/rams and does/ewes	
1. Management of does/ewes 2. Tagging/identifying kids/lambs properly 3. Proper care/practices in growing young and mature animals 4. Health practices for goat/sheep 5. Appropriate number of animals for available grazing/pasture area 6. Monitoring body weights and feed requirements of animals			LO 2. Manage does/ewes and their progenies 2.1. Monitor signs of approaching kidding/lambing 2.2. Dispose placenta and dead kids/lambs properly 2.3. Assist kids/lambs to suckle colostrums 2.4. Identify kids/lambs through ear tags/notches 2.5. Disbud growing kids/lambs appropriately 2.6. Dehorn and castrate growing small ruminants 2.7. Wean lambs/kids properly at 3 months from birth 2.8. Keep lactating goats and sheep in a clean and quite environment 2.9. Separate lactating goats from the breeder males 2.10. Provide forage grasses concentrate, other feed supplements and adequate water supply	TLE_AFP9-12SM-If-j-2
1. Selection of site for housing 2. Materials for housing 3. Space requirements for goat/sheep 4. Types of housing			LO 3. Provide comfortable housing 3.1. Identify the different types of goat/sheep house 3.2. Identify the materials needed in the construction of a goat/sheep house	TLE_AFP9-12SM-IIa-e-3

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			3.3. Estimate the recommended floor space requirement of goat/sheep at different physiological stages	
1. Feeding guide for small ruminants 2. Common feed ingredients for goat/sheep 3. Feeding the general herd 4. Grasses/forages 5. Concentrates 6. Feed supplements 7. Alternative food resources 8. Ratio 9. Silage 10. Grazing area 11. Feed requirements and biological space requirement for individual animals and stocking density based on recommended standards and BAI requirements 12. Appropriate animal unit per available grazing or pasture area 13. Feed conversion efficiency			LO 4. Provide proper feeding management 4.1. Establish a feeding guide following the animals' nutritional requirements 4.2. Determine the feeding system for small ruminants 4.3. Provide forages, concentrates and food supplements 4.4. Make water available to animals 4.5. Establish and maintain pasture area for the herd 4.6. Search for alternative feed resources	TLE_AFP A9-12SM-II f-III j-4
1. Diseases and parasites attacking goats 2. Preventive measures on the different diseases and parasites of goats 3. Prevention vs control 4. Proper herd health program 5. Application of biologics and other disease treatment and management practices			LO 5. Implement health program 5.1. Identify the different diseases and parasites attacking goats and sheep 5.2. Practice/apply the preventive measures 5.3. Follow the medication and vaccination program designed by BAI and as prescribed by a	TLE_AFP A9-12SM-IV a-f-5

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
6. Practices to contain disease spread			veterinarian 5.4. Appreciate the importance of keeping the animals healthy 5.5. Dispose of properly dead animals 5.6. Treat sick animals	
1. Record keeping 2. Record analysis 3. Preparing inventory reports, production and performance records, and financial report			LO 6. Analyze record 6.1. Keep/update records according to organization standards 6.2. Analyze the viability of the project based on records 6.3. Make sound management decisions based on records	TLE_AFP A9-12SM-IVg-j-6

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AGRI-FISHERY ARTS – ANIMAL PRODUCTION

(160 hours)

Course Description:

This is a specialization course which leads to an **ANIMAL PRODUCTION** National Certificate Level II (NC II). It covers one core competency that a high school student ought to possess—namely, raising swine and large ruminants.

The preliminaries of this 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 business opportunities.

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
Introduction 1. Concepts of raising swine and large ruminants 2. Relevance of the course 3. Career opportunities	The learner demonstrates an understanding of the concepts and underlying theories in raising swine and large ruminants.	The learner independently demonstrates common competencies in raising swine and large ruminants as prescribed by TESDA Training Regulations.	1. Explain concepts in raising swine and large ruminants 2. Discuss the relevance of the course 3. Explore career opportunities in animal production or as a source of extra income	
PERSONAL ENTREPRENEURIAL COMPETENCIES (PECS)				
1. Assessment of Personal Competencies and Skills (PECS) vis-à-vis PeCS of 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 based on the results of the assessment 3. Strengthening and further developing of one's PECS	The learner demonstrates an understanding of one's Personal Competencies and Skills (PECS) in raising swine and large ruminants.	The learner independently creates a plan of action that strengthens/ further develops one's PECS in raising swine and large ruminants	LO 1. Develop and strengthen personal competencies and skills (PECS) needed in raising swine and large ruminants 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-Ia-1
ENVIRONMENT AND MARKET (EM)				
1. Product Development 2. Key concepts of developing a product 3. Finding Value 4. Innovation	The learner demonstrates an understanding of <i>environment</i> and <i>market</i> and how they relate to raising swine and large ruminants in one's	The learner independently creates a business vicinity map reflective of the potential market in raising swine and large ruminants within the	LO 1. Develop a product/ service in raising swine and large ruminants	TLE_EM9-12-Ia-1

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
4.1. Unique Selling 4.2. Proposition (USP)		locality/town.	1.1 Identify what is of “Value” to the customer 1.2 Identify the customer 1.2 Explain what makes a product unique and competitive 1.3 Apply creativity and Innovative techniques to develop marketable product 1.4 Employ Unique Selling Proposition (USP) to the product/service	
5. Selecting a Business Idea 6. Key concepts in selecting a business idea 6.1. Criteria 6.2. 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-Ia-2
7. 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-Ia-3

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
LESSON I RAISING SWINE (Note: Research components should be included in all activities)				
<ol style="list-style-type: none"> 1. Characteristics of different breeds 2. Characteristics of good breeder and hog grower 3. Selection of breeder and replacement stocks 4. Do's and Don'ts in training boars 5. Selection criteria and breeding objectives 6. Semen collection and evaluation 7. BAI semen quality standards 	The learner demonstrates an understanding of the underlying concepts and principles in the selection of breeds of boars based on industry standards.	The learner independently performs proper selection of breeds of boars based on the industry standards.	LO 1. Select and train boars <ol style="list-style-type: none"> 1.1. Select suitable breed based on superiority of pedigree or production performance 1.2. Train boars to mount sows/dummy. 1.3. Select boars based on breeding objective and selection criteria. 1.4. Evaluate boar's semen for fertility based on quality standards of BAI. 1.5. Test boars for leptospirosis and brucellosis 	TLE_AFP9-12RS-Ia-c-1
<ol style="list-style-type: none"> 1. Space requirements of pigs at different stages 2. Space requirement computations 3. Infrastructure plans and layout based on existing regulatory policies and proper zoning scheme 	The learner demonstrates an understanding of the underlying concepts and principles in the preparation of swine housing.	The learner independently performs proper preparation of swine housing based on the industry standards.	LO 2. Prepare swine housing <ol style="list-style-type: none"> 2.1. Compute space requirements for each physiological stage based on BAI standards. 2.2. Lay out pig houses based on existing policies and zoning scheme. 	TLE_AFP9-12RS-Id-e-2
<ol style="list-style-type: none"> 1. Selection and culling breeder stocks 2. Production cycle 3. Heat detection and pregnancy diagnosis 4. Natural breeding and artificial insemination 5. Reproductive efficiency 	The learner demonstrates an understanding of the underlying concepts and principles in breeding sows and gilts.	The learner independently performs breeding of sows and gilts based on the industry standards.	LO3. Breed sows and gilts <ol style="list-style-type: none"> 3.1. Select gilts and sows based on superiority of pedigree or production performance. 3.2. Flush selected gilts and sows 3.3. Monitor signs of heat. 3.4. Natural breeding/ artificial insemination. 3.5. Monitor signs of pregnancy. 	TLE_AFP9-12RS-If-g-3

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
<ol style="list-style-type: none"> 1. Preparations for farrowing 2. Assistance activities for farrowing sows 3. Care of newly-farrowed piglets 4. Nutritional requirements (sow feeding scheme) 5. Common farrowing problems 	The learner demonstrates an understanding of the underlying concepts and principles in performing farrowing activities.	The learner independently performs farrowing activities based on the industry standards.	LO 4. Perform farrowing activities 4.1. Disinfect farrowing stalls and pens. 4.2. Transfer pregnant sows and gilts to farrowing stalls or pens. 4.3. Control feed intake based on standard requirements. 4.4. Monitor signs of farrowing. 4.5. Prepare farrowing materials and supplies 4.6. Monitor farrowing problems. 4.7. Remove fetal membranes in piglets 4.8. Cut umbilical cord in an inch from the base and apply with antiseptics 4.9. Cut needle teeth 4.10. Administer post-farrowing medications to the sow. 4.11. Burn placenta and dead fetus	TLE_AFP9-12RS-Ih-j-3
<ol style="list-style-type: none"> 1. Nutritional requirements/feeding scheme of piglets to market age 2. Caring piglets to market age 3. Regular check up and repair of tools and equipment 4. Marketing fattened hogs 	The learner demonstrates an understanding of the underlying concepts and principles in caring and raising piglets to market age.	The learner independently cares and raises piglets to market age based on the industry standards.	LO 5. Care and raise piglets to market age 5.1. Provide artificial heat at the brooding pen 5.2. Inject iron preparations/ anti-scours to piglets. 5.3. Wean piglets 5.4. Castrate piglets using single and double-slit method. 5.5. Introduce pre-starter	TLE_AFP9-12RS-IIa-d-4

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			rations to 2-3 weeks piglets 5.6. Implement different feeding programs based on physiological stages. 5.7. Market hogs at approximately 75-85 kg/head 5.8. Cull undesirable gilts and junior boars.	
<ol style="list-style-type: none"> 1. Signs of unhealthy pigs 2. Medication program (complying BAI, NMIC, PAHC, DA and DENR standards) 3. Regulatory controls and policies on handling, use and disposal of biologics, veterinary drugs and other supplies 4. Program disposal of waste (placenta and dead fetuses and others) 5. Safety in handling biologics and veterinary drugs 	The learner demonstrates an understanding of the underlying concepts and principles in maintaining a herd health program.	The learner independently maintains a herd health program..	LO 6. Maintain herd health program 6.1. Monitor changes in animal behavior 6.2. Implement vaccination programs based on industry standards, existing municipal laws and as per required by BAI 6.3. Perform preventive medication programs based on existing conditions in and out of the farm and industry requirements 6.4. Implement periodic review of medication programs	TLE_AFP9-12RS-IIe-h-5
<ol style="list-style-type: none"> 1. Stock inventory 2. Performance records and production efficiency 3. Mortality and morbidity record keeping 4. Financial recording 5. Sow productivity index calculation 6. Feed efficiency calculation 7. Financial viability of swine 	The learner demonstrates an understanding of the underlying concepts and principles in recording data.	The learner independently performs recording data.	LO7. Record data 7.1. Update stock inventory. 7.2. Record and monitor breeding and farrowing schedules. 7.3. Monitor and analyze production performance of breeders.	TLE_AFP9-12RS-III-j-6

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
enterprise 8. Office equipment and supplies 9. Business ethics				
LESSON 2:				
RAISE LARGE RUMINANT (BEEF CATTLE) LR				
1. Types and breeds of cattle 2. Types and breeds of buffaloes 3. Criteria for selection of a good replacement breeder stocks 4. Bull 5. Heifers 6. Cows 7. Reproductive anatomy and physiology of cattle and buffalo 8. Signs of estrus in cattle and buffaloes 9. Natural breeding vs. artificial insemination 10. Breeding systems	The learner demonstrates an understanding of the underlying concepts and principles in selecting and managing breeder cattle and buffaloes, including their feed and feeding practices.	The learner independently performs proper selection and management of breeder cattle and buffaloes, including their feeds and feeding practices.	*LO 1. Select and manage breeder cattle and buffaloes. 1.1. Identify and select suitable and superior breeds of cattle and buffaloes based on industry and BAI standards 1.2. Identify and formulate breeding objectives to which selected cattle and buffalo will be raised 1.3. Identify and implement breeding systems for cattle and buffalo according to enterprise procedures 1.4. Feed breeders properly 1.5. Manage and provide appropriate support activities for efficient rearing of bulls and cows. 1.6. Discuss productive physiology of large ruminants according to enterprise procedure 1.7. Observe natural or synchronized estrus among heifers/cows	TLE_AFPA9-12LR-IIIa-f-1

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
<ol style="list-style-type: none"> 1. Kinds of grasses 2. Crop products and by-products as feeds 3. Different feed additives 4. Feeding system 5. Calculations of feed requirement 			LO2. Provide feed and implement feeding practices 2.1. Identify feed resources appropriate for cattle and buffalo at various physiological stages based on industry and BAI standards 2.2. Give feed additives and mineral supplements according to enterprise procedures. 2.3. Implement appropriate feeding system.	TLE_AFP9-12LR-IIIg-j-2
LESSON 3: MANAGE THE GENERAL HERD, HEALTH PROGRAM AND RECORD KEEPING (note: Research components should be included in all activities)				
<ol style="list-style-type: none"> 1. Stocking rate 2. Care and management of herd 3. Management of breeding cow, caracows, bulls and carabulls 	The learner demonstrates an understanding of the underlying concepts and principles in the management of the general herd by providing life support facilities, implementing health herd programs and record keeping.	The learner independently performs proper management of the general herd in health program and record keeping.	LO 3. Manage the general herd 3.1. Rear calves, growers and fatteners according to enterprise requirements 3.2. Ensure sound stocking rate and manage general herd appropriately 3.3. Rear breeding cows and bulls according to enterprise requirements	TLE_AFP9-12LR-IVa-b-3
<ol style="list-style-type: none"> 1. Pasture establishment 2. Housing design and facilities 3. Different pasture grasses and legumes 4. Breeding management 			LO 4. Provide life support facilities 4.1. Identify areas and support system for pasture establishment and maintenance, housing and infrastructure facilities and tools and equipment based on industry and BAI standards. 4.2. Identify pasture grasses	TLE_AFP9-12LR-IVc-f-4

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			and legumes suited for general herd. 4.3. Identify housing system and related infrastructures for general herd. 4.4. Use natural mating or artificial insemination in cattle and buffalo according to enterprise procedures.	
1. Herd vaccination and medication program 2. Common pests and diseases of large ruminants			LO 5. Implement herd health program. 5.1. Adopt immunization program in accordance with industry standards. 5.2. Implement medication program based on industry and farm requirements.	TLE_AFPA9-12LR-IVg-h-5
1. Production Records 2. Reproduction records 3. Sales and Expenses records 4. Inventory records 5. Animal Health records 6. Mortality records 7. Profit and Loan Statement records			LO 6. Maintain and analyze records. 6.1. Regularly update and analyze records according to organizational standard 6.2. Analyze economic viability of the project	TLE_AFPA9-12LR-IVi-j-6

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GLOSSARY

Animal Production	A science that deals with production and management of livestock or domestic animals.
Breed	A group of animals that have specific traits or characteristics in common.
Broiler	A type of chicken that is commonly raised between 35 to 42 days and weighs between 1.5-2.0 kilograms.
Brooding	A natural or artificial means of supplying heat to a newly hatched chick from one day to two weeks old.
Castration	Any action, surgical, chemical, or otherwise, by which a male loses the functions of his testicles or a female loses the functions of her ovaries; also referred to as gelding, spaying, neutering, fixing, orchiectomy, and oophorectomy.
Confinement	The state of being confined; with restricted movement.
Entrepreneur	Someone who enters any business to introduce a product or service to substantially form or change the nerve center of that business.
Equipment	Power tools and machines used in animal production.
Farrowing	The act of giving birth; it pertains to swines.
Feed	Edible materials which are consumed by animals and thus contribute energy or nutrients to the animal diet
Feeding	The process of giving feeds to an animal.
Fencing tool	A device used for fence construction and layout of animal houses.
Flammable	Easily ignited and capable of burning rapidly.
Gestation	The period which begins from the breeding of a female until she gives birth to her young.
Hand tool	Things used for conducting simple repair and maintenance operations
Handheld tool	A tool which is compact enough to be used or operated while being held in the hand or hands
Incubation	The process by which certain animals hatch their eggs ; the development of the embryo within the egg until it hatches.
Layer	An egg-type or dual-type 6-month female fowl that lays eggs.

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GLOSSARY

Livestock	One or more domesticated animals raised in an agricultural setting to produce commodities such as food, fiber and labor; usually four legged animals.
Market	A place where goods are sold.
Mortality Rate	The number of animals that died based on the total number of animals raised.
Nutrients	Substances that nourish animals for specific purposes such as for health maintenance, growth, repair of body tissues, reproduction, and other productive activities.
Parasite	A living organism which is dependent on another living organism for food in order to survive.
Poultry	Feathered animals such as chickens, ducks, geese, etc.; A collective term for all domestic birds rendering economic service to man.
Power tool	A tool powered by electricity or driven by a motor.
Pullet	A female fowl, 5 to 6 months of age, intended for egg production
Ration	The amount of feed an animal receives in a 24-hour period.
Ruminant	The name given to a grazing animal that chews its cud and has split hoofs.
Shovel	A tool used in digging and moving soil and other granular materials; it is used for cleaning ditches; also used for leveling a base for sill rocks and steps.
Spade	A tool used to collect animal droppings and manures
Steer	A male cattle that has been castrated before its secondary sex characteristics develop.
Swine	A term collectively used for any of the stout-bodied, short-legged omnivorous mammals with a long mobile snout.
Tool	A device that helps to make the work of men and women easier and faster.
Type	A group of animals that are raised to serve a certain purpose.
Vaccination	An injection of vaccine, bacterin, antiserum or anti-toxin to produce immunity or tolerance to disease.

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SELECTING AND PROCURING STOCKS GLOSSARY	
Bargain	Items that are sold at a very low price.
Characteristic	Qualities and behaviors (of an animal).
Comb	The fleshy crest on the head of a fowl.
Cull	Unproductive birds.
Day-old chicks	Newly-hatched chicks.
Deformities	Physical defects.
Demand	Needs; requirements.
Earlobes	The soft and fleshy thing that protrudes at the lower part of the external ear.
Estimate	To calculate.
Flock	A group of feathered animals such as chickens, ducks, geese, turkey.
Flock	A group of chicken.
Fowl	Generally refers to chicken, ducks, geese, etc.
Full grown pullets	Egg- laying birds that are ready to lay eggs.
Hatchery	A place or establishment where eggs are hatched.
Inferior	Low in quality.
Investment	Capital in an enterprise with the expectation of profit.
Livability	A group of birds with low death rate.
Market	A place where goods are sold.
Market demand	Commodities or goods that people need.
Non- sitters	Fowls that do not sit on their eggs.
Persistent	Enduring; continuous.
Poultry grower	A person who raise chickens; poultry raiser.
Profit	The excess of revenues over outlay in a given time.
Pullets	Young female chicken, not more than one year old.
Purchase	To buy.
Qualities	Essential and distinguishing attributes of an animal.
Selection	The process of choosing and getting the best in a group.
Shank	The leg proper of a bird.
Stocks	Animals used as foundation or parents of the next generation.

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SELECTING AND PROCURING STOCKS GLOSSARY

Strain	Kind or breed of stock.
Vigorous	healthy; active.

PROVIDING FEEDS AND IMPLEMENTING FEEDING PRACTICES GLOSSARY

Absorption or Digestion	The mechanical and chemical breakdown of food into smaller components that are more easily absorbed into a blood stream .
<i>Ad libitum</i>	Means “at one’s pleasure”; in animal feeding, it pertains to the continuous feeding of the animal.
Commercially mixed feeds	feeds of animals intended for sale
Digestion	the process of dissolving food into the stomach, so that it can be turned into available nutrients for the body.
Feed intake	the amount of feeds eaten by the birds
Moistened	slightly wet
Musty	with moldy odor
Nutritious	promoting nutrition, nourishing something
Overfeeding	– feed intake is more than what is required
Ration	the amount of feed given to birds within 24 hours.
Retarded	abnormally slow in development
Self feeder	equipment where feeds are placed
Self feeding	free to take feeds in the feeder
Stale	lost of freshness
Wastage	waste, worthless, loss of materials, minerals or waste products
Absorption	assimilation
Ad libitum	continuous feeding
Commercially mixed feeds	feeds of animals intended for sale
Digestion	the process of dissolving food into the stomach, so that it can be turned into available nutrients for the body.
Feed intake	the amount of feeds eaten by the birds

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PROVIDING FEEDS AND IMPLEMENTING FEEDING PRACTICES GLOSSARY	
Moistened	slightly wet
Musty	with moldy odor
Nutritious	promoting nutrition, nourishing something
Overfeeding	feed intake is more than what is required
Ration	the amount of feed given to birds within 24 hours.
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Self feeder	equipment where feeds are placed
Self feeding	free to take feeds in the feeder
Stale	lost of freshness
Wastage	waste, worthless, loss of materials, minerals or waste products

BROODING GLOSSARY	
Adequate	Meeting the requirements
Brooding	A process of providing artificial heat to the birds from one day old till the time that they can control their own body heat.
Crowding	A condition where there is a large number of birds in a limited space and have no more room for movement
Fixtures	Anything that is fixed in its place.
Humidity	The condition of air moisture in a brooder.
Litter	Materials used to cover floor space.
Requirements	Things needed.
Ventilation	The circulation of air inside and outside the brooder

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MAINTAINING PROPER FLOCK MANAGEMENT GLOSSARY	
Cannibalism	A condition where birds form the habit of feather-picking, to the extent of eating their companions if not controlled
Cauterize	The burning of wounds or injuries by means of a heated metal, to prevent further infection
Culling	The process of removing unproductive birds from a flock
Debeaking /beak trimming	The removal of a part of the upper and lower beak of a bird.
Flock uniformity	Having more or less equal weight among birds in a flock.
Lighting	Having abundant/sufficient light or illumination.
Molting	The shedding of feathers among poultry birds.
Pigmentation	Color.
Pliable	Flexible; easily bent.
Pubic Bone	One of the bones that make up the pelvis and is found at the lower part of the abdomen.
Vent	An opening for the escape of a gas or liquid or for the relief of pressure.

PRE AND POST HARVEST ACTIVITIES GLOSSARY	
Pewee	A group of small to medium-sized insect -eating birds .
Demand	The need or desire for a particular commodity.
Supply	Pertains to available goods or commodities.
Market	A place where the goods are sold.

PERFORMING PREVENTIVE AND THERAPEUTIC MEASURES GLOSSARY	
Disease	Any deviation from the normal conditions of the body.
Hygiene	Cleanliness.
Inclement weather	Bad weather.
Infectious disease	Transmittable disease.
Outbreak	A violent break of disease that affects a large number all at once.

**K to 12 BASIC EDUCATION CURRICULUM
JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL TECHNICAL-VOCATIONAL-LIVELIHOOD TRACK
AGRI-FISHERY ARTS – ANIMAL PRODUCTION**

PERFORMING PREVENTIVE AND THERAPEUTIC MEASURES GLOSSARY	
Parasite	An organism that lives on or in another organism to obtain its food
Prevention	An advance measure to eliminate the possible occurrence of pest and disease to the flock
Sanitation	The removal of the disease-causing organisms.
Susceptible	Easily affected.
Vaccine	Live and controlled causal organisms of certain diseases for immunization.
Veterinarian	An animal doctor.
Vaccination	The introduction of live but weak disease, causing an organism to develop immunity

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 AGRI-FISHERY ARTS – ANIMAL PRODUCTION**

CODE BOOK LEGEND

Sample: TLE_AFP A9-12LR-IVd-5

LEGEND		SAMPLE	
First Entry	Learning Area and Strand/ Subject or Specialization	Technology and Livelihood Education_Agri-Fishery Animal Production	TLE_AF PA 9-12
	Grade Level	Grade 9/10/11/12	
Uppercase Letter/s	Domain/Content/ Component/ Topic	Raise Large Ruminant (Beef Cattle)	LR
			-
Roman Numeral <i>*Zero if no specific quarter</i>	Quarter	Fourth Quarter	IV
Lowercase Letter/s <i>*Put a hyphen (-) in between letters to indicate more than a specific week</i>	Week	Week Four	d
			-
Arabic Number	Competency	Implement herd health program	1

DOMAIN/ COMPONENT	CODE
Personal Entrepreneurial Skills	PECS
Environment and Marketing	EM
Raising Swine	RT
Raise Large Ruminant (Beef Cattle)	LR

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

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 JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL TECHNICAL-VOCATIONAL-LIVELIHOOD TRACK
 AGRI-FISHERY ARTS – ANIMAL PRODUCTION
 SAMPLE AGRICULTURE AND FISHERY ARTS CURRICULUM MAP**

No.	Grade 7/8 (Exploratory)	Grade 9	Grade 10	Grade 11	Grade 12
1	EXPLORATORY	Crop Production (NC I)	4 semesters	*Landscape Installation and Maintenance (NC II)	
2				4 semesters	
3				*Pest Management (NC II)	
4				4 semesters	
5				*Rice Machinery Operation (NC II)	
6		4 semesters		*Artificial Insemination: Swine (NC II)	
7		Animal Production (NC II)			2 sems
8		6 semesters			
9		*Artificial Insemination: Ruminants (NC II)		2 sems	
10		*Slaughtering Operation (NC II)			
11		4 semesters		Horticulture (NC II)	
12		8 semesters		Food (Fish) Processing (NC II)	
13		8 semesters		Aquaculture (NC II)	
13	*Fish Wharf Operation (NC I)		2 sems		

*Please note that these subjects have prerequisites mentioned in the CG.