

K to 12 BASIC EDUCATION CURRICULUM
JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL - TECHNICAL-VOCATIONAL-LIVELIHOOD TRACK
AGRI-FISHERY ARTS – ARTIFICIAL INSEMINATION: LARGE RUMINANTS (NC II)
(160 hours)

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

AGRI-FISHERY ARTS

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

K to 12 BASIC EDUCATION CURRICULUM
JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL - TECHNICAL-VOCATIONAL-LIVELIHOOD TRACK
AGRI-FISHERY ARTS – ARTIFICIAL INSEMINATION: LARGE RUMINANTS (NC II)
(160 hours)

HOME ECONOMICS

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

K to 12 BASIC EDUCATION CURRICULUM
JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL - TECHNICAL-VOCATIONAL-LIVELIHOOD TRACK
AGRI-FISHERY ARTS – ARTIFICIAL INSEMINATION: LARGE RUMINANTS (NC II)
(160 hours)

INDUSTRIAL ARTS

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

K to 12 BASIC EDUCATION CURRICULUM
JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL - TECHNICAL-VOCATIONAL-LIVELIHOOD TRACK
AGRI-FISHERY ARTS – ARTIFICIAL INSEMINATION: LARGE RUMINANTS (NC II)
(160 hours)

INFORMATION, COMMUNICATIONS AND TECHNOLOGY (ICT)

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

K to 12 BASIC EDUCATION CURRICULUM
JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL - TECHNICAL-VOCATIONAL-LIVELIHOOD TRACK
AGRI-FISHERY ARTS – ARTIFICIAL INSEMINATION: LARGE RUMINANTS (NC II)
 (160 hours)

Course Description:

Prerequisite: Animal Production (Large Ruminants) (NC II)

This Module is an **ADVANCED** component of **Senior High School – Animal Production** which leads to an **Artificial Insemination–Large Ruminants** National Certificate Level II (**NC II**). It covers **four** core competencies that the high school student ought to possess: (1) establish readiness of cow/buffalo for artificial insemination, (2) prepare for artificial insemination, (3) perform artificial insemination, and (4) prepare artificial insemination documentation and reports.

The preliminaries of this advanced 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 artificial insemination in large ruminants 2. Relevance of the course 3. Career opportunities	The learner demonstrates an understanding of the basic concepts and underlying theories in the artificial insemination (AI) of beef cattle, dairy cows and buffaloes.	The learner independently performs core competencies in the artificial insemination of large ruminants as prescribed by TESDA Training Regulations.	1. Explain basic concepts in large ruminant AI 2. Discuss the relevance of the course 3. Explore career opportunities in Large Ruminant AI as a technician	
LESSON 1. ARTIFICIAL INSEMINATION-LARGE RUMINANT				
1. Validate Information on Animal 2. Body Condition Scoring 3. Heat Detection Thru Rectal Palpation	The learner demonstrates an understanding of establishing the readiness of breeders for AI.	The learner independently confirms readiness of breeders for AI.	LO 1. ESTABLISH READINESS FOR ARTIFICIAL INSEMINATION 1.1. Record client's and animal's profile using the prescribed forms and following standard operating procedure 1.2. Transact and coordinate (with clients?) following communication etiquette 1.3. Make an accurate interpretation and decision based on the gathered information 1.4. Evaluate physical condition of the animal based on recommended standards 1.5. Monitor signs of estrus	TLE_AFAIR9-12VBH-IIIa-f-1

K to 12 BASIC EDUCATION CURRICULUM
JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL - TECHNICAL-VOCATIONAL-LIVELIHOOD TRACK
AGRI-FISHERY ARTS – ARTIFICIAL INSEMINATION: LARGE RUMINANTS (NC II)
(160 hours)

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			1.6. Restrain animal using the prescribed chute 1.7. Conduct examination through rectal palpation to determine the animal's reproductive condition 1.8. Perform task without causing injury to the animal, technician and others 1.9. Make an accurate interpretation and decision based on the result of the actual examination	
4. Pre-insemination Activities 5. Semen Storage and Quality Maintenance	The learners demonstrate an understanding of the process of preparation for artificial insemination.	The learner independently performs necessary preparations prior to artificial insemination.	LO 2. PREPARE FOR ARTIFICIAL INSEMINATION 2.1. Source semen and LN ₂ supplies from the concerned partners 2.2. Prepare and secure AI kit and Liquid Nitrogen (LN ₂) tank with semen during transport 2.3. Make preparation for AI according to hygiene and safety requirements 2.4. Restrain animal using suitable restraining procedures 2.5. Monitor LN ₂ level using the dip stick and replenish when necessary 2.6. Replenish semen inventory as needed based on recommended procedure 2.7. Perform task with caution to ensure safety of technician and other individuals	TLE_AFAIR9-12PS-III-g-j-2

K to 12 BASIC EDUCATION CURRICULUM
JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL - TECHNICAL-VOCATIONAL-LIVELIHOOD TRACK
AGRI-FISHERY ARTS – ARTIFICIAL INSEMINATION: LARGE RUMINANTS (NC II)
(160 hours)

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
6. Semen Preparation 7. Actual Insemination 8. Post-artificial insemination (AI) activities	The learners demonstrate an understanding of performing artificial insemination.	The learner independently performs artificial insemination to inheat cows.	LO 3. PERFORM ARTIFICIAL INSEMINATION 3.1. Select semen to be used in accordance with the mating plan and production objective 3.2. Prepare semen straw for AI in accordance with established procedure 3.3. Perform task in the recommended location to ensure quality of semen and to avoid injuries to technician and others 3.4. Discard defective semen straws in accordance with environmental regulations 3.5. Perform cleaning of the external genitalia using suitable materials and as needed 3.6. Deposit semen into the female reproductive tract following recommended standards 3.7. Perform task without causing injury to the animal, technician and others 3.8. Advise clients about the management of animals after AI 3.9. Dispose of waste according to existing environmental regulations	TLE_AFAIR9-12SAP-IV-a-g-3

K to 12 BASIC EDUCATION CURRICULUM
JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL - TECHNICAL-VOCATIONAL-LIVELIHOOD TRACK
AGRI-FISHERY ARTS – ARTIFICIAL INSEMINATION: LARGE RUMINANTS (NC II)
(160 hours)

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
9. Collection and Processing of Data 10. Accomplish and submit forms	The learner demonstrates an understanding of the preparation of documents and reports on completed artificial insemination.	The learner independently prepares documents and reports on completed artificial insemination.	LO 4. PREPARE FOR ARTIFICIAL INSEMINATION (AI) DOCUMENTATIONS AND REPORTS 4.1. Secure necessary forms from partners 4.2. Collect and process data as required in the forms 4.3. Gather photos and other pertinent information as needed 4.4. Secure evidence for breed registry as needed 4.5. Accomplish and submit forms to concerned partners 4.6. Prepare and submit summary report using required forms 4.7. Keep file copies of accomplished forms and summary report as well as those compiled by technicians according to required filing procedures	TLE_AFAIR9-12CA-IV-h-j-4

K to 12 BASIC EDUCATION CURRICULUM
JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL - TECHNICAL-VOCATIONAL-LIVELIHOOD TRACK
AGRI-FISHERY ARTS – ARTIFICIAL INSEMINATION: LARGE RUMINANTS (NC II)
 (160 hours)
CODE BOOK LEGEND

Sample: TLE_AFPAAIR9-12CA-IV-h-j-4

LEGEND		SAMPLE	
First Entry	Learning Area and Strand/ Subject or Specialization	Technology and Livelihood Education_Agri-Fishery Artificial Insemination - Ruminant	TLE_AF AIR 9-12
	Grade Level	Grade 9/10/11/12	
Uppercase Letter/s	Domain/Content/ Component/ Topic	Collection and Processing of Data	CA
			-
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 eight to ten	h-j
			-
Arabic Number	Competency	Prepare for artificial insemination documentations and reports	4

DOMAIN/ COMPONENT	CODE
Validate Information on Animal Body Condition Scoring Heat Detection Thru Rectal Palpation	VBH
Pre-insemination Activities Semen Storage and Quality Maintenance	PS
Semen Preparation Actual Insemination Post-artificial insemination (AI) activities	SAP
Collection and Processing of Data Accomplish and submit forms	CA

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.

K to 12 BASIC EDUCATION CURRICULUM
JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL - TECHNICAL-VOCATIONAL-LIVELIHOOD TRACK
AGRI-FISHERY ARTS – ARTIFICIAL INSEMINATION: LARGE RUMINANTS (NC II)
 (160 hours)

SAMPLE AGRICULTURE AND FISHERY ARTS CURRICULUM MAP (updated as of May 2016)**

GRADE 7/8 (EXPLORATORY)			GRADES 9-12					
EXPLORATORY			Agricultural Crops Production (NC I)	4 sems				
			Agricultural Crops Production (NC II)⁺ <small>updated based on TESDA Training Regulations published on December 28, 2013</small>			8 sems		
			*Agricultural Crops Production (NC III)			8 sems		
			Landscape Installation and Maintenance (NC II)	4 sems	Organic Agriculture (NC II)	4 sems		
			Pest Management (NC II)	4 sems	Rice Machinery Operation (NC II)	4 sems		
			Animal Production (Swine) (NC II)⁺ <small>updated based on TESDA Training Regulations published on December 28, 2013</small>	4 sems	*Artificial Insemination: Swine (NC II)	2 sems	*Slaughtering Operations (Hog/Swine/Pig) (NC II)	2 sems
			Animal Production (Large Ruminants) (NC II)⁺ <small>updated based on TESDA Training Regulations published on December 28, 2013</small>	4 sems	*Artificial Insemination: Large Ruminants (NC II)	2 sems	Fish Wharf Operation	2 sems
			Animal Production (Poultry-Chicken) (NC II)⁺ <small>updated based on TESDA Training Regulations published on December 28, 2013</small>	4 sems	*Animal Health Care Management NC III		4 sems	
			Rubber Production (NC II)	4 sems	Rubber Processing (NC II)		4 sems	
				*Horticulture (NC III)			8 sems	
				Food Processing (NC II)			8 sems	
				Fish Capture (NC II)			8 sems	
				Aquaculture (NC II)			8 sems	
			Fish-Products Packaging (NC II)	4 sems	Fishing Gear Repair and Maintenance (NC III)		4 sems	

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

+ CG updated based on new Training Regulations of TESDA.

Other specializations with no prerequisites may be taken up during these semesters.

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

K to 12 BASIC EDUCATION CURRICULUM
JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL - TECHNICAL-VOCATIONAL-LIVELIHOOD TRACK
AGRI-FISHERY ARTS – ARTIFICIAL INSEMINATION: LARGE RUMINANTS (NC II)
(160 hours)

Reference:

Technical Education and Skills Development Authority-Qualification Standards Office. *Training Regulations for Artificial Insemination (Large Ruminants) NC II*. Taguig City, Philippines: TESDA, 2007.