



Agricultural Science Program
Student Learning Outcome Mapping
Course (CLO), Program (PLO), Institutional (ILO)

Program Description: This program is designed to equip students with employable skills/knowledge or for the pursuit of a higher education in the field of agricultural science.

Program Learning Outcomes	Institutional Learning Outcomes
<ol style="list-style-type: none"> 1. Students will develop competent agricultural skills with ethical standards in their commitment to develop their respective agricultural sectors 2. Students will demonstrate scientific knowledge and skills of a prospective entrepreneur 3. Students will recognize the value and develop awareness in preserving diversities of the environment 4. Students will effectively deliver relevant extension services providing quality services and assistance to agriculture sectors 	<ol style="list-style-type: none"> 1. Critical Thinking and Problem Solving: Analyze and solve problems by using informed judgment based on evidence, sound reasoning, and/or creativity to differentiate facts from opinions and to specify solutions and their consequences. 2. Communication: Effectively communicate, both orally and in writing, thoughts in a clear, well-organized manner to persuade, inform and/or convey ideas in academic, work, family and community settings. 3. Quantitative and Technological Competence: Use mathematical skills appropriate to our technological society by analyzing and solving problems that are quantitative in nature and use technology for informational, academic, personal and professional needs. 4. Diversity: Understand and appreciate differences in cultures and behaviors between the self and others by demonstrating respect, honesty, fairness, and ethical principles in both personal and professional life. 5. Civic Responsibility: Apply the principles of civility and morality to situations in the contexts of a healthy family, work, community, environment and world. 6. Aesthetics: Apply numerous means of inquiry to experience and appreciate the values of arts and nature.

PLO-ILO Mapping

PLOs	ILOs					
	ILO 1	ILO 2	ILO 3	ILO 4	ILO 5	ILO 6
PLO 1	X	X	X	X	X	X
PLO 2	X	X	X	X	X	X
PLO 3	X	X	X	X	X	X
PLO 4	X	X	X	X	X	X

CLO-PLO-ILO Mapping

AG 111 - Introduction to Tropical Agriculture

An orientation to Agricultural Science which provides an overview of the fundamental principles of the field. The course stresses agriculture in the tropics and Micronesia, covering a variety of topics in plant science to animal science. It also introduces students to the various careers and occupations which are included in the field of agriculture. This course includes laboratory and field investigations, and field trips to local agricultural production sites.

CLO Students will be able to:	PLO					ILO					
	PLO 1	PLO 2	PLO 3	PLO 4		ILO 1	ILO 2	ILO 3	ILO 4	ILO 5	ILO 6
1. Explain the factors affecting yields of tropical crops.	X	X	X			X	X	X	X	X	
2. Demonstrate procedures in restoring and maintaining soil organic matter under continuous cultivation.	X	X	X	X		X	X	X	X	X	
3. Classify tropical plants based on their economic uses.	X	X				X	X			X	
4. Describe the reproductive physiology of farm animals.	X					X				X	
5. Perform the practices in animal nutrition.	X	X		X		X			X	X	

AG 122 - Soil Technology

Soil is a complex matrix of physical, chemical, and biological interactions between its living and nonliving components. This course covers soil identifications, fertility, microbiology, amendments, testing, and practical implications for agriculture.

CLO Students will be able to:	PLO					ILO					
	PLO 1	PLO 2	PLO 3	PLO 4		ILO 1	ILO 2	ILO 3	ILO 4	ILO 5	ILO 6
1. Identify the major, secondary plant nutrients and micronutrients and apply to growing crops.	X	X	X	X		X	X			X	
2. Perform the process of soil sampling and recommend fertilizers and lime applications.	X	X	X	X		X		X	X	X	
3. Determine the effects of soil pH to plants.	X	X				X		X			
4. Demonstrate efficiency in composting using proper materials.	X	X	X			X		X	X		
5. Prepare ideal soil mixes using organic amendments.		X	X			X			X	X	

AG 123 - General Animal Husbandry

This course is designed to provide instruction in the principles of efficient animal production. It covers topics in general farm breeds, selection of breeds, anatomy, physiology, genetics, nutrition, feeds and feeding, housing, management, sanitation and animal health and disease control.

CLO Students will be able to:	PLO					ILO					
	PLO 1	PLO 2	PLO 3	PLO 4		ILO 1	ILO 2	ILO 3	ILO 4	ILO 5	ILO 6
1. Identify the internal organs of a chicken.		X	X			X	X	X			
2. Describe the functions of a good ration.	X	X		X		X	X				
3. Identify the major functions of the basic nutrient groups and its feeds source.	X	X		X		X	X			X	
4. Discuss the use of artificial insemination and embryo transfer in animal science.	X	X		X		X		X		X	
5. Identify and describe reproductive organs: discuss fertilization, gestation, parturition, and oestrus cycle.	X		X			X	X	X	X		

AG 124 - Plant Science

This course introduces students to the basic principles of plant structure, classification, growth, reproduction, propagation, and utilization. The course emphasizes plant science from an agricultural standpoint, stressing its importance in everyday agriculture.

CLO Students will be able to:	PLO					ILO					
	PLO 1	PLO 2	PLO 3	PLO 4		ILO 1	ILO 2	ILO 3	ILO 4	ILO 5	ILO 6
1. Identify the various structures of plants and state their functions.	X	X		X		X	X				
2. Explain the factors that influence and affect plant growth and developments.	X	X		X		X	X	X	X	X	
3. Perform the different methods of plant propagation.	X	X				X		X	X		
4. Demonstrate the systems of land conservation practices.			X	X		X	X	X	X	X	
5. Diagnose deficiency symptoms of minerals and recommend the right kind of fertilizer materials.	X	X		X		X	X	X	X	X	

AG 214 - Horticultural Crop Production

This course introduces the principles of plant growth, classification of crop plants, soils and soil preparation, planting, fertilizing, harvesting, and general management of crop production. The course emphasizes tropical vegetable crops, root crops, and fruit/tree crops.

CLO Students will be able to:	PLO					ILO					
	PLO 1	PLO 2	PLO 3	PLO 4		ILO 1	ILO 2	ILO 3	ILO 4	ILO 5	ILO 6
1. Demonstrate efficiency in land preparation for crop production.	X	X	X	X		X		X	X	X	
2. Perform the different methods of plant propagation.	X	X		X		X			X		
3. Perform the production practices of common tropical root crops.	X	X	X	X		X	X	X	X	X	
4. Perform the production practices of tropical vegetables.	X	X	X	X		X	X	X	X	X	
5. Perform the production practices of tropical fruit trees.	X	X	X	X		X	X	X	X	X	

AG 215 - Poultry and Swine Production

This course provides general instruction in the techniques of poultry and swine production, including breed selection, feeding, management, housing and disease control. It emphasizes poultry and swine production in the tropics.

CLO Students will be able to:	PLO					ILO					
	PLO 1	PLO 2	PLO 3	PLO 4		ILO 1	ILO 2	ILO 3	ILO 4	ILO 5	ILO 6
1. Identify and describe the different types and breeds of chicken.	X			X		X	X			X	
2. Describe the desirable characteristics of chicken when selecting a breed.	X			X		X	X			X	
3. Explain the management practices in different stages of chicken growth.	X	X		X		X	X	X		X	
4. Identify the nutritional needs of a chicken through its life cycle.	X	X		X		X	X			X	
5. Identify and describe the different types and breeds of swine.	X			X		X	X			X	
6. Perform the feeding programs for the different growth stages of swine.	X	X		X		X	X	X	X	X	
7. Perform accepted management practices in swine raising from prebreeding to weaning to market.	X	X	X	X		X	X	X	X	X	
8. Explain the factors to consider when selecting a suitable breed of swine.	X			X		X	X			X	

AG 216 - Tropical Landscape Horticulture

This course is designed to prepare students for job entry in landscaping private homes, schools, hotels, government buildings, and recreation areas. This course covers landscape arts, style, and design; identification of ornamental and landscape plants; nursery production of ornamental plants; and landscape establishment and maintenance.

CLO Students will be able to:	PLO					ILO					
	PLO 1	PLO 2	PLO 3	PLO 4		ILO 1	ILO 2	ILO 3	ILO 4	ILO 5	ILO 6
1. Propagate tropical ornamental plants and observe the practices of a successful nursery management.	X	X				X		X	X		
2. Demonstrate the different ways of arranging plant materials.	X	X	X	X		X			X	X	X
3. Perform proper ways of installing trees and shrubs.	X	X	X	X		X	X	X	X	X	X
4. Describe how flower borders and flowerbeds are used in landscaping.	X	X	X	X		X	X			X	X
5. Design a flower planting.	X	X	X	X		X	X	X			X

AG 219 - Crop Protection

This course provides the student with theoretical and practical skills in crop protection, including identification and control of insects, weeds, and pathogens. Emphasis in the course is on integrated management of the main crop pests in the Pacific Islands through an understanding of the basic principles of agroecology. The course includes thorough instruction in the safe and proper use of pesticides; students successfully completing the course should be able to pass a test for certification as a private pesticide applicator.

CLO Students will be able to:	PLO					ILO					
	PLO 1	PLO 2	PLO 3	PLO 4		ILO 1	ILO 2	ILO 3	ILO 4	ILO 5	ILO 6
1. Define agroecology and discuss the basic principles, concepts, and practices and explain the importance of agroecology in crop protection.	X	X	X	X		X	X	X	X	X	X
2. Identify and describe some of the insect pests of important root crops in the Pacific region and explain the preventive and control measures.	X	X	X	X		X	X	X	X	X	
3. Identify and describe some of the insect pests of important crops in the Pacific region and explain the preventive and control measures.	X	X	X	X		X	X	X	X	X	
4. Identify and describe some of the insect pests of fruits and other trees in the Pacific region and explain the preventive and control measures.	X	X	X	X		X	X	X	X	X	
5. Explain the safety procedures in the use of synthetic chemicals including handling, storage, and disposal.	X	X	X	X		X	X	X	X	X	

AG 220 - Farm Management

This course provides instruction in managing a small diversified farm including the efficient use of farm resources, budgeting, credit and finance, planning, decision-making, farm records keeping, labor supervision, and marketing of farm goods. The emphasis of the course is on using these principles for a farm business in the Pacific Region.

CLO Students will be able to:	PLO					ILO					
	PLO 1	PLO 2	PLO 3	PLO 4		ILO 1	ILO 2	ILO 3	ILO 4	ILO 5	ILO 6
1. Explain the process of decision-making and be able to discuss the decision-making environment in Agriculture.	X	X	X	X		X	X	X			
2. Discuss the procedures for selecting enterprises.	X	X	X	X		X	X	X			
3. Explain and give examples of the tools necessary for measuring management performance.	X	X	X	X		X	X	X			
4. Explain the difference between specialization and diversification and list the advantages and disadvantages for each.	X	X	X	X		X	X	X	X	X	
5. Discuss the importance of capital and credit in Agriculture.	X	X				X	X	X			
6. Explain the different systems for employing labor resources.	X	X				X	X	X	X	X	

AG 223 - Internship

This course provides the student practical training in Agricultural Science. With the assistance of an instructor-coordinator, the student is assigned to work under a supervisor in a governmental department or a private business firm in order to learn through an actual work experience.

CLO Students will be able to:	PLO					ILO					
	PLO 1	PLO 2	PLO 3	PLO 4		ILO 1	ILO 2	ILO 3	ILO 4	ILO 5	ILO 6
1. Demonstrate proper employee behaviors and work habits.	X	X	X	X		X	X	X	X	X	X
2. Perform agriculture tasks as assigned by site supervisor.	X	X	X	X		X	X	X	X	X	X