

College of Micronesia – FSM
Program Evaluation Division of Agriculture

I. Program Historical Background: This program was created by an act of the Congress of Micronesia, to fulfill the long cherished goal of creating education that was suited to the needs of the island economy. In 1981 COM-FSM College was given a Land Grant Institutions status by the United States Congress through the United States Department of Agriculture. This funded the creation of the Cooperative Extension Service (CES), Agriculture Experiment Station, (AES), and a residential agriculture instruction program (RI).

II Program Mission Statement: This program prepares individuals for employment in agriculture and natural resources or for further graduate study. The curriculum is structured to offer a well-rounded education in basic and applied sciences of agriculture. The program blends comprehensive classroom instruction with practical experiences.

Goals 1: Develop and advance sustainable agriculture and natural resources management through the application of educational programs and training.

Goal 2: Develop and implement a specific recruitment plan, and to provide scholarships.

Goal 3: Implement a Certificate Program in Agriculture and Food Technology at Chuuk and Yap campus.

III. Program Learning Outcomes:

These following learning outcomes are identified by the Division of Agriculture as being important upon completion of the degree program in Agriculture/Natural Resource Management.

Demonstrate and understanding of how human choices influence the relationship between living beings, their surroundings, and the quality of life.

Demonstrate an understanding of the principles of efficient livestock production including feeding practices, breeds, management, housing, marketing, diseases, and sanitation under tropical conditions.

Apply knowledge of farm records in preparation of financial net worth statement, receipts and expenses records, enterprise accounts, and farm budgeting. And also demonstrate and understanding the role of the manager in the organization and operation of the agribusiness.

Demonstrate an understanding of growing, harvesting, handling, storing, processing, and marketing of vegetables and local cash crops.

Demonstrate the ability to write and present a practicum report that details the field experience.

IV. Program Admission and AS degree Requirement: The admission policy of the COM-FSM established by the Board of Regent should be applied for the program admission.

General Education Requirement (9)

EN 110 Advanced Reading

EN 120 Expository Writing I

EN 129b Expository Writing II

Mathematics (3)

MS 100 College Algebra

Natural Science (7)

A science course with lab and and a non lab or agriculture course.

Social Science (3)

SS 150 History

Computer (3)

CA computer literacy

Physical Education

PE course

Humanities (3)

Any course in Art, Music, History

Literature, Philosophy, or Language.

Major Requirement (21)

Introduction to Agriculture

Crop Science

Animal Science

Food Science

Agriculture Project Management

Field Experience

V. Program Required Course Descriptions**AG 084 Basic Crop Production (4)**

This course is designed to provide students with the basic principles of plant-soil-climate relationship, various stages of pre-planting, planting, vegetable growth, fruit seed growth, harvesting and marketing.

AG 086 Micropropagation and Nursery Practices (4)

Introduces the basic principles and skills regarding techniques, practices and procedures of plant tissue culture (micropropagation), asepsis, laboratory plan, equipment and facilities, and green house growing.

AG 088 Landscaping (3)

Designed to prepare students to work in either private or public sectors with basic skills and knowledge in style, design, identification of local ornamental, turf management, nursery propagation practices and maintenance.

AG 090 Principles of Food Processing (3)

Introduces the students to the fundamentals of food preparation and the relationship between the scientific principles and cooking procedures.

AG 092 Swine and Poultry Production (3)

Introduces the basic skills and principles of swine and poultry production including breed selection, feed, housing, management, and animal health.

AG 094 Farm Management and Marketing (3)

Introduces the basic economic concepts, government policies as they relate to farm production and marketing, prepare, analyze and interpret farm records and account, techniques and management of farm business.

AG 096 Field Internship (5)

Designed to give the student field experience with a cooperating supervisor from either government or private agricultural organization. This is for students who are in the last semester of the certificate program.

AG 101 Introduction to Agriculture (3)

Provides an orientation to agricultural careers and the agriculture major by laying down the basic principles of vegetable gardening, animal husbandry, aquaculture, forestry, soil science, soil and water conservation, pest management, nutrition, marketing, and extension.

AG 110 Crop Production w/lab (4)

Prerequisite: AG 101

Fosters a greater understanding of the current theories and practices in tropical horticultural, agronomic and agroforestry cropping systems. Emphasizes sustainable/low impact production techniques, hands-on field experience, and individual research, experimentation and reporting.

AG 140 Principles of Animal Science w/lab (4)

Prerequisite: AG 101

Develops a general understanding of the principles of raising animals commercially with special emphasis on poultry and pigs.

AG 252 Agricultural Extension (3)

Prerequisite: AG 101 or permission of instructor

Deals with communication skills and knowledge needed by an extension officer: the chairing of meetings, conducting surveys, teaching adults, writing proposals and plans, writing talks for radio, and poster and pamphlet design. Reviews the development and educational philosophy of the Cooperative Extension Service in Micronesia and the U.S. as well as existing programs and projects.

AG 270 Principles Of Agricultural Engineering (3)

Prerequisite: AG 101

Introduces the concepts and applications of agricultural engineering with emphasis on farm power and machinery, agricultural structures, concrete work, electrification, aquaculture, hydroponics and greenhouse system construction, and irrigation and drainage management in the Pacific context.

AG 290 Agricultural Project Management (3)

Introduces the basic principles and methods of designing, obtaining, managing and evaluating agricultural projects; both entrepreneurial and governmental funded. Frequent use of case studies, guest lecturers and field trips. Individual final project required.

AG 299 Directed Field Experience (1)

Structured learning experience working with a private or governmental agricultural organization

or enterprise for at least three hours weekly. Ten hours classroom instruction together with frequent supervisor visits. Diary and final report required.

VI. Program Faculty

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 Master- Agriculture Studies
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VII Program Evaluation Methodology

Division of Agriculture and Natural Resource Management decided to evaluate the program learning outcomes of Ag 140,(animal science) and Ag. 110 (crop science). To asses the level of learning based on course objective by knowledge gain and demonstrative basic skills.

Questionarie Preparation

The questions were designed from the compilation of previous chapter tests and field work tests in both courses. The primary objective was to investigate the success of the students learning experiences. Success is defined as the students capability to pass these tests with higher standards.

Data collection and rubrics developed.

Index developed in the major categories in cognitive domain

Standard Levels	0-never	1-seldom	2-sometimes	3-often	4-always	Score
Knowledge	Never recognize and recall of facts and details	Seldom recognize and recall of facts and details	Sometimes recognize and recall of facts and details	Often recognize and recall of facts and details	Always recognize and recall of facts and specifics.	
Comprehension	Never able to summarize or paraphrase given information	Seldom able to summarize or paraphrase given information	Sometimes able to summarize or paraphrase given information	Often able to summarize or paraphrase given information	Always able to summarize or paraphrase given information	
Application	Never able to use information in a situation different from original learning context.	Seldom able to use information in a given situation different from original learning context	Sometimes able to use information given in a situation different from original learning context.	Often able to use information given in a situation different from original learning context	Always able to use information given in a situation different from original learning context	

Analysis	Never able to separate whole into parts, until relationship among elements are clear	Seldom able to separate whole into parts, until relationship among elements are clear.	Sometimes able to separate whole into parts, until relationship among elements are clear.	Often able to separate whole into parts, until relationship among elements are clear	Always able to separate whole into parts, until relationship among elements are clear.	
Synthesis	Never able to combine elements to form new entity from original one	Seldom able to combine elements to form new entity from original one	Sometimes able to combine elements to form new entity from original one	Often able to combine elements to form new entity from original one	Always able to combine elements to form new one from original one	
Evaluation	Never able ves acts of decision-making , judging , or selecting based on criteria and rationale	Seldom able to make decision, judging or selecting based on criteria and rational	Sometimes able to make decision, judging or selecting based on criteria and rational	Often able to make decision, judging or selecting based on criteria and rational.	Always able to make decision, judging or selecting based on criteria and rational.	

Exceeds standard (must receive a 4 in each area)

Meet standard (must receive all 3's or a combination of 3's and 4's)

Approaches standard (must receive all 2's or any combination of 3's and 4's)

Begins standard (has no 3's or 4's but not all 1's)

Absent (has all 1's and 0's)

Baseline data collected:

1. program enrollment, 2003- 7, 2004- 15, 2005- 11, 2006- 10, 2007- 5,
2. Graduation Rate, 2003- 0, 2004- 0, 2005- 1, 2006-1, 2007, 1
3. Average class size, 2003- 19, 2004- 22, 2005- 17, 2006- 14, 2007- 19
4. Student cost seat, Not available
5. Employment rate, Not available
6. Transfer rate, Not available

Program Analysis: To be analyzed after collection of student results

Program Recommendations:

1. Develop recruitment and enrollment plan for Chuuk and Yap campuses to offer the Certificate Program to increase transfer students into the degree program. The data collected on enrollment was indeed low

2. Increase scholarships for graduates in Agriculture through Caripac and Land Grant programs, state and national scholarship schemes to motivate more students to further studies.
3. Hire one more instructors and increase budget for the new program (Agriculture/Natural Resource Management). Its been one man division since the creation of this College. This will give students more opportunities to learn from different instructors with different skills and knowledge.

References:

PERCEPTIONS ABOUT THE ROLE OF EDUCATION AT THE COLLEGE OF MICRONESIA FEDERATED STATES OF MICRONESA. UMI's dissertation by Shum Grant, 1996