

AG-084 Basic Crop Production

GENERAL INFORMATION:

Course title: AG 084 Basic Crop Production		
Campus: CTEC, Kosrae, Yap	Initiator: Alvie B. Cabañez	Date: 02/03/2022
Course description: This course is designed to provide students with the basics and fundamentals of crop production. The basic principles of plant and soil relationship, plant, soil, and climate change relationship, understanding the basic concept of root formation. The students will learn to execute simple but basic ideas on planting, transplanting, soil sterilization, soil formation, and different levels of seed growth, fruit growth, harvesting, and marketing.		

COURSE HOURS/CREDITS:

	Hours per Week		No. of Weeks		Total Hours		Semester Credits
Lecture	3	x	16	x	48	=	3
Laboratory	3	x	16	x	48	=	1
Workshop		x		x		=	
Total SemesterCredits							4

PURPOSE OF COURSE:

☐ Degree requirement

☐ Degree elective

☒ Certificate

☐ Other

PREREQUISITES: None

PSLOs OF OTHER PROGRAMS THIS COURSE MEETS:

PSLO#	Program
1. Acquire fundamental concepts and principles focusing towards development and production in a sustainable manner appropriate in Micronesia.	Agriculture and Natural Resource Management

2. Demonstrate basic competencies in the management of land resources and food production.	
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CAC Chair signatures:_____ Date recommended:_____

VPIA signature::_____ Date approved:_____

1. INSTITUTIONAL STUDENT LEARNING OUTCOMES(Check all that apply)

[]	1. Effective oral communication: capacity to deliver prepared, purposeful presentations designed to increase knowledge, to foster understanding, or to promote change in the listeners' attitudes, values, beliefs, or behaviors.
[]	2. Effective written communication: development and expression of ideas in writing through work in many genres and styles, utilizing different writing technologies, and mixing texts, data, and images through iterative experiences across the curriculum.
[]	3. Critical thinking: a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion.
[]	4. Problem solving: capacity to design, evaluate, and implement a strategy to answer an open-ended question or achieve a desired goal.
[]	5. Intercultural knowledge and competence: a set of cognitive, affective, and behavioral skills and characteristics that support effective and appropriate interaction in a variety of cultural contexts.
[]	6. Information literacy: the ability to know when there is a need for information, to be able to identify, locate, evaluate, and effectively and responsibly use and share that information for the problem at hand.
[X]	7. Foundations and skills for life-long learning: purposeful learning activity, undertaken on an ongoing basis with the aim of improving knowledge, skills, and competence.
[x]	8. Quantitative Reasoning: ability to reason and solve quantitative problems from a wide array of authentic contexts and everyday life situations; comprehends and can create sophisticated arguments supported by quantitative evidence and can clearly communicate those arguments in a variety of formats.

2. PROGRAM STUDENT LEARNING OUTCOMES (PLOs):

The student will be able to:

1. Explain the basic concepts and principles used in management of land resources (crops and animals) and how resources are processed from farm to table.
2. Practice basic knowledge and skills in operating an agribusiness including management and protection of crops in nurseries.

3. Develop a foundation in Math, Science, and English that will allow transfer to higher-level courses to prepare them for entry-level employment.

3. COURSE STUDENT LEARNING OUTCOMES (SLOs) - GENERAL:

The student will be able to:

1. Differentiate basic principles, processes and functions of plant growth and reproduction, including photosynthesis, respiration, transpiration, vegetative growth and reproductive growth, fertilization and fruit formation.
2. Demonstrate the different plant propagation techniques.
3. Apply skills for solving problems related to plant growth, crop production and natural resource management.

4. COURSE STUDENT LEARNING OUTCOMES (CSLOs)-SPECIFIC:

The student will be able to:

CSLO (General) 1: Differentiate basic principles, processes and functions of plant growth and reproduction, including photosynthesis, respiration, transpiration, vegetative growth and reproductive growth, fertilization and fruit formation;			
Student Learning Outcomes (specific)	ISLO	PSLO	Assessment Strategies
1.1 Discuss plant vegetative and reproductive structures, and the various structures of plants and their functions.	7	1	The student will be given homework and quizzes in a form of short answer essay graded with a rubric.
1.2 Explain the differences between genus, species, variety, and why scientific names are used.	7	1	The student will be given homework and quizzes in a form of short answer essay graded with a rubric.
1.3 Explain the process of photosynthesis respiration, pollination, and the factors that influence and affect plant growth and developments.	7	1	Provided with a prompt, students will discuss as a group the process of photosynthesis respiration, pollination, and the factors that influence and affect plant growth and developments and submit a report. Graded with a rubric
CSLO (General) 2: Demonstrate the different transplanting and propagation techniques;			
Student Learning Outcomes (specific)	ISLO	PSLO	Assessment Strategies
2.1 Prepare a vegetable garden site and perform agricultural practices.	8*	1	The student will be assigned a plot to develop and submit a laboratory report. Assessed by direct observation and submission of a lab report using a rubric.
2.2 Demonstrate techniques for transplanting.	8	1	Assessed by direct observation and submission of a lab report using a rubric.
2.3. Propagate plants using asexual and sexual methods.	8	1	Assessed by direct observation and submission of a lab report using a rubric.

CSLO (General) 3: Apply skills for solving problems related to plant growth, crop production and natural resource management;			
Student Learning Outcomes (specific)	ISLO	PSLO	Assessment Strategies
3.1 Prepare land for crop production using nature farming techniques.	8	1	A grading rubric will be set to evaluate the development of the garden.
3.2 Discover deficiency symptoms of minerals and recommend the right kind of fertilizer materials.	8	1	The student will be given homework and quizzes in a form of short answer essay graded with a rubric.

5. COURSE CONTENTS

- Horticulture: An Introduction
- Plant Science
- Plant Propagation
- Integrated Pest Management
- The Vegetable Garden

6. METHODS OF INSTRUCTION

[X] Lecture [X] Cooperative learning groups

[X] Laboratory [X] In-class exercises

[X] Audio visual [X] Demonstrations

[X] Other

7. REQUIRED TEXT(S) AND COURSE MATERIALS

Reiley, E. & Shry, C.(2017). *Introductory Horticulture*. 9th Edition. Cengage Learning.

8. REFERENCE MATERIALS

Burton, L. D. (2010). *Lab Manual to Accompany Agriscience: Fundamentals and Applications*. 5th Edition. Delmar: Cengage Learning. USA.

Burton, L. D. (2010). *Agriscience: Fundamentals and Applications*. 5th Edition. Delmar: Cengage Learning. USA.

Ricketts, C. and Ricketts K (2009). *Agribusiness: Fundamentals and Principles*. 2nd edition. Delmar Cengage Learning. USA.

9. INSTRUCTIONAL COSTS

None

10. EVALUATION

The student must exhibit proficiency of at least 70% to receive a passing grade of “C”.

11. CREDIT BY EXAMINATION

None

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Endorsed by CC: 04/07/22

Approved by VPIA: 04/08/22