

COURSE OUTLINE

Horticultural Crop Production

AG 214

Course Title

Dept. & Course No.

I. COURSE DESCRIPTION

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. This course emphasizes tropical vegetable crops, root crops, and fruit/tree crops.

II. SEMESTER CREDITS: 5

III. CONTACT HOURS PER WEEK:	<u>3</u>	<u>6</u>	<u>9</u>
	Lec	Lab	Total

IV. PREREQUISITE: AG 124

V. STUDENT LEARNING OUTCOMES:

Upon completion of the course, the student will be able, with 65% accuracy, to:

VI COURSE CONTENT

1. Discuss the scope and importance of the horticulture industry in Palau and Micronesian region.
2. Describe the different career opportunities in horticulture.
3. Explain the major divisions of horticulture.
4. Explain the environmental requirements for plant growth.
5. Describe the different plant growth regulators
6. Demonstrate efficiency in land preparation for crop production
7. Perform the different methods of plant propagation

- A. Exploring the Horticulture Field
- B. Careers in Horticulture
- C. Divisions of Horticulture
- D. Environmental Factors Affecting Plant growth
- E. Plant Growth Stimulants, Retardants, and Rooting Hormones
- F. Practices in Land Preparation
 1. Cultivation
 2. Use of Organic Ammendments
 3. Preparing Seed Bed
 4. Planting
- G. Plant Propagation
 1. Propagation from Seed
 2. Cuttings
 3. Layering
 4. Grafting

3. Perform the production practices of common tropical root crops.

9. Perform the production practices of tropical vegetables.

10. Perform the production practices of tropical fruit trees.

5. Budding

6. Separation and Division

H. Tropical Root Crops

1. Taro

2. Cassava

3. Sweet potato

4. Yams

I. Tropical Vegetables

1. Pechay

2. Cucumber

3. Watermelon

4. Sweet corn

5. Pumpkin

6. Eggplant

7. Okra

J. Tropical Fruit Trees

1. Banana

2. Papaya

3. Lemons and Oranges

4. Guava

VIII. TEXTS

A. Text:

Reiley, H. Edward, and Shry, Carrol L. Jr. *Introductory Horticulture*, 6th ed. Albany, N.Y.: Del Mar Publishers, 2002.

IX. METHOD OF INSTRUCTION

A. Lecture/Discussion

B. Demonstration

C. Laboratory/Field activities

D. Student projects

E. Field trips

X. METHOD OF EVALUATION

The lecture portion of this course will account for 60% of the grade while the laboratory will provide the other 40%.

<u>Lecture</u>	Percentage of Grade
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Participation	05%
Quizzes	15%
Tests	30%
Assignments	10%

<u>Laboratory</u>	
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Participation	15%
Laboratory write-ups	10%
Projects	<u>15%</u>

TOTAL:100%

The computation of the letter grade is as follows:

90% – 100%	A
80% – 89%	B
70% – 79%	C
65% – 69%	D
0% - 64%	F

TASK LISTING SHEET

AG 214 HORTICULTURAL CROP PRODUCTION

Course No. and Title

Credits: 3 2 96

Lec Lab Total lab hrs

TIME

SLO #2. Describe the different career opportunities in horticulture.

9

1. During field trips, using activity worksheet, list and describe the different career opportunities in horticulture through the Bureau of Agriculture and PCC- CRE Research Stations.

SLO #6. Demonstrate efficiency in land preparation for crop production

15

1. Collect organic amendments and incorporate them into the soil during cultivation.
2. Cultivate the soil with correct procedures and with uniformity
And with proper tilth.
3. Prepare seedbeds with standard sizes and distances
4. Plant seeds/transplant seedlings at correct depths and spaces

SLO #7. Perform the different methods of plant propagation

12

1. Collect scion materials and perform the different methods of asexual plant propagation.

SLO #8. Perform the production practices of common tropical root crops.

18

1. Prepare the planting site by correct procedures of cultivation
2. Collect planting materials of common root crops from CRE farm
3. Follow correct procedures of pre-germination practices of planting materials
4. Transplant germinated plants at right age following standards of planting

SLO #9. Perform the production practices of tropical vegetables.

21

1. Prepare the nursery, collect and prepare good soil media for seedlings.
2. Transplant vegetable seedlings in seedbeds at the right age and at specific planting distances.
3. Implement correct vegetable management practices.

SLO #10. Perform the production practices of tropical fruit trees.

21

1. Prepare the crop production area following the concepts of sloping agricultural land technology.
2. Propagate fruit tree seedlings in the nursery.
3. Manage the growing seedlings and transplant them following prescribed planting distances.
4. Implement the cultural practices at the right time and crop growth stages.
5. Observe the right maturity indices of the crops before harvesting.
6. Perform post-production operations.

Palau Community College
AG 214- Horticultural Crop Production
Course Learning Outcomes

During the course experience, the **course learning outcomes** (CLOs) will be assessed through the use of signature assignments. A rating scale will be used to determine the students' proficiency level of each CLO using specifically aligned assignments. The numerical ratings of 4, 3, 2 and 1 are not intended to represent the traditional school grading system of A, B, C, D and F. The descriptions associated with each of the numbers focus on the level of student performance for each of the course learning outcomes listed below.

Rating Scale:	4	Excellent
	3	Above-Average
	2	Average
	1	Below Average

CLO # 1

Numerical Value	Demonstrate efficiency in land preparation for crop production
4	Perform all the following tasks accurately <ul style="list-style-type: none"> • Accurately perform efficient cultivation procedures using a tiller • Cultivate soil with uniform depth • Incorporate compost uniformly and evenly
3	Perform the task mentioned above but most with minor mistakes
2	Perform the task mentioned above but most are inaccurate or incomplete
1	Perform the task mentioned above inaccurately or incompletely

CLO # 2

Numerical Value	Perform the different methods of plant propagation
4	Perform all the following tasks accurately <ul style="list-style-type: none"> • Identify and collect scion materials properly • Accurately perform each operation following the standards
3	Perform the task mentioned above but most with minor mistakes
2	Perform the task mentioned above but most are inaccurate or incomplete
1	Perform the task mentioned above inaccurately or incompletely

CLO # 3

Numerical Value	Perform the production practices of common tropical root crops.
4	Perform all the following tasks accurately <ul style="list-style-type: none"> • Prepare the planting site by correct procedures of cultivation • Follow correct procedures of pre-germination practices of planting materials • Transplant germinated plants at right age following standards of planting
3	Perform the task mentioned above but most with minor mistakes
2	Perform the task mentioned above but most are inaccurate or incomplete
1	Perform the task mentioned above inaccurately or incompletely

CLO # 4

Numerical Value	Perform the production practices of tropical vegetables.
4	Perform all the following tasks accurately <ul style="list-style-type: none"> • Propagate vegetable seeds in seedling trays • Follow standards of seedlings management • Implement correct vegetable management practices
3	Perform the task mentioned above but most with minor mistakes
2	Perform the task mentioned above but most are inaccurate or incomplete
1	Perform the task mentioned above inaccurately or incompletely

CLO # 5

Numerical Value	Perform the production practices of tropical fruit trees.
4	Perform all the following tasks accurately <ul style="list-style-type: none"> • Prepare the crop production area following the concepts of sloping agricultural land technology for orchards. • Propagate seedlings and transplant at correct planting plant spacing • Implement management practices of growing plants
3	Perform the task mentioned above but most with minor mistakes
2	Perform the task mentioned above but most are inaccurate or incomplete
1	Perform the task mentioned above inaccurately or incompletely