

**College of Micronesia-FSM**  
**Division of Natural Science and Mathematics**

**SC 250 Botany Outline**

<b>Course Title</b>	<b>Number</b>	<b>Division</b>
General Botany w/lab	SC 250	Natural Science and Mathematics

**Course Description**

Introduces the study of structure, function, and evolution of plants, their relationship to the environment and to humans.

**Course Prepared by:** Dana Lee Ling **State:** National Campus, Pohnpei  
 Structure

	<b>Hours Per Week</b>	<b>No. of weeks</b>	<b>Total Hours</b>	<b>Semester Credits</b>
<b>Lecture/Discussion</b>	3	x 16	= 48	3
<b>Laboratory</b>	3	x 16	= 48	1
<b>Workshop</b>		x	=	
			<b>Total Semester Credits</b>	<b>4</b>

Purpose of Course

**Degree requirement**

**Degree elective** X

**Certificate**

**Other**

**Prerequisite Course**

SC 120 or MR 120 or instructor's permission

**Signatures**

Chairperson, Curriculum Committee: \_\_\_\_\_ Date:

\_\_\_\_\_

President, COM-FSM: \_\_\_\_\_ Date: \_\_\_\_\_

## I. Course Objectives

### A. General Objectives

1. Develop knowledge of the life cycle, reproductive, structural, chemical, evolutionary, and anatomical characteristics of photosynthetic and fungal phyla.
2. Acquire a basic knowledge of plant physiology, plant ecology, and ethnobotany.
3. Acquire an understanding of the importance of plants in our daily lives.
4. Learn the diversity and classification of plants.
5. Understand the interrelationships of plants and their environment.
6. Identify local botanical species.
7. Enhance environmental understanding and awareness

### B. Specific Objectives: 70% mastery. Students will be able to...

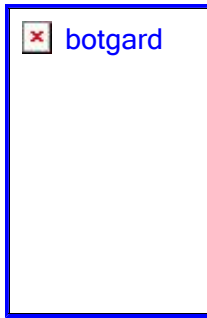
1. List cultural uses of plants globally
2. List cultural uses of plants locally
3. Distinguish between public knowledge plant medicine and private knowledge plant medicine
4. Describe the characteristics that make each of the five plant kingdoms unique and distinct
5. Place an organism into the correct kingdom give the characteristics of that organism
6. Identify local plants by local name in the field
7. Identify local plants by latin binomial in the field
8. Explain the evolutionary differences that characterize each phyla
9. Explain the nature of the biologically important evolutionary developments that allow a given phyla to more effectively compete for limited resources than more primitive (or advanced) phyla.
10. Sketch the generic life cycle for each phyla
11. Sketch an inflorescence with the parts correctly labelled
12. Label the vegetative and structural parts of plants.
13. Explain the process of photosynthesis including inputs and outputs

14. Write out the key function(s) of major plant hormones
15. Grow and propagate a plant
16. Produce herbarium pages, either real or virtual (online) pages.

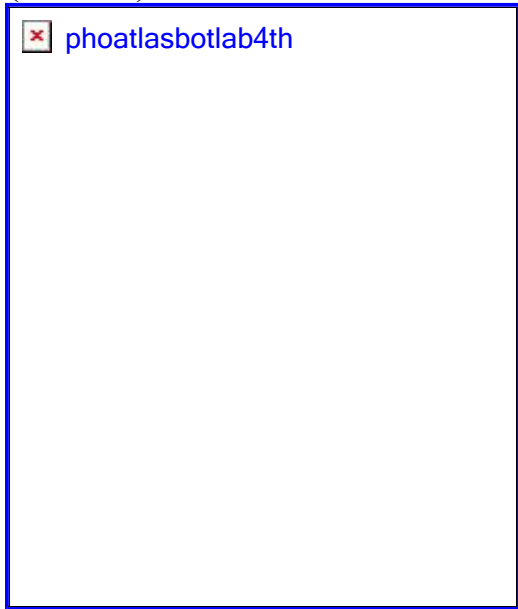
## II. Course content

- A. Ethnobotany
- B. Five Kingdoms
- C. Kingdom Monera: Cyanophyta
- D. Kingdom Protista: Primarily Unicellular Organisms
  1. Chrysophyta
  2. Pyrrophyta
  3. Rhizopoda
  4. Apicomplexa
  5. Euglenophyta
  6. Ciliophora
- E. Kingdom Protista: Primarily Multicellular Organisms
  1. Algae
    - a. Division Chlorophyta
    - b. Division Phaeophyta
    - c. Division Rhodophyta
  2. Protists Resembling Fungi
    - a. Division Myxomycota
    - b. Division Acrasiomycota
    - c. Division Oomycota
- F. Kingdom Fungi
  1. Division Zygomycota
  2. Division Ascomycota
  3. Division Basidiomycota
  4. Lichens
- G. Kingdom Plantae: Division Bryophyta (Bryophytes)
  1. Class Hepaticae
  2. Class Anthocerotae
  3. Class Musci
- H. Kingdom Plantae: Seedless Vascular Plants
  1. Division Psilotophyta
  2. Division Lycophyta
  3. Division Sphenophyta
  4. Division Pterophyta
- I. Kingdom Plantae: Gymnosperms (Exposed Seed Plants)

1. Division Cycadophyta
  2. Division Ginkgophyta
  3. Division Coniferophyta
  4. Division Gnetophyta
- J. Chapter 9 Kingdom Plantae: Angiosperms (Enclosed Seed Plants- Flowering Plants)
- K. Division Anthophyta
- L. Growth: Cells and Seeds
- M. Growth: Roots and shoots
- N. Organization: Stems
- O. Organization: Roots and leaves
- P. Adaptation: Protection
- Q. Adaptation: Needs
- R. Functions: Growth and Development
- S. Functions: Waters, minerals
- T. Photosynthesis
- U. Term Project: Three virtual herbarium pages
- a. One plant not previously done (15)
  2. One plant that has cultural significance (20)
  3. One plant that was previously done (10)
- V. Live Plant returned healthy with sketchbook including:
1. Full life cycle diagram as observed by you
  2. Notes how to propagate plant
  3. Notes on what the plant needs to grow
  4. Notes on its response to fertilizer
  5. Notes on whether it prefers sunshine or shade
  6. Notes on whether it prefers to be wet or dry
  7. Drawings should include measurements of size
  8. Identification of the plant (*Genus species* and local name if any)
  9. Plant should be healthy, vigorous, growing robustly
- W. Final examination
- III. Textbooks
- A. [Botany for Gardeners](#), Brian Capon (\$17.95).



- B. [A Photographic Atlas for the Botany Laboratory](#), Kent Van de Graff (\$20.95).



- IV. Required course materials
- V. Reference materials
- VI. Instructional cost
- √VII. Methods of instruction
  - Lecture, discussion, laboratory, field trips, reports, projects
- III. Evaluation
  - No credit by evaluation
- IX. Attendance policy
  - As per current COM-FSM policy in current catalog

### Sources

Kapi'olani Community College  
Gordon College  
University of the Rio Grande  
Palomar College  
Valdosta State University

[Community College of Rhode Island](#)  
[Pacific Union College](#)  
[Jigsaw](#)

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