

## **BOT 101 General Botany and Lab**

4 Credits

MTWR 08:30 – 10:40 am, Imiloa 101

<b>INSTRUCTOR:</b>	Dr. Hongwei Li	
<b>OFFICE:</b>	Imiloa 107	
<b>OFFICE HOURS:</b>	MW 11:00 am – 12 pm, or by appointment	
<b>TELEPHONE:</b>	236-9104	<b>EMAIL:</b> hli@hawaii.edu
<b>EFFECTIVE DATE:</b>	Summer/2014	

### **WINDWARD COMMUNITY COLLEGE MISSION STATEMENT**

*Windward Community College offers innovative programs in the arts and sciences and opportunities to gain knowledge and understanding of Hawai'i and its unique heritage. With a special commitment to support the access and educational needs of Native Hawaiians, we provide O'ahu's Ko'olau region and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.*

### **CATALOG DESCRIPTION**

Introduction to plant structure, function, reproduction, and evolution; plants in relation to the environment and human activities. Lecture/laboratory/field trip course.

*Recommended Preparation: High school biology.*

### **Activities Required at Scheduled Times Other Than Class Times**

Possible field trip or campus walk during class time.

### **STUDENT LEARNING OUTCOMES**

The student learning outcomes for the course are:

- Discuss basic concepts and perform lab experiments in plant morphology, anatomy, physiology, cytology, taxonomy and genetics.
- Discuss life cycles of division in Protista, Fungi, Bryophyta, Pteridophyta, Gymnosperms, and Angiosperms.
- Discuss interrelationship between plants and animals, and socio-economic importance of plants on humans.
- Discuss plant tissue culture & biotechnology.
- Operate dissecting and compound microscopes.
- Discuss traditional propagation methods.

## COURSE TASKS AND GRADING

- Students must be able to access / utilize Laulima via the internet for this course.
- Students are expected to read the assigned chapters before coming to class.

### Test & Exam

- There are 4 tests each worth 75 points.
- The final exam will be cumulative and worth 100 points.
- Make-up test: make-up test will be permitted only when there is a legitimate excuse (such as illness or emergency; doctor's note required). ***There will be no make-up for the Final Exam.***

### Lab Exercises

- ***Students must be present in class in order to receive credit for the scheduled laboratory exercises.***
- ***Lab Notebook:*** a three-ring folder with lab manuals, working protocols, lab report (raw data, analysis of data, drawings, assignments, summaries and a short response paper). The lab notebook will be examined and graded worth a total of 100 points.

Tasks	Possible Points
Test 1	75
Test 2	75
Test 3	75
Test 4	75
Lab Notebook	100
Final Exam	100
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Total possible points:	500

Extra credit will be offered, but cannot exceed 5% of the total available points.

### Grading

- Grading is based on the percentage of total points earned. Final Grades will be assigned as follows:
 

A	90 – 100%
B	80 - 89%
C	70 - 79%
D	60 - 69%
F	0 - 59%

## LEARNING RESOURCES

Introductory Botany Plants, People, and the Environment. L. Berg, 2008, 2<sup>nd</sup> edition, Thompson Brooks Cole.

### DISABILITIES ACCOMMODATION STATEMENT

*If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to fully participate in this class, you are encouraged to contact the Disability Specialist Counselor to discuss reasonable accommodations that will help you succeed in this class. Ann Lemke can be reached at 235-7448, [lemke@hawaii.edu](mailto:lemke@hawaii.edu), or you may stop by Hale 'Akoakoa 213 for more information.*

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Summer 2014

Textbook: Introductory Botany: Plants, People, and the Environment

by L. Berg

**Syllabus**

<b>Date 2014</b>	<b>Reading Chapter</b>	<b>Topic</b>	<b>Lab</b>	<b>Test</b>
May 27	1-2	Introduction /The Chemical Composition of Cells	Lab Safety	
May 28	3	Cell Structure and Organization	Microscopy / Plant Cells & Organelles	
May 29	5	Plant Tissues and the Multicellular Plant Body	Plant Body and Tissues	
June 2	6/10	Plant Organs: Roots/Mineral Nutrient and Transport	Roots	
June 3	7	Plant Organs: Stems	Stems	<b>Test 1</b>
June 4	8	Plant Organs: Leaves	Leaves	
June 5	4	Metabolism in Cells (Photosynthesis)	Photosynthesis	
June 9	9	Flowers, Fruits, & Seeds	Flowers	
June 10	11	Growth Responses and Regulation of Growth	Fruit & Seeds	
June 11		<b>Holiday</b>		
June 12	12	Mitosis, Meiosis and Life Cycles	Cell Division <b>Turn in Lab Notebook</b>	<b>Test 2</b>
June 16	13	Patterns of Inheritance	Growth and Development	
June 17	14	Molecular Basis of Inheritance	DNA & RNA	
June 18	16	Continuity Through Evolution	Evolution in Hawaiian Plants	
June 19	17	Evolution of Populations and Species	Evolution in Hawaiian Plants	
June 23	18/19	Classification of Plants & Other Organisms / Introduction to Viruses and Bacteria	Viruses and Bacteria	<b>Test 3</b>
June 24	20-21	Introduction to Protozoa & Fungi	Protozoa and Fungi	
June 25	22	The Plant Kingdom: Bryophytes	Moss & Liverworts	
June 26	23	The Plant Kingdom: Seedless Vascular Plants	Ferns & Fern Allies	
June 30	24	The Plant Kingdom: Gymnosperms	Gymnosperms	
July 1	25	The Plant Kingdom: Flowering Angiosperms	Flowering Plants	<b>Test 4</b>
July 2	26/27	Ecosystems / Global Ecology and Human Impact	<b>Turn in Lab Notebook</b>	
<b>July 3</b>		<b>Final Exam</b>		