

BIOL 221, Concepts of Botany, Spring 2012

Course Web: <http://herbarium.millersville.edu/class-web/221.htm>

Lecture (Roddy 261): M W F, 8-8:50, Roddy 261

Lab (Roddy 279): A (Dr. Zhong), W 9-11:50;
C (Dr. Ambler), R 9-11:50;

B (Dr. Wagner), W 1-3:50;
D (Dr. Hardy), R 1-3:50.

Instructor Dr. Chris Hardy office: Roddy 271
tel: 871-2312

office hrs: M & W 9-10:50; F 9-9:50
web: <http://herbarium.millersville.edu/hardy.php>

Required Text: 1. Bidlack, JE, SH Jansky. 2011. Stern's Introductory Plant Biology, 12th Ed. McGraw-Hill. (ISBN 978-0-07-304052-3.)

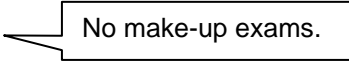
Suggested Lab Materials: 1. 3-ring binder with tabs for holding lab handouts.
(these and other materials may be required by your lab instructor) 2. 3-hole looseleaf paper for notes in lab.
3. Colored pencils (at least red, blue, green) for lab drawings.
4. Scientific calculator.

Schedule

<u>Lecture Topic</u>	<u>Lab (may change w/ instructor)</u>
Structure & Development	
Week of Jan 23: The Primary Plant Body	Intro to Plant Biology
Week of Jan 30: The Primary Plant Body	Primary Root & Shoot Morphology
Week of Feb 06: Seeds & Seedlings, Cereals & Legumes	Primary Root & Shoot Anatomy
Week of Feb 13: Plant Modifications & Marketplace Vegetables	Cereals & Legumes (seeds & seedlings)
Week of Feb 20: The Secondary Plant Body; Ethnobotany of Wood, Cork, & Fibers	Plant Modifications & Marketplace Vegetables
Physiology & Function	
Week of Feb 27: Exam 1 (Wednesday, Feb 29) Water	Wood, Cork, & Fibers
Week of Mar 05: Water Hormones & Tropisms	Water
Week of Mar 12: Spring Break	Spring Break
Week of Mar 19: Photosynthesis	Hormones & Tropisms
Week of Mar 26: Nutrition; Plant Chemical Defense, Drugs, & Medicines	Photosynthesis
Diversity & Evolution	
Week of Apr 02: Exam 2 (Wednesday, Apr 04) Algae	Ethnobotany of 2° Metabolism
Week of Apr 09: Bryophytes & Pteridophytes	Algae
Week of Apr 16: Gymnosperms	Bryophytes & Pteridophytes
Week of Apr 23: Angiosperms; Flowers & Fruits	Gymnosperms
Week of Apr 30: TBA	Angiosperms, Flowers & Fruits
Final Exam: Wednesday, May 09, 8:00-10:00 AM	

Reading Assignments Will be announced in class. You are responsible for all content in the assigned readings.

Grading A point system is employed. Final letter grades are determined based on the percentage of total possible points you earn as follows (A = 93-100%; A- = 90-92; B+ = 87-89; B = 83-86; B- = 80-82; C+ = 77-79; C = 73-76; C- = 70-72; D+ = 67-69; D = 63-66; D- = 60-62; F = below 60%).

Lecture Exam 1	50	
Lecture Exam 2	50	
Final Lecture Exam	75	
<u>Lab</u>	<u>100 (scaled from your lab instructor's points)</u>	
Total points possible	275	

- Objectives** At the successful completion of Biol 221, a student should be able to
1. Understand the organization in plants from the cellular to tissue to organ to organism level.
 2. Understand basic plant metabolism, including Electron Transport, and the Light and Dark Reactions of Photosynthesis.
 3. Understand specific aspects of internal transport in plants including diffusion, osmosis, transpiration, translocation, root pressure, turgor pressure, osmotic pressure and plasmolysis.
 4. Understand and describe the mechanisms controlling plant behavior to light, gravity, touch, wounding and regeneration, and to flowering.
 5. Recognize salient features and diversity within and between major plant taxa, and to develop a lineage of features from plesiomorphic to derived groups of plants.
 6. Explain how the biology, anatomy, and structures of plants relate to their uses by humans.
 7. Understand basic processes in the production of food, shelter, medicines, from plants.
 8. Understand the role of plants in important societal issues.

Special Needs Please let me know if you have any disabilities or special needs that might affect your performance in this course. I will do my best to accommodate you.

Attendance Attendance is expected for all lectures and labs.

Honesty Each student is expected to adhere to the Millersville University's Academic Honesty Policy. Violation of it results in a zero for the assignment. The policy can be found in the Student Handbook and the Academic Honesty and Dishonesty brochure.