

BIOL 221, Concepts of Botany, Spring 2016

Web: <http://herbarium.millersville.edu/hardy.php>

Lecture (Roddy 261): T R, 2:35-3:50

Labs (Roddy 279): A, M 1-3:50 B, T 9:25-12:15
C, W 1-3:50 D, R 9:25-12:15

Lecture Instructor Dr. Christopher Hardy
office: Roddy 271 tel: 871-4317 office hrs: M & W 9:30-11:30, F 9:30-10:30

Required Text: Evert RF, SE Eichhorn. 2013. *Raven Biology of Plants*, 8th Edition. WH Freeman and Co. New York, NY, USA. ISBN: 9781429219617.

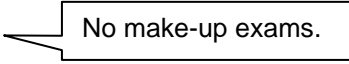
- Other Materials:**
1. Required Lab Manual: Hardy CR, RL Wagner (eds). 2016. *Guide to Lab Exercises in Concepts of Botany*, 4th edition. Millersville, Pennsylvania, USA.
 2. 3-ring binder with tabs for holding lab handouts.
 3. 3-hole looseleaf paper for notes in lab.
 4. Colored pencils (at least red, blue, green) for lab drawings.
 5. Scientific calculator.

Schedule

<u>Lecture Topic</u>	<u>Lab (subject to change)</u>
Structure & Development	
Week of Jan 18: Introduction Ch 1 & 3 (p 38-62)	Introduction to Botany; Monday lab does not meet but has homework
Week of Jan 25: The Primary Plant Body Ch 22 & 25	Seeds & Seedlings
Week of Feb 01: The Primary Plant Body Ch 24	Primary Morphology
Week of Feb 08: The Secondary Plant Body Ch 26	Primary Anatomy
Week of Feb 15: The Secondary Plant Body	Wood, Cork & Bamboo
Physiology & Function	
Week of Feb 22: Water: Ch 4 (p 75-81) & 30 Exam 1 (Thu, Feb 25)	Plant Modifications & Marketplace Vegetables
Week of Feb 29: Hormones & Tropisms Ch 27 & 28	Water Relations
Week of Mar 07: Spring Break	Spring Break
Week of Mar 14: Photosynthesis Ch 7	Hormones & Tropisms
Week of Mar 21: Ethnobotany of Secondary Metabolism Ch 2 (p 30-34) & 20 (p 297-498)	Photosynthesis
Diversity & Evolution	
Week of Mar 28: Gymnosperms Ch 18	Ethnobotany of 2° Metabolism
Week of Apr 04: Angiosperms - Ch 19, Exam 2 (Thu, Apr 7)	Gymnosperms
Week of Apr 11: Angiosperms Ch 20 (p 492-496)	Angiosperms: Flowers
Week of Apr 18: Bryophytes & Pteridophytes Ch 16 & 17	Angiosperms: Fruits
Week of Apr 25: Algae Ch 13 (p 263-267) & 15	Bryophytes & Pteridophytes
Week of May 02: Final Exam: Fri, May 6, 12:30-2:30 PM	Monday lab only, subject TBA

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>160 (scaled from your lab instructor's points)</u>	
Total points possible	335	

- Objectives** At the successful completion of BIOL 221 lecture, a student should be able to
1. Understand the organization in plants from the cellular to tissue to organ to organism level.
 2. Compare and contrast the life cycles of plants and animals.
 3. Understand basic plant metabolism, including Electron Transport, and the Light and Dark Reactions of Photosynthesis.
 4. Understand specific aspects of internal transport in plants including diffusion, osmosis, the Cohesion-Tension Theory, transpiration, translocation, and turgor pressure.
 5. Understand and describe the mechanisms controlling plant behavior to light, gravity, touch, wounding and regeneration, and to flowering.
 6. 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.
 7. Explain how the biology, anatomy, and structures of plants relate to their uses by humans.
 8. Understand basic processes in the production of food, shelter, medicines, from plants.
 9. 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. No make-up exams or quizzes will be given for unexcused absences. Excused absences in lab must request permission prior to class and you will be expected to arrange to complete the lab in another lab section. Whenever possible, plan in advance. See the Millersville University attendance policy for qualifying excused absences.

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.

Title IX Millersville University and its faculty are committed to assuring a safe and productive educational environment for all students. In order to meet this commitment, comply with Title IX of the Education Amendments of 1972, 20 U.S.C. §1681, et seq., and act in accordance with guidance from the Office for Civil Rights, the University requires faculty members to report to the University's Title IX Coordinator incidents of sexual violence shared by students. The only exceptions to the faculty member's reporting obligation are when incidents of sexual violence are communicated by a student during a classroom discussion, in a writing assignment for a class, or as part of a University-approved research project. Faculty members are obligated to report to the person designated in the University Protection of Minors policy incidents of sexual violence or any other abuse of a student who was, or is, a child (a person under 18 years of age) when the abuse allegedly occurred.

Information regarding the reporting of sexual violence, and the resources that are available to victims of sexual violence, is available at <http://www.millersville.edu/socialeq/title-ix-sexual-misconduct/index.php>.