

BIOL 221, Concepts of Botany, Spring 2008

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

Instructor Dr. Chris Hardy office: Roddy 271 office hrs: Mon & Tue 2-4 pm, Thu 9:30-10:30 am
tel: 871-2312 Web: <http://herbarium.millersville.edu/hardy.php>

Req Text 1. Stern, KR, JE Bidlack, and SH Jansky. 2008. Introductory Plant Biology, 11th Ed. McGraw-Hill, Boston. (ISBN 978-0-07-331421-1.)

Opt Text 2. DeGraaff, Rushforth, & Crawley. 2004. Photographic Atlas for Botany Laboratory, 4th Ed. Morton Publishing Co., Englewood.

Schedule

Date	Lecture	Minimum Reading
Jan 15 & 17	- Introduction; Cells & tissues	Chaps. 3 & 4 (p. 55-61)
Jan 22 & 24	- Roots	Chap. 5
Jan 29 & 31	- Shoots	Chaps. 6 & 7
Feb 05 & 07	- Seeds, embryos & seedlings	Chap. 8 (p. 143-147)
Feb 12 & 14	- TBA	
Feb <u>19</u> & 21	- Exam 1 (Feb 19); TBA	
Feb 26 & 28	- Water in plants	Chap. 9
Mar 04 & 06	- Metabolism	Chap. 10
	spring break	
Mar 18 & 20	- Growth	Chap. 11
Mar 25 & 27	- Plant diversity & evolution	Chap. 18 (p. 318-338)
Apr <u>01</u> & 03	- Exam 2 (Apr 01); Plant diversity & evolution	Chap. 20
Apr 10	- Plant diversity & evolution	Chap. 21
Apr 15 & 17	- Plant diversity & evolution	Chap. 22 & 23
Apr 22 & 24	- Flowering plants & civilization	Chap. 24
Apr 29	- TBA	
May <u>05</u>	**FINAL EXAM**, Mon 2:45-4:45 pm	--

Grading

A point system is employed. Final letter grades are earned on basis of percentage of total points available 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

No make-up exams.

Lab	100 (scaled from your lab instructor's points)
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 glycolysis, Krebs Cycle, Electron Transport System 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.

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 Required for lab, strongly suggested for lecture.

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.