BIOL 221, Concepts of Botany, Fall 2010
Course Web: http://herbarium.millersville.edu/class-web/221.htm

Lecture: T & R, 1-2:15, Roddy 261 **Lab:** As announced by your lab instructor.

Instructor Dr. Chris Hardy office: Roddy 271 office hrs: M-F 3-3:50 pm
tel: 871-2312 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: (these may be required by your lab instructor)
1. 3-ring binder with tabs for holding lab handouts.
2. 3-hole looseleaf paper for notes in lab.
3. Rushforth, Robbins, Van De Graaff. 2008. Photographic Atlas for the Botany Lab, 5th Ed. Morton Publishing.
4. Colored pencils (at least red, blue, green, and yellow) for lab drawings.

Schedule

		Lecture Topic	**Lab (may change w/ instructor)**
Week 1:	Aug 31 & Sep 2	Intro to the Plant Biology Primary Plant Body	Orientation, Microscopy Primer (Or Instructor's Choice)
Week 2:	Sep 07 & 09	Primary Plant Body Secondary Plant Body	Cells & Tissues
Week 3:	Sep 14 & 16	Wood, Fibers, Dyes from Plants Angiosperms: Life Cycle, Flowers	Roots & Shoots
Week 4:	Sep 21 & 23	Angiosperms: Fruits, Seeds, Seedlings Angiosperms: Pollination	Wood, Fibers, and Dyes
Week 5:	Sep 28 & 30	Important Angiosperms for Food: Cereals & Legumes Important Angiosperms for Food: Staples, Vegetables & Fruits	Angiosperm Flowers & Fruits
Week 6:	Oct 05 & 07	TBA Exam 1	Cereals, Legumes, and Other Important Angiosperm Food Plants
Week 7:	Oct 12 & 14	Fall Break Gymnosperms; Cycads & Guam Dementia	**No Tu lab; We & Th lab are Instructor's Choice.**
Week 8:	Oct 19 & 21	Pteridophytes & Bryophytes Algae	Gymnosperms
Week 9:	Oct 26 & 29	Fungi Water Relations & Mineral Nutrition	Pteridophytes & Bryophytes
Week 10:	Nov 02 & 04	Hormones & Tropisms Photosynthesis	Algae
Week 11:	Nov 09 & 11	Photosynthesis & the Environment **Exam 2**	Water Relations
Week 12:	Nov 16 & 18	Secondary Metabolites: Intro to & Stimulating Beverages 2° metabolites: Herbs & Spices	Hormones & Tropisms
Week 13:	Nov 23 & 25	Medicines, Drugs, Poisons T-day Recess	**Tu lab: Instructor's Choice; We & Th labs off for Thanksgiving.**
Week 14:	Nov 30 & Dec 02	TBA Plant Ecology & Environment	Photosynthesis
Week 15:	Dec 07 & 09	Plant Ecology & Environment TBA	Secondary Plant Metabolites Ethnobotany
Week 16:	Dec 14	**Exam 3: Tue, 12:30-2:30**	

Grading A point system is employed. Final letter grades are determined based on the percentage of total possible points your 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
Lab	100 (scaled from your lab instructor's points)
Total points possible	275

No make-up exams.

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.