BIOL 221.01D (Dr. Hardy's section), Concepts of Botany, Spring 2015
Course Web: http://herbarium.millersville.edu/class-web/221.htm

Labs (Roddy 279): A, M 1-3:50 (Dr. Wagner) B, T 9:30-12:20 (Dr. Ladd)
C, W 1-3:50 (Dr. Wagner) D, R 9:30-12:20 (Dr. Hardy)

Lecture Instructor Dr. Christopher Hardy
office: Roddy 271 tel: 871-2312 office hrs: M, T & W 9:20-11:00

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

Lab Materials:
1. Lab Manual: Hardy CR, RL Wagner (eds). 2015. Guide to Lab Exercises in Concepts of Botany, 3rd 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

Lab Topic		Assignment/Quiz Due in Lab
Week of Jan 19:	Introduction to Botany No Monday lab	
Week of Jan 26:	Seeds & Seedlings	Quiz 1
Week of Feb 02:	Primary Morphology	Quiz 2
Week of Feb 09:	Primary Anatomy	Quiz 3
Week of Feb 16:	Wood, Cork, & Bamboo	Quiz 4
Week of Feb 23:	Plant Modifications & Marketplace Veg.	Quiz 5
Week of Mar 02:	Water Relations	Quiz 6
Week of Mar 09:	Spring Break	
Week of Mar 16:	Hormones & Tropisms	Quiz 7
Week of Mar 23:	Photosynthesis	Quiz 8
Week of Mar 30:	Ethnobotany of Secondary Metabolism	Hormones & Tropisms Assignment
Week of Apr 06:	Algae	Photosynthesis Assignment
Week of Apr 13:	Bryophytes & Pteridophytes	Quiz 9
Week of Apr 20:	Gymnosperms	Quiz 10
Week of Apr 27:	Angiosperms	Quiz 11
Week of May 04:	Monday lab only: topic TBA	

Objectives: Upon successful completion of this course, students are expected to be able to:

1. distinguish between and confidently identify members of larger groups such as algae, liverworts, mosses, horsetails, ferns, seed plants, gymnosperms, and angiosperms
2. compare and contrast the life cycles of plants and animals
3. relate plant anatomy, physiology and diversity to economic value/uses
4. identify plant cell structures, plant tissues, and plant organs by sight
5. relate structure to function via physiological experiments examining photosynthesis, hormones, and water relations
6. generate testable hypotheses about the functioning of biological systems
7. effectively use statistics and graphing techniques to draw logical conclusions from experiments
8. use dissecting and compound microscopes effectively

Attendance: *Attendance to all labs is mandatory*. No make-up quizzes will be given for unexcused absences. You are responsible for all material covered in the labs regardless of your presence. Excused absences must request permission prior to class and will be expected to arrange to complete the lab in another instructor's lab section. Be aware that lab schedules can vary between instructors. Whenever possible, plan in advance. See the Millersville University attendance policy for qualifying excused absences.

Special Needs: If you have special needs that may affect classroom performance please inform me immediately so that appropriate accommodations can be arranged to the best of my ability.

Honesty: Cheating, plagiarism, falsification, etc. will not be tolerated. Refer to the Millersville University Academic Honesty and Dishonesty brochure for specific details.

Grading: 140 lab points total.

1. Lab Quizzes (100 pts. total). Eleven quizzes at 10 pts, lowest grade dropped. Quizzes cover material since last quiz. Quizzes can be made up for excused absences.
2. Assignments (40 pts total). Two assignments, the hormones & tropisms assignment and the photosynthesis assignment are announced in the schedule, and others may be announced throughout the semester to add up to a total of 40 pts worth of assignments. All assignments will be due at the begining of lab on the due date. There is a 10% deduction of points for every 24-hour late period.
3. Participation/Attendance Penalties. You will lose upwards of 3 points per lab period for unexcused absences, late arrivals or early departures, failure to work diligently to effectively complete the lab, texting or otherwise using your phone for business unrelated to lab, failure to clean-up thoroughly after lab, or failture to treat equipment and other persons in the lab with due courtesy.

Consideration: Please leave the lab as clean as you found it. Silence all cell phones, pagers, etc. and put phones away before class starts.