

**BIOL 221, Concepts of Botany Laboratory Section 01C
Spring 2009**

Instructor: Dr. Yuan Zhong
E-mail: yzhong@millersville.edu

Office: Roddy 163
Phone: 871-5112

Office Hours: Wed: 1-3 PM, Thu: 11-12 AM, Fri: 2-3 PM.

Lab Section: Thu: 1-3:50PM
Meet in Roddy 279

Required Materials:

1. Lab Manual: <http://herbarium.millersville.edu/class-web/221.htm>
2. Texts:
Photographic Atlas for Botany Laboratory, 2004. DeGraaff, Rushforth, & Crawley.
Introductory Plant Biology, 2008. Stern, Bidlack, Jansky, 11th Edition
3. Laboratory Notebook: any 8.5 inch by 11 inch binder should suffice. Cross-reference these to your laboratory exercise printouts and the Photographic Atlas.

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

- 1) gain an appreciation for botany by learning how plants are essential for supporting life on our planet;
- 2) become familiar with the diversity of plant life; distinguish between and confidently identify members of larger groups such as algae, liverworts, mosses, horsetails, ferns, gymnosperms, and angiosperms;
- 3) identify plant cell structures, tissues, and organs; distinguish the features unique to plants such as cell structure, localized meristems, open growth, and photosynthesis;
- 4) relate structure to function via physiological experiments examining photosynthesis, hormones, and water relations;
- 5) learn how to formulate and test biological hypothesis, how to design and conduct experiments (including the effective use of the tools like dissecting and compound microscopes), and how to acquire, analyze and present scientific data.

Laboratory Schedule:

Laboratory Schedule		
<u>Week of</u>	<u>Lab Topics</u>	<u>Quizzes</u>
Jan. 12	Cells and Tissues	
Jan. 19	Roots	
Jan. 26	Shoots	#1
Feb 2	Embryos and Seeds	
Feb 9	Wood & Cork	#2
Feb 16	Plant Modifications & Marketplace	
Feb 23	Water Relations	
Mar 2	Spring Break	
Mar 9	Tropisms	#3
Mar 16	Photosynthesis	
Mar. 23	Cyanobacteria & Algae	#4
Mar 30	Ferns	
Apr 6	Gymnosperms	#5
Apr 13	Angiosperms	
Apr 20	TBA	#6

Other Lab Instructor Contact Information for Alternative Lab Sections:

<i>Dr. Chris Hardy :</i>	<i>Roddy261a</i>	<i>871-2371</i>	Section 1B: Wed 1-4 pm.
<i>Dr. Ryan Wagner:</i>	<i>Roddy 274</i>	<i>872-3789</i>	Section 1A: Monday 6-9 pm.

Open Lab: Roddy 279 will be open and available to all Botany students every Friday from 12-5. The materials from that week's lab will be available for analysis. Additional materials relating to that week's topic will also be available for analysis and exploration. Please direct any questions or concerns about open lab to Dr. Wagner.

Attendance: Attendance is required, and you will receive up to 2 points per lab for your punctual and full attendance; attendance checks will be conducted randomly at either the beginning or the end of a lab.

You will receive up to 2 points per lab for your good participation and performance. I expect you to be prompt, cooperative and well-prepared. Please read over the appropriate lab exercises before you get to lab. It may also be appropriate to review certain sections of the textbook before coming to lab. Be sure to bring your laboratory manual, textbook and notebook to each lab section.

You are responsible for all material covered in the labs regardless of your presence. There will be no makeup labs or lab quizzes for unexcused absences. Excused absences require written documentation, and must request permission prior to class and will be expected to arrange to complete the one of the other laboratory sections that is doing the same lab as your section during that week. It is up to you to find out which section you can attend, and request permission from the instructor of that section as early as possible since there is no guarantee that they will have space for you and that lab schedules can vary between instructors. Plan in advance. You need to get the signature of that instructor after you complete the lab. See the Millersville University attendance policy for qualifying excused absences.

Any student who misses and fails to make up 4 labs (whether the absences are excused or not) will not receive a grade higher than a D, regardless of performance in lab. Any student missing 5 labs or more will fail the course.

Special Needs: please let me know if you have special needs that may affect classroom performance. I will do my best to accommodate you.

Honesty: Each student is expected to adhere to the Millersville University's Academic Honesty Policy.

Grading:

Your lab grade will consist of three parts:

(i) Lab attendance:	2 pts per lab x 14 weeks = 28points
(ii) Lab participation and performance:	2 pts per lab x 14 weeks = 28 points
(iii) Lab quizzes*:	20 pts per quiz x 6 labs = 120 points
(iv) ab report**:	40 pts
(v) Input***:	4 pts
Total:	220 points

*Quizzes cover the contents discussed and demonstrated in the previous lab exercises as well as current week's topic. No make-up quizzes will be given for unexcused absences. Make-up quizzes can only be made up that week in an alternative lab.

**One lab will be chosen from the Physiology section and will be prepared by the

student in the format used by the journal Plant Physiology. Sections detailing introduction, materials and methods, results and discussion, and conclusions will be included. Due date will be given on the day of assignment. Lab reports are to be done individually, neat and typed. Late submission will be penalized.

*** Your feedback and effort for improving the course (e.g. helpful suggestions) will be given up to 4 bonus points.

Consideration: Please turn off all cell phones, pagers, and any other electronic devices before class.

Millersville University Class Attendance Policy

The University supports departmental and faculty class attendance policies that are reflective of and consistent with University approved guidelines. Faculty will include their class attendance policy in their syllabi given to all students in their classes at the start of the semester.

University approved guidelines:

1. **Students are expected to attend all classes.** It is the student's responsibility to complete all course requirements even if a class is missed. If a student misses class for an officially excused reason, then he/she is entitled to make up the missed work but only at the convenience of the faculty member. Responsibility for materials presented in, assignments made for, and tests/quizzes given in regularly scheduled classes lies solely with the student.
2. **The University policy is that faculty will excuse absences for the following reasons:**
 - a. personal illness,
 - b. death or critical illness in the family,
 - c. participation in a university-sponsored activity,
 - d. jury duty,
 - e. military duties, or
 - f. religious holidays
3. **Faculty judge the validity of student absences from class within the University's approved guidelines and may require documentation for excused absences.** Faculty will evaluate any reason, other than those listed above, for a student missing class and determine whether the absence is justified. In these circumstances, a student may make up missed work at the discretion of the instructor.
4. **In the case of foreseeable absences, students are encouraged to notify the faculty member in advance.** A student who will miss class due to participation in an official University activity must notify the instructor well in advance of the activity to assure that the absence is excused.

Appeals:

As with any academic issue, students may exercise their right to appeal adverse attendance decisions. Please refer to the current undergraduate catalog for the complete Academic Appeal procedure.