Biology 130: Plant Biology
Sections 7 and 8
Spring 2013

Lecture 9:35-10:50 M W, SCI D101

Lab Section 7: 13:00-14:50 T R, TNR157
Section 8: 15:00-16:50 T R, TNR157

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Office hours: 11:00 – 12:00 M
11:00 – 12:00 W
9:00 – 10:00 F
Other times by appointment

Textbook Stern KR, Bidlack JE, Jansky SH. 2008. *Introductory Plant Biology*, 11th Edition. The McGraw-Hill Companies, Inc., New York. Required, rental from University Bookstore

Lab manual *Essentials of Botany---Laboratory Manual for Introductory Botany* (7th Edition) compiled and written by UWSP Botany Faculty. Required, purchase from the University Bookstore

Course related websites

1. UWSP Biology 130 Lab Review Images:
   http://www.uwsp.edu/biology/courses/botlab/
2. Common Plants of Wisconsin:
   http://www.uwsp.edu/biology/courses/plantid/cp-hires-main.htm

Course materials All the lecture outlines, handouts and other course materials will be posted on Desire2Learn (D2L). Please visit the website frequently.

Course description

This course will provide you with important, up-to-date information about modern plant biology. We will cover fundamental concepts in different fields of plant biology, including structure, function, genetics, molecular biology and biotechnology, diversity, evolution and ecology. The following three main goals are expected to be achieved:

1. Attain general perception of the essential concepts and terminology of plant biology and be well prepared for the upper-level plant biology courses.

2. Appreciate the importance of plants and plant-like organisms to our world and develop an awareness of how plants and plant biology knowledge are connected to agriculture, forestry, pharmaceutical industry, environmental policies and our everyday lives etc.

3. Understand basic scientific methodology and become familiar with some common research techniques in plant biology.

Attendance

You are required to actively participate in all activities of this course. Missing class will severely hinder your ability to understand subsequent material and perform well on exams. If you miss a lecture, it is your responsibility to borrow notes from your classmate. There will be no points for missed exams or quizzes. Make-up exams or labs will be allowed only in case of unavoidable emergencies, in which you need to get my approval in advance if possible and provide a written proof later.

Exams

Three midterm lecture exams	300 points (100 points x 3 times)
Six lab quizzes	180 points (30 points x 6 times)
One final lecture exam	100 points
Ten lecture quizzes	60 points (4 points x 15 times)
Lab attendance	52 points (2 points x 26 times)
Total possible score	692 points

Projects

You will be expected to complete two projects at a total of 40 extra points. One is a group project. You will need to form a group of four students, write up a report collaboratively and present it to the class (30 extra points). The other project needs to be completed independently (10 extra points). Detailed instructions for the projects will be given when assigned.

Grading

Grade	Percent
A	93 - 100
A-	90 - 92
B+	87 - 89
B	83 - 86
B-	80 - 82
C+	75 - 79
C	70 - 74
C-	65 - 69
D+	60 - 64
D	55 - 59
F	<55

Academic integrity

Academic honesty is an essential element to the educational principles of UWSP as well as to this course. Academic misconduct in any form is strictly prohibited by the University regulations. Any violation will result in disciplinary sanction in accordance with "UWS/UWSP Chapter 14: Student Academic Standards and Disciplinary Procedures". Please find the details of UWSP academic integrity policy at http://www.uwsp.edu/admin/stuaffairs/rights/rightsChap14.pdf.

Special needs

If you need course adaptations, accommodations, or any other special arrangements because of disability and other medical conditions, please visit Student Disability Office first to establish a record of your disability. After that, please make an appointment with me as soon as possible or see me during my office hours.

Tentative Lecture and Lab Schedule

Week #	Week of	Lecture topic	Lab topic
1	Jan 20	An introduction to plant biology and Chemical and physical bases of life - I	NO LAB on Jan 22; Lab 1 (P.1 in the laboratory manual; the same below), lab safety and Lab 15 Part II-A (P.174)
2	Jan 27	Chemical and physical bases of life – II and the macromolecules of cells; Structure and function of plant cells	Lab 2 (P. 11); Lab 3 (P. 17)
3	Feb 3	Reproduction of plant cells and plant tissues – I; Plant tissues – II and plant growth	Lab 4 (P. 29); Lab 5 (P. 35)
4	Feb 10	Stems and pretest review; Roots and leaves - I	Lab 6 (P. 47) and **Lab Quiz 1**; Lab 7 (P. 63)
5	Feb 17	**Lecture Exam 1 (02/18);** Leaves – II and plant water relations	Lab 8 (P. 75); Lab 9 (P. 93)
6	Feb 24	Enzymes and respiration – I; Respiration – II and photosynthesis	Lab 10 (P. 113) and **Lab Quiz 2**; Lab 11 (P. 127)
7	Mar 3	Plant growth control and genetics – I; Genetics – II and molecular biology	Lab 12-1 (P. 139)-Growth setup; Lab 13 (P. 153)
8	Mar 10	GMO video and group project assignment; **Lecture Exam 2 (03/13)**	Lab 12-2 (P. 139)-Growth analysis; Lab 14 (P. 161)

9	Mar 17	Evolution – I; Evolution – II and Darwin video	Lab 15 (P. 171) and **Lab Quiz 3**; NO LAB on Mar 21
10	Mar 31	Prokaryotes and protists – I; Protists – II	Lab 16 (P. 185); Lab 17 (P. 197)
11	Apr 7	Fungi and lichens; Bryophytes	Lab 18 (P. 202) and **Lab Quiz 4**; Lab 19 (P. 221)
12	Apr 14	Seedless vascular plants and gymnosperms - I; **Lecture Exam 3 (04/17)**	Lab 20 (P. 233); Lab 21 (P. 243)
13	Apr 21	Gymnosperms – II and Angiosperms – I; Angiosperms – II and reproductive organs	Lab 22 (P. 253) and **Lab Quiz 5**; Lab 23 (P. 265)
14	Apr 28	Population ecology and community ecology - I; Community ecology – II and project presentations - I	Lab 24 (P. 279); Lab 25 (P. 289) and **Lab Quiz 6**
15	May 5	Project presentations - II; Ecosystem ecology	NO LABS
16	May 12	**Final Lecture Exam (05/14, Tuesday)**	NO LABS