Biology 130: Plant Biology
Sections 7 ~ 9
Fall 2012

Lecture 13:00-13:50 M W F, TNR170

Lab Section 7: 9:00-10:50 T R, TNR157
Section 8: 11:00-12:50 T R, TNR157
Section 9: 13:30-15:20 T R, TNR157

Professor Dr. Qiang Sun
Office: 237 TNR
Phone: 346-2737
Email: qsun@uwsp.edu
Website: http://www.uwsp.edu/biology/Pages/Faculty/QSun.aspx
Office hours: 14:00 – 15:00 M
9:00 – 11:00 W
14:00 – 15:00 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 University Bookstore

Course related websites

1. UWSP Biology 130 Lab Review Images:
   http://www4.uwsp.edu/biology/courses/botlab/
2. Common Plants of Wisconsin:
   http://www4.uwsp.edu/biology/courses/plantid/

Course materials All the lecture outlines, handouts and other course materials will be posted on Desire2Learn (D2L). Please visit the course 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
Twenty lecture pop quizzes	60 points (3 points x 20 times)
Total possible score	640 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 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	Sept 2	An introduction to plant biology; Chemistry of life	NO LAB
2	Sept 9	Bio-macromolecules; Cell structure and function; Cell division	Lab 1 (P.1 in the laboratory manual; the same below) and Lab 15 Part II-A (P. 174) on Sept 13; Lab 2 (P. 11)
3	Sept 16	Tissues; Plant growth and Stems-I; Stems-II	Lab 3 (P. 17); Lab 4 (P. 29) and Lab 15 Part II-B (P. 174)
4	Sept 23	Reviews; **Lecture exam #1 (09/26);** Roots	Lab 5 (P. 35); Lab 6 (P. 47) and **Lab quiz #1 (09/27)**
5	Sept 30	Leaves; Plant water relations; Enzymes	Lab 7 (P. 63); Lab 8 (P. 75)
6	Oct 7	Respiration; Photosynthesis; Growth control	Lab 9 (P. 93) and **Lab quiz #2 (10/09)**; Lab 10 (P. 113)
7	Oct 14	Genetics and molecular biology-I; Genetics and molecular biology-II; GMO video	Lab 11 (P. 127); Lab 12 (P. 139)-Growth setup
8	Oct 21	**Lecture exam #2 (10/22);** Group project assignment; Prokaryotes	Lab 13 (P. 153); Lab 12 (P. 139)-Growth analysis
9	Oct 28	Protists-I; Protists-II and Fungi-I; Fungi-II and Lichens	Lab 14 (P. 161) and **Lab quiz #3 (10/30)**; Lab 15 (P. 171)

10	Nov 4	Bryophytes; Lycophytes and Pterophytes; Gymnosperms	Lab 16 (P. 185); Lab 17 (P. 197)
11	Nov 11	Angiosperms; Flowers and Fruits; **Lecture exam #3 (11/16)**	Lab 18 (P. 202) and **Lab quiz #4 (11/13)**; Lab 19 (P. 221)
12	Nov 18	Evolution-I; Darwin video; Thanksgiving	Lab 20 (P. 233); NO LAB on Nov 22
13	Nov 25	Evolution-II; Population ecology; Project presentations-I	Lab 21 (P. 243); Lab 22 (P. 253) and **Lab quiz #5 (11/29)**
14	Dec 2	Project presentations-II; Community ecology; Ecosystem ecology	Lab 23 (P. 265); Lab 24 (P. 279)
15	Dec 9	Biomes; Invasive species video (the last class day)	Lab 25 (P. 289) and **Lab quiz #6 (12/11)**, NO LAB on Dec 13
16	Dec 16	**Final exam (12/20, Thursday)**	NO LABS