

## Botany SI2104 - Plant Form and Function - Fall 2009

**Prerequisites:** none

**Lecture/Lab:** MWF 12:30-2:20

**Instructor:** Dr. S. Harley   **Office:** SL409M

**Office hours:** MWF 10:30-11:20, TuTh 11:00-11:50, or by appointment

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**Course URL:** <http://faculty.weber.edu/sharley/2104/2104.htm>

Plant Form and Function is one of the two core courses required for all Botany majors and minors. The other course is Botany SI2114, Evolutionary Survey of Plants. The two courses are independent of each other; one is not a prerequisite for the other. If you will be taking upper division Botany courses, you should be aware that some have both 2000-level courses as prerequisites and that others only require a specific one of the two.

Plant Form and Function is a 4 credit hour course which meets in three 2-hour blocks per week. Lab activities are integrated with lecture information. You will spend approximately 2-3 hours per week in lecture time and 3-4 hours per week in activities. The first part of the course will go into the details of internal plant anatomy, including subcellular structures. The second part of the course material will cover plant metabolism (respiration and photosynthesis), mineral nutrition, and sexual and asexual reproduction.

### Required texts and materials:

P.H. Raven, R.F. Evert, and S. E. Eichhorn. 2005. *Biology of Plants*, 7<sup>th</sup> ed. W. H. Freeman and Company.

S. M. Harley, R. A. Bush, B. A. Wachocki. 2007. *Botany 2104 Lab Manual*.

safety glasses (Safety glasses are available from the WSU Bookstore or Chemistry stores on the 5th floor of the Science Lab Building.)

### Recommended texts and materials:

*Writing Papers in the Biological Sciences*, any edition, by V. E. McMillan. This text is required for Botany 2121.

*A Photographic Atlas for the Botany Laboratory* by Van de Graff et al. This text is also recommended for Dr. Deckert's section of Botany SI2114.

30 cm ruler, colored pencils, and a calculator

### Students With Disabilities

Any student requiring accommodations or services due to a disability must contact Services for Students with Disabilities (SSD) in room 181 of the Student Services Center. SSD can arrange to provide course materials in alternative formats, if necessary.

### Student Behavior

This class meets in a laboratory room. Therefore, food and drink are prohibited. Feet must be in enclosed shoes. Your clothing must cover your lap when you are seated. Safety glasses are required for lab activities in which you handle chemicals. Additional safety information will be covered on the second day of class.

You are expected to comply with the Botany Department Statement of Expectations of Students. The text of this statement can be found at <http://www.weber.edu/Botany/expectations.html>

## Your course grade will be based on the following:

**Exams:** There will be three 100 point exams and one 200 point cumulative final (~100 points old material, ~100 points new material). Of the 500 points available, only 400 will be used to calculate your grade. Either your lowest score on a 100 point exam will be dropped or your final exam score will be halved; whichever calculation gives you the higher grade will be used. Your exams will be a mixed format of multiple choice, short answer, essay, and lab practical.

**Lab Activities:** You will turn in 12 of your lab activities. See the Important Dates section of this syllabus for a list of the 12 activities that you will turn in. You must be present for the activities in order to get credit.

**Essay:** One of the goals of Botany courses numbered >2000 is to provide support to the development of the Botany Student Portfolio. Therefore, you are to write an essay in which you address certain core concepts in Plant Biology as displayed by one particular species of flowering plant (angiosperm). Further guidelines will be given during the third week of classes and will be available with the online version of the syllabus.

## Calculation of Final Grade:

Exam points	400 points
Nine lab activities @ 10 points each	90 points
Three lab activities @ 20 points each	60 points
Essay	50 points
TOTAL	600 points

Point totals to achieve a specific grade are as follows:

A = 558-600 (93%)      B = 498-521 (83%)      C = 438-461 (73%)      D = 378-401 (63%)

A- = 540-557 (90%)      B- = 480-497 (80%)      C- = 420-437 (70%)      D- = 360-377 (60%)

B+ = 522-539 (87%)      C+ = 462-479 (77%)      D+ = 402-419 (67%)      E = 0-359

Awarding of a UW grade: miss more than one regular exam OR miss the final exam OR not turn in the Portfolio Essay OR turn in fewer than eight lab activities.

## **NO MAKE UP EXAMS!! NO MAKE UP ACTIVITIES!! NO EXTRA CREDIT!!**

**Extra Credit:** There is no extra credit in this class. (1) If you do not have time to master the content material and complete the assignments mentioned above, you certainly do not have time to do extra work. (2) It is not fair to your classmates for you to have different criteria for your grade.

**Important Dates:**

Sept 7	Labor Day - no classes
Sept 9	last day to turn in "Storage Polymers of Seeds" (10 points)
Sept 14	last day to turn in "Diffusion and Osmosis" (10 points)
Sept 16	Annual Botany Department Field Trip to the Uinta Mountains - class will not meet. For more information, go to <a href="http://departments.weber.edu/botany/UMFT/home.htm">http://departments.weber.edu/botany/UMFT/home.htm</a>
Sept 21	last day to turn in "Microscopy" (10 points)
Sept 21	Exam 1
Sept 28	last day to turn in "Eukaryotic Cell" (10 points)
Oct 14	last day to turn in "Roots" (20 points)
Oct 16	Fall Break - no classes
Oct 19	last day to turn in "Stems" (10 points)
Oct 23	Exam 2
Oct 23	last day to turn in "Leaves" (20 points)
Oct 30	last day to turn in "Secretory Structures" (10 points)
Nov 4	last day to turn in "Respiration" (10 points)
Nov 4	Preliminary version of Essay due
Nov 9	last day to turn in "Photosynthesis" Procedures 1-6 (10 points)
Nov 13	Exam 3
Nov 20	last day to turn in "Mineral Nutrition" (20 points)
Nov 27	Thanksgiving Break - no classes
Nov 30	Final version of Essay due
Nov 30	last day to turn in "The Flower" (10 points)
Dec 9 (Wednesday)	Final Exam, 12:30-2:20