

Biology 130: Introduction to Plant Biology
Section 01/L1-2
Spring 2022

Lecture Online asynchronous delivery (Mon and Wed)

Lab Sec01L1: 13:00-15:50 Tue, CBB 170/176
Sec01L2: 13:00-15:50 Thu, CBB 170/176

Professor Dr. Qiang Sun
Office: CBB 348
Phone: 715-346-2737
Email: gsun@uwsp.edu
Website: <http://www4.uwsp.edu/biology/Pages/Faculty/Sun.aspx>
Virtual office hours: 16:00 – 17:00 Tue
16:00 – 17:00 Thu
10:00 – 11:00 Fri
Other times by appointment

Textbook Stern KR, Bidlack JE, Jansky SH. 2017. *Introductory Plant Biology*, 14th Edition. The McGraw-Hill Companies, Inc., New York. Required, rental from the University Bookstore

Lab manual A lab handout/manual will be posted on Canvas prior to each lab meeting. You are required to bring a hard copy to your lab meeting.

Course related websites

1. UWSP Biology 130 Lab Review Images:
<https://www4.uwsp.edu/biology/courses/botlab/default.htm>
2. Common Plants of Wisconsin:
<http://www4.uwsp.edu/biology/courses/plantID/cphome.htm>

Course materials All lecture slideshows, lecture recordings, lecture-related videos, lecture handouts, lab handouts, lab summaries, and other course materials will be posted on the Canvas. Please visit the website frequently.

Learning outcomes of General Education Program (Investigation-Level Natural Science Courses)

1. Explain major concepts, methods, or theories used in the natural sciences to investigate the physical world
2. Interpret information, solve problems, and make decisions by applying natural science concepts, methods, and quantitative techniques
3. Describe the relevance of aspects of the natural sciences to their lives and

society

Course description and learning outcomes

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. Below are the five core learning outcomes that students are expected to achieve.

1. Upon completing this course, students need to be able to explain fundamental molecular, biochemical, and cellular principles of plants
2. Upon completing this course, students need to be able to describe general anatomical structures and physiological functions of plants and interpret fundamental principles of genetics, evolution, and ecology
3. Upon completing this course, students need to be able to recognize major groups of plants, fungi, protists and prokaryotes and describe their evolutionary and ecological relationships as well as their impacts on ecosystems and human welfare etc.
4. Upon completing this course, students need to be able to apply the scientific method in analyzing problems
5. Upon completing this course, students need to be able to apply the concepts, methods, and theories they have learned to clearly identify, critically think, and better interpret plant biology related issues/problems in the real world

Attendance

You are required to actively participate in all activities of this course. Missing activities will severely hinder your ability to understand subsequent material and perform well on exams and quizzes.

All lecture exams, lecture quizzes and lab quizzes will be posted on the Canvas and are open-note/open-book. Each test or quiz will become accessible to you online after the relevant material has been completed in class. You have only one attempt to finish it online within a certain period of time.

There will be no points for missed exams or quizzes. Make-up exams or quizzes 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 etc.

Four non-cumulative lecture exams	400 points (100 points x 4 times)
Four non-cumulative lab quizzes	200 points (50 points x 4 times)
Twenty-two lecture quizzes	88 points (4 points x 22 times)
Lab attendance	39 points (3 points x 13 times)
One group project	20 points
One individual project	20 points
Total possible score	767 points

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](#)

Special needs

If you need course adaptations, accommodations, or any other special arrangements because of disability and/or other medical conditions, please contact the Student Disability Office first to establish a record. After that, please schedule a virtual meeting with me as soon as possible to see how I can do to accommodate your needs.

Copying and Recording of Instructional Materials or Lectures

According to [the UWS Board of Regents Policy Document 4-1](#), instructional materials for this course are protected intellectual property at UW-Stevens Point. Students in this course may use the materials and recordings for their personal use related to participation in this class. Students may also take notes solely for their personal use. If a lecture is not already recorded, you are not authorized to record my lectures without my permission unless you are considered by the university to be a qualified student with a disability requiring accommodation. Students may not copy or share course materials and recordings outside of class, including posting on internet sites or selling to commercial entities. Students are also prohibited from providing or selling their personal notes to anyone else or being paid for taking notes by any person or commercial firm without the instructor's express written permission. Unauthorized use of these copyrighted lecture materials and recordings constitutes copyright infringement and may be addressed under the university's policies, UWS Chapters 14 and 17, governing student academic and non-academic misconduct.

Emergency Response Guidance and UWSP COVID-19 Related Policies

Emergency Response Guidance

In the event of a medical emergency, call 911 or use Red Emergency Phone. Offer assistance if trained and willing to do so. Guide emergency responders to victim.

In the event of a tornado warning, proceed to the lowest level interior room without window exposure. Avoid wide-span structures (gyms, pools or large classrooms). See [floor plans](#), showing severe weather shelters on campus. Get to know at the start of the semester the locations of red emergency phone and severe weather shelters closest to our lecture hall and laboratory. In the event of a fire alarm, evacuate the building in a calm manner. Meet at an instructed location 200 yards away from building. Notify instructor or emergency command personnel of any missing individuals.

In the event of active shooting, run/escape, hide or fight. If trapped, hide, lock doors, turn off lights, spread out and remain quiet. Call 911 when it is safe to do so. Follow instructions of emergency responders. See [UW-Stevens Point Emergency Procedures](#) for details on all emergency response at UWSP.

Guidance Regarding Face Coverings in the Classroom

At all UW-Stevens Point campus locations, the wearing of face coverings is currently mandatory in all buildings, including classrooms, laboratories, studios, and other instructional spaces. Any student with a condition that impacts his/her use of a face covering should contact [the Disability and Assistive Technology Center](#) to discuss accommodations in classes.

Tentative Lecture and Lab Schedule

Week #	Week of	Lecture topic	Lab topic
1	Jan 23	An introduction to plant biology; The chemical and physical bases of life - I	No Lab
2	Jan 30	The chemical and physical bases of life - II; The macromolecules of cells; The structure, function, and reproduction of plant cells-I	Lab 1 Light microscopy; Lab safety
3	Feb 6	The structure, function, and reproduction of plant cells- II; Plant tissues; Plant growth	Lab 2 Plant cells and tissues
4	Feb 13	Stems; Review; Lecture Exam 1 (02/16)	Lab 3 Stems; Lab Quiz 1 (02/17)
5	Feb 20	Roots; Leaves; Plant water relations	Lab 4 Roots and leaves

6	Feb 27	Enzymes; Cellular respiration; Photosynthesis	Lab 5 Stomata
7	Mar 6	Plant growth control; Plant genetics and molecular biology	No Lab
8	Mar 13	Plant Biotechnology; GMO video; Group project assignment; Lecture Exam 2 (03/16)	Lab 6 Plant water relations; Lab Quiz 2 (03/17)
9	Mar 27	Evolution; Darwin video	Lab 7 Photosynthesis
10	Apr 3	Prokaryotes; Protists	Lab 8 Plant growth and hormones
11	Apr 10	Fungi; Lichens; Bryophytes	Lab 9 Plant genetics; Lab Quiz 3 (04/14)
12	Apr 17	Seedless vascular plants; Gymnosperms – I; Lecture Exam 3 (04/20)	Lab 10 Bacterial and Fungi
13	Apr 24	Gymnosperms – II; Angiosperms; Reproductive organs	Lab 11 Protists
14	May 1	Population ecology; Community ecology	Lab 12 Seedless plants
15	May 8	Ecosystem ecology; Invasive species video	Lab 13 Seed plants; Lab Quiz 4 (05/12)
16	May 15	Lecture Exam 4 (05/16-18)	