

# BIO 130: Introduction to Plant Biology

Fall 2021

5 credits

**Lecture and Lab Instructor:** Ann Impullitti, Ph.D.

**Email:** [ann.impullitti@uwsp.edu](mailto:ann.impullitti@uwsp.edu) (this is the best way to reach me)

**Office hours:** In-person: Monday and Wednesday 12:00 – 1:00pm; I typically have an open door policy. If my door is open, I am available to chat. My office is rm 342 in the CBB  
In-person times don't fit your schedule? I'm also available via Zoom  
<https://wisconsin-edu.zoom.us/j/7529151185>

**How I will contact you:** I will use your UWSP email address so please check your email daily. If you use a different email address, make arrangements to have messages forwarded to the account you use.

## Course Information

Welcome to Plant Biology! This course will cover many aspects of plant biology, including anatomy, ecology, biotechnology, diversity, and physiology. By the end of this course you will have an appreciation for the role and function of plants in the environment, and you will have gained an understanding about their diversity, physiology, and ecology.

### BIOL 130 Learning Outcomes

1. Explain the following fundamental biological principles as related to plants
  - The cellular basis of life
  - Inheritance
  - Evolutionary processes
  - Ecological processes
  - Basic physiology of hormones, transport processes, tropisms, and metabolism
2. Be able to differentiate among the major groups of plants, fungi, protists, and bacteria and explain their relevance to society
3. Demonstrate the ability to address questions by applying the scientific method

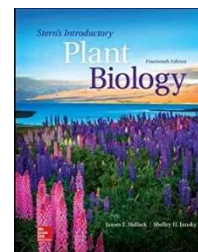
## Course Materials

### *For lecture*

Textbook: Bialack, J., Janskey, S., and Stern, K. *Stern's Introductory Plant Biology*, 14<sup>th</sup> edition. McGraw-Hill  
ISBN-10: 0073369446

### *For Lab*

Lab handouts will be uploaded to Canvas



## Class format and student expectations

The lecture material will be recorded and posted onto Canvas. Each video will cover an individual topic and/or learning outcome. **The expectation is that you will have watched the lectures prior to the weekly in-person meetings.** We will meet in-person once a week to work on review problems and discuss the material covered in the lectures. Some of the assignments and review problems will be collected. The labs are in-person and will meet one time each week. The labs are designed for you to apply the scientific method and to further your understanding of some of the topics we will cover throughout the semester.

At a minimum, you will be expected to complete the following types of tasks throughout the semester

- Sign-in to Canvas and view online lectures
- Upload documents to Canvas to submit assignments.
- Learn to use MS Excel
- Complete assignments/quizzes/tests in-person or in an on-line format.
- Check your email daily
- Communicate via email and Zoom when needed
- Work with small groups of students for lecture and/or lab assignments

## How to succeed

- Stay organized! Check and read your email and Canvas Announcements at least one time per day!
- **This class is 5 credits. The federal expectation is that you spend 2-3 hrs outside of class for each credit. For BIOL 130 this would mean that the expectation is that you spend 10+hrs on this course every week. Many of your other courses are likely 3-4 credits so keep in mind that this course is 5 credits and as such, the expectations of this course are quite different.**
- Make sure you can access course resources from a laptop, table, or desktop computer. A phone will likely not be sufficient to complete the assignments and activities
- Take handwritten notes as you are watching the remote lectures, and then write a summary or make a sketch or drawing after you finished the video. Simply listening/watching a lecture will not result in retention of material.
- Study frequently and actively. Active studying will require you to take hand-written notes, etc. Just sitting and reading the textbook or watching a video without taking notes is not 'active', it is passive. Passive studying is generally not a useful or efficient means of studying.
- Stay focused. Focus on a single class at a time. Focus for 30-50 minutes and then take 5-10 minutes to go for a walk, check your messages, do the laundry, wash the dishes etc. Identify a location that will help you to stay focused. Set-up a desk, find a table, maybe a quiet area. Sitting on a soft comfy chair or in bed is tempting to let us drift away rather than complete the tasks at hand.
- Meet regularly with a partner or small study group. **Quiz each other.** Answer each other's questions. One of the best ways to learn the material (or to discover that you don't understand it after all...) is to explain it to someone else. This class is not easy. Students frequently form study groups and work together.
- Remember, most of you are enrolled in a full-time course load this semester (approx. 16 credits). A full-time course load of 16 credits typically equates 30hr of course work every week. If you are also working 20hrs a week (or 30+), then you are up to 50hrs of work (school + job).
- Be flexible. Everybody will need support and understanding throughout the semester.
- Set a schedule! Try to protect your time. Setting a schedule will help to hold yourself accountable for accomplishing tasks and keep you motivated. You've just found an 'Easter Egg'. Send me an email with three things that you hope to do to succeed in BIOL 130 and you will receive 2 extra credit points for your diligence in reading the syllabus.

## Assessment

### Lecture Exams (315 pts)

Three exams (80 pts/exam) and a final (75 pts) Exams are based on lectures and assigned readings. Exams may be composed of any of the following T/F, multiple choice, fill in the blank, short answer, data interpretation, problem solving, and essay. The final exam is cumulative. Biology is a discipline in which you are constantly building on prior knowledge, and therefore on the final you will be expected to integrate concepts and ideas from throughout the semester.

- If you miss an exam for any reason (car troubles, alarm clock failure, etc.), you will receive a zero on the exam.
- Drop/Replace exam policy
  - We all have days when life throws a us a bunch of lemons so I will drop the lowest score of your three lecture exams and replace it with your score on the final. For example, you overslept OR the first exam just didn't go well. No problem, I get it. Your lowest lecture exam score will be replaced with the percentage you earn on the final exam. For example, you missed lecture exam #1 (Score = 0) and earned a 75% (56/75pts) on the final exam. Exam #1 will now be replaced with 75pts.
- *Makeup exams are only given in extreme circumstances OR if you have a conflict due to a religious observance or a UWSP sponsored event.* In cases such as these, you need to make arrangement with me **at least 1 week before the exam.**

### Lecture Assignments and Quizzes (120 pts)

We will have in-class assignments throughout the semester. The purpose of these assignments is to help you master the material, formulate and clarify your ideas/thinking, and improve your critical thinking skills. There will be about 130 points worth of these assignments during the semester, but the maximum possible score is 120 points. This allows you some flexibility since you can miss or score less than perfect on several and still have the ability to score all 120 points. There are no make-up assignments.

### Lab Assignments (130 pts)

You will have weekly lab assignments.

- All lab assignments are due every Monday at 9 am.

## Grading

I will use the Canvas gradebook to enter all of your grades. All final grade calculations are completed in MS Excel. Canvas does not have the ability to drop/replace grades, etc. *Your grade in Canvas is only an estimate.*

Your final grade is determined based on the percent of points earned throughout the semester. Your grade can be calculate using the following formula:

$$\frac{\text{Total pts you earn on all assignments}}{\text{Total pts possible for all assignments}} \times 100 = \text{Your \% earned}$$

For example, if you earned 500pts on all of your exams and assignments and the total possible points from lab is 600, you would have an 83.3% (B).

A	A -	B+	B	B-	C+	C	C-	D+	D	D-	F
>93%	90 - 92.9%	87 - 89.9%	83 - 86.9%	80 - 82.9%	77 - 79.9%	73 - 76.9%	70 - 72.9%	67 - 69.9%	63 - 66.9%	60 - 62.9%	<59.9

## BIO130 and UWSP Policies

**ATTENDANCE:** I will not track your attendance. It is still your responsibility to take an active part in our course: attend in-person sessions, watch recorded resources, and ask questions. Are you still reading the revised syllabus? Nice job. Email me a biology meme and you will receive another two points.

**DUE DATES AND LATE WORK:** Please refer to the 'Assessment Section' of the syllabus for specific due dates of lab and lecture assignments. I do have expectations, standards, and deadlines for assignments, but I also understand that you might be ill, have an emergency, etc. If you are unable to meet a deadline, please contact me as soon as possible so we can work together to make necessary arrangements. Approved/Excused late work will not receive late penalties. Late work submitted without arrangements or explanation will be subject to a 10% late penalty for each day that it is late. **Late assignments are only accepted for one week following the due date.** After that time, the assignment will no longer be available on Canvas and you will receive a zero. The additional pts that are embedded in this syllabus as a reward for reading thoroughly are due by 5pm on September 10.

**TECHNOLOGY GUIDELINES:** View this website to see [minimum recommended computer and internet configurations for Canvas](#).

**STUDENT RECORDING AND SHARING CLASS LECTURE:** Lecture materials and recordings for Introductory Plant Biology (BIOL 130) 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. [Regent Policy Document 4-1] Students may not copy or share lecture 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.

**ACCOMODATIONS:** I will be happy to help you if you need special accommodations to succeed in this course. Please contact the UWSP Student Disability and Assistive Technology Center ([datctr@uwsp.edu](mailto:datctr@uwsp.edu)) to document your needs and contact me so that appropriate arrangements can be made. More information: <http://www.uwsp.edu/disability/Pages/default.aspx>

**UNDERSTAND WHEN YOU MAY DROP THIS COURSE:** It is the student's responsibility to understand when they need to consider unenrolling from a course. Refer to the UWSP [Academic Calendar](#) for dates and deadlines. After this period, a serious and compelling reason is required to drop from the course. Serious and compelling reasons includes: (1) documented and significant change in work hours, leaving student unable to attend class, or (2) documented and severe physical/mental illness/injury to the student or student's family.

**ACADEMIC INTEGRITY: Academic dishonesty in any form will not be tolerated!** Assignments submitted to Canvas are automatically scanned by TurnItIn software that verifies the originality of your work. It is your responsibility to be aware of your rights and responsibilities as a UWSP student. Please take the time to read and understand the information found here (and let me know of any questions): Cheating or plagiarism related to any of the course assessments will result in a score of zero for that assessment.

## **Student Academic Disciplinary Procedures**

### UWSP 14.01 Statement of principles

The board of regents, administrators, faculty, academic staff and students of the university of Wisconsin system believe that academic honesty and integrity are fundamental to the mission of higher education and of the university of Wisconsin system. The university has a responsibility to promote academic honesty and integrity and to develop procedures to deal effectively with instances of academic dishonesty. Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for respect of others' academic endeavors. Students who violate these standards must be confronted and must accept the consequences of their actions.

### UWSP 14.03 Academic misconduct subject to disciplinary action.

(1) Academic misconduct is an act in which a student:

- (a) Seeks to claim credit for the work or efforts of another without authorization or citation;
- (b) Uses unauthorized materials or fabricated data in any academic exercise;
- (c) Forges or falsifies academic documents or records;
- (d) Intentionally impedes or damages the academic work of others;
- (e) Engages in conduct aimed at making false representation of a student's academic performance; or
- (f) Assists other students in any of these acts.

(2) Examples of academic misconduct include, but are not limited to: cheating on an examination; collaborating with others in work to be presented, contrary to the stated rules of the course; submitting a paper or assignment as one's own work when a part or all of the paper or assignment is the work of another; submitting a paper or assignment that contains ideas or research of others without appropriately identifying the sources of those ideas; stealing examinations or course materials; submitting, if contrary to the rules of a course, work previously presented in another course; tampering with the laboratory experiment or computer program of another student; knowingly and intentionally assisting another student in any of the above, including assistance in an arrangement whereby any work, classroom performance, examination or other activity is submitted or performed by a person other than the student under whose name the work is submitted or performed.

**RELIGIOUS BELIEFS:** Relief from any academic requirement due to religious beliefs will be accommodated according to UWS 22.03, with notification within the first three weeks of class.

## BIO130: Lecture Schedule

<b>Week 1 (9/2 - 9/3)</b>		
Lecture topics	Syllabus and Overview of Plant Biology	
Lab	No lab	
<b>Week 2 (9/7 - 9/10)</b>		
Lecture topics	Chemistry, water, and Biological molecules	Ch 2
Lab	No lab	
<b>Week 3 (9/13 - 9/17)</b>		
Lecture topics	Cells structure, function, growth and division	Ch 3, 13
Lab	Light Microscopy	
<b>Week 4 (9/20 - 9/24)</b>		
Lecture topics	Plant tissues and organization	Ch 4
	Roots	Ch 5
Lab	Plant cells and tissues	
<b>Week 5 (9/27 - 10/1)</b>		
Lecture topics	Stems and Structure of woody plants	Ch 6
	Leaves	Ch 7
Lab	Stems	
<b>Week 6 (10/4 - 10/8)</b>		
Lecture topics	Transport Processes and plant nutrition	Ch 9
	Metabolism Overview; Energy Flow	Ch 10
	<b>EXAM #1</b>	
Lab	Roots and Leaves	
<b>Week 7 (10/11 - 10/15)</b>		
Lecture topics	Photosynthesis and Respiration	Ch 10
Lab	Stomata	
<b>Week 8 (10/18 - 10/22)</b>		
Lecture topics	Meiosis and Alternation of Generations	Ch 12
Lab	Water relations	
<b>Week 9 (10/25 - 10/29)</b>		
Lecture topics	Mendelian Genetics	Ch 13
	Genes, Molecular Genetics and Development	Ch 13
Lab	Photosynthesis	
<b>Week 10 (11/1 - 11/5)</b>		
Lecture topics	Genes, Molecular Genetics and Development	Ch 13
	Genetic Engineering	
Lab	Plant Growth and Hormones	
<b>Week 11 (11/8 - 11/12)</b>		
Lecture topics	Evolution	Ch 15
	Tree of life, Diversity, and Life Cycles	
	<b>EXAM #2</b>	
Lab	Plant Genetics	

<b>Week 12 (11/15 - 11/19)</b>		
Lecture topics	Viruses and Bacteria Fungi are fun I	Ch 17 Ch 19
Lab	Bacteria and Fungi	
<b>Week 13 (11/22 - 11/24)</b>		
Lecture topics	Before Land Fall. The Chlorophyta (Green Algae) and other protists	Ch 18, 20
Lab	Protists	
<b>Week 14 (11/29 - 12/3)</b>		
Lecture topics	Seedless Vascular Plants (Getting taller!): Ferns and Fern Allies Gymnosperms – Vascular Seed Plants: Overview and Coniferophyta	Ch 21 Ch 22
Lab	Seedless Plants (Bryophytes and Ferns)	
<b>Week 15 (12/6 - 12/10)</b>		
Lecture topics	Angiosperm Plants and People	Ch 23 Ch 24
	<b>EXAM #3</b>	
Lab	Seed Plants (Gymnosperms and Angiosperms)	
<b>Finals Week</b>		
	<b>Cumulative Final 12/15/2021 5:00 – 7:00pm; <i>Note the room</i></b> <b>CCC 214</b>	