

BIOL 130: Intro to Plant Biology (5 credits)

UWSP Wausau (Fall 2022)

Lecture: MW 2-3:15 pm; Rm 220 WAU (and Rm 130 MSF)

Lab: T 2-4:50 Rm 271

Lecture Instructor: Dr. Laura Lee

office: 217-B Leopold Building

phone: 715-389-6524

email: llee@uwsp.edu

office hours: tba, or by appointment

WAUS lab instructor: Dr. Paul Whitaker

office: Rm 285C

phone: 715-261-6284

email: pwhitake@uwsp.edu

office hours: Tues 11am-1pm or by appointment

Required Text:

Biology 2nd Ed. By Clark, Choi, & Douglas - Open access (see below).

There is not a required lab manual for the WAUS lab section. Lab materials will be posted on Canvas for you to download and/or print as desired.

Course Description & Objectives:

BIOL 130 is a demanding introductory biology course intended for both majors and non-majors. The overall goal of this course is for students to develop an understanding of the concepts, terminology and techniques used in the field of plant biology. This will be accomplished through a combination of lectures and laboratory applications. Some of the topics that will be covered include plant ecology, plant structure and physiology, genetics and plant diversity.

GEP, AAS Designation

- GEP Designation: NSC (Investigations – Natural Science)
- AAS Designation: NW (Natural World), LS (Lab Science)

Course Objectives: Students completing this course will attain varying levels of proficiency in their ability to demonstrate:

1. ability to form and test hypotheses using the scientific method, and present results in the form of a scientific paper.
2. useful laboratory and field skills, including microscope use, field measurements, and tree identification.
3. knowledge of the following concepts and how they are related to each other
 - a. structure and function of plants, how they are inter-related.
 - b. role of plants in ecosystems, and how plants interact with both the living community and the physical environment around them
 - c. how plants change over time through genetic and evolutionary means, and the impacts of such changes.
4. an appreciation of the many uses of plants by humans, and the many ways that humans negatively affect the environment for plants and other living things.

Books, Notes & Study Aids:

This course uses a free, open access textbook. It is available in web view and PDF for free (Biology 2e from OpenStax, <https://openstax.org/details/books/biology-2e>). You can also rent it through the campus bookstore, purchase it digitally on iBooks, or purchase a print version from the Open Stax website or Amazon. You can use whichever format you want. Web view is recommended -- the responsive design works seamlessly on any device. Whichever form you get it in, make sure to use it! Every student has good intentions at the beginning of the year in terms of reading and studying. But, by the end of the semester, many textbooks remain closed and unused. We know you'll get busy and want to blow off reading, but we expect you to use your

textbook! Do the assigned reading either before or after class (they're not long). Use the animations, photos and diagrams in the textbook to further your understanding of the material.

Dr. Lee, in Marshfield, has an assigned lab manual that is not available free online and is not part of UWSP's textbook rental system. However, Dr. Whitaker does not use that lab manual and will provide all needed lab materials in advance on the Canvas site for the Wausau lab section. It is essential that you read the week's lab chapter(s) before coming to class so that you will have the proper knowledge to do the lab correctly. Please download and read the assigned materials before lab each week and bring hard copies of at least the assignable parts to lab each week.

This course will be taught using Canvas as an instructional aid. You should have a Canvas login and password and access to the Biology 130 Canvas sites. You can log into Canvas directly the UWSP home page. You should see one site maintained by Dr. Lee for the lecture component of the course (**Lecture (Sec 1 and 2) Introduction to Plant Biology**) and a separate Canvas site for lab (**Wausau lab for Introduction to Plant Biology**, and look for the kiwi image). All course material will be posted on these sites, including lecture outlines, objectives, practice exam questions, web links, information about assignments and supplementary lab material. It is to your advantage to access and make use of this information. In the past, students who have used Canvas more have tended to "get more" out of the lectures and labs and were better prepared for exams and assignments. If you are not familiar with Canvas, please see Canvas training resources here: <https://uwstp.instructure.com/enroll/36GKLY>.

The Tutoring-Learning Center promotes and supports the academic environment by providing free, confidential, student-centered academic support. The TLC offers individual, drop-in tutoring in math, writing, and STEM, Student Success Workshops, and credited courses. It also offers Academic Coaching as an opportunity to work on skills such as goal-setting, motivation, note-taking, test-taking, time-management, study skills, etc. On the Marshfield and Wausau campuses, the TLC is located in the Campus Library. For more information, contact Ryan O'Leary on the Marshfield campus (roleary@uwsp.edu; 715-898-6036) or Lori Randall on the Wausau campus (lorandal@uwsp.edu; 715-261-6148).. In addition, the DUO Center on both campuses will offer tutoring with professional tutors in Writing and Math. Hours and availability will be announced soon.

Course Organization and Communication Information:

This class will be taught jointly between the Marshfield and Wausau campuses. Dr. Lee is the lead instructor and will teach lectures on MW from 2:00 to 3:15pm via point-to-point compressed video in WAUS Rm 220. Dr. Lee will also teach the lab section in Marshfield while Dr. Whitaker will teach the lab section in Wausau. Dr. Lee should be your contact for any logistical questions about the lecture component of the course (lecture assignments, exams, dues dates, etc.), whereas Dr. Whitaker should be your contact for any lab-related questions. You can reach out to either instructor with questions about course content, as both of us have taught BIOL 130 for many years and both have used this OpenStax textbook. We are available without an appointment on the days/times above. You can arrange an individual meeting with either of us, whether in person or via Zoom, through an email request, phone call, or conversation directly before or after class. Neither of us will hold our normal office hours during the first week of class, Thanksgiving week, or finals week. In addition, Dr. Lee will have "virtual office hours" in Canvas during the evening before each exam.

Although you can reach either of us by telephone or email, email is quicker and more efficient. Remember, some faculty receive as many as 100 emails per day. Please identify yourself (first and last name), as well as the class that you are in. Your email should be clear, concise, and professional so that your issues can be responded to effectively. Include the entire thread of an ongoing email conversation so that we can recall the history of your issue without searching for other emails you have sent.

Covid Information:

This class will be held (mostly) in person. You are expected to attend all lecture and lab sessions in person unless other arrangements have been made in advance. Please contact the appropriate instructor to make arrangements for any extenuating circumstances (illness, etc.). At all UW-Stevens Point campus locations, the wearing of face coverings is optional; please do not harass any of your classmates for wearing (or not wearing) a mask. Please monitor your own health each day. If you are not feeling well or believe you have been exposed to COVID-19 (if not vaccinated), do not come to class; email your instructor and contact UWSP's Student Health Service (715-346-4646). Regardless of the reason, students are expected to communicate their need to be absent and complete course requirements as outlined in the syllabus. Please maintain healthy practices both in and out of the classroom as much as possible.

Assessment:

Course grades: Your grade in this course is based on the following:

1. *Exams:* There will be 3 three lecture exams during the semester, each covering approximately 4 weeks of material. You will have the opportunity to improve your grade on any **ONE** exam by reworking it as a homework assignment (see details in Canvas). A final exam will be given during the assigned final exam period. It will be comprehensive in nature, with a focus on material covered after Exam 3. There will also be a series of Laboratory “mini-exams” covering only lab material. These will be announced at least a week in advance of each.
2. *Quizzes:* Weekly quizzes will be posted on Canvas each Friday and will be due by the end of the day on Sunday. Quizzes will cover information from the previous week’s material. At the end of the semester, the lowest quiz score will be dropped. **Quizzes must be completed by their due dates!**
3. *Labs/Assignments:* Each week in lab, you will be turning in some combination of lab write-up/ assignment covering the previous week’s material. All assignments should be handed in on time at the beginning of lab (if you are not present on the due date, you must scan and submit via email) – points will be deducted for late assignments. **All late assignments must be turned in before the next exam!**
4. *Semester Research Project:* During the course of the semester, you will learn to think like a biologist, read like a biologist, do research like a biologist, and write like a biologist. For this assignment, you will work as a group to test a “gardening hack”. You will come up with an idea, run the experiment in the greenhouse, gather/analyze data, and write it up with a partner. As we learn about scientific design, statistics, and citations, you will work on various parts of your paper; by the end of the semester, you will have a complete scientific paper written in the proper form for submission to a scientific journal. Activities related to the paper will be due throughout the semester; the final paper is due at the end of the semester. A handout with more detailed instructions will be handed out early in the semester.
5. *Extra Credit:* Extra credit points will be available during the semester (see Extra Credit instructions on Canvas). Please do not ask for additional, individual extra credit assignments.

Final Grade Distribution: At the end of the semester, all of your lab and lecture points will be added together to produce a point total for the semester. Your course grade will be calculated as follows:

93-100% = A	80-82.9% = B-	67-69.9% = D+
90-92.9% = A-	77-79.9% = C+	60-66.9% = D
87-89.9% = B+	73-76.9% = C	<60% = F
83-86.9% = B	70-72.9% = C-	

Course Attendance Policies:

Attendance in lecture and lab will help you to perform well on exams. Therefore, you are expected to attend all class sessions. If you take part in an off-campus trip by an authorized university group such as an athletic team, campus organization, or a class, make appropriate arrangements with me in advance. You will not be penalized for class absence due to unavoidable or legitimate required military obligations, or medical appointments at a VA facility. You are responsible for notifying faculty members of such circumstances as far in advance as possible. All students are responsible for all lecture and lab material, whether or not actually in attendance. If you miss a lab for any reason, you must make it up before I will accept a submitted lab assignment. Unfortunately, you occasionally may not be able to make up missed lab and lecture activities, due to their nature. The consequence of poor attendance is likely to be failure in the course, because of the amounts and complexity of the material.

Attendance at exams is required. Makeup exams will not be scheduled **unless** arrangements have been made with Dr. Lee personally. In general, the reasons you that you miss an exam should be the same as those for which you would miss your best friend’s wedding. If you are very ill, in court, have a dental emergency, death in the family, etc., please contact the appropriate instructor as soon as possible.

Policy on Phones & Electronic Devices

Research supports that having visual access to a cell phone diminishes our ability to learn. Checking social media, texts, emails, and messages is unprofessional and disrespectful to our class community. Therefore, phones are not to be used during class unless you are asked to take them out for a class-related

exercise. If you must be available for work/family, please leave phones in your pocket on vibrate. Laptops, tablets and other devices may be used for the sole function of following along with lecture or other course-related activities. Foreign-language translators (but not dictionary-type electronics with internet capabilities) may be used. Violations of any electronics rules will result in these privileges being revoked.

Accommodation of Religious Beliefs & Disabilities

It is UW System policy ([UWS 22](#)) to reasonably accommodate your sincerely held religious beliefs with respect to all examinations and other academic requirements. Any student who cannot be present for a scheduled exam or lab session due to a religious observance will be provided with an alternate way of fulfilling that particular course requirement, providing the student has notified the instructor of the scheduling conflict at the beginning of the semester. In addition, UW-Stevens Point will modify academic program requirements as necessary to ensure that they do not discriminate against qualified applicants or students with disabilities. We are always willing to work (to the extent allowed by the nature of the course) with students who require special accommodations because of disability. If accommodations are needed, please let us know and contact the appropriate office to complete an Accommodations Request form.

Emergency Procedures:

- In the event of a **medical emergency call 9-1-1**. 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 (basement of South Hall). Avoid wide-span structures (gyms, pools or large classrooms).
- In the event of a **fire alarm, evacuate the building** in a calm manner. We will gather on the other side of Garfield Avenue by the Fieldhouse. Notify instructor or emergency response personnel of any missing individuals.
- **Active Shooter – RUN. HIDE. FIGHT.** If trapped, hide, lock doors, turn off lights, spread out and remain quiet. Call 9-1-1 when it is safe to do so. Follow instructions of emergency responders.

Care Team

The University of Wisconsin-Stevens Point is committed to the safety and success of all students. The Office of the Dean of Students supports the campus community by reaching out and providing resources in areas where a student may be struggling or experiencing barriers to their success. Faculty and staff are asked to be proactive, supportive, and involved in facilitating the success of our students through early detection, reporting, and intervention. As your instructors, we may contact the Office of the Dean of Students if we sense you are in need of additional support which we may not be able to provide individually. You may also share a concern if you or another member of our campus community needs support, is distressed, or exhibits concerning behavior that is interfering with the academic or personal success or the safety of others.

Academic Misconduct:

Integrity is an expectation of each UW-Stevens Point student. Campus community members are responsible for fostering and upholding an environment in which student learning is fair, just, and honest. Through your studies as a student, it is essential to exhibit the highest level of personal honesty and respect for the intellectual property of others. Academic misconduct is unacceptable. It compromises and disrespects the integrity of our university and those who study here. UWS 14 defines academic misconduct as any "action which a student: 1) seeks to claim credit for the work or efforts of another without authorization or citation; 2) uses unauthorized materials or fabricated data in any academic exercise; 3) forges or falsifies academic documents or records; 4) intentionally impedes or damages the academic work of others; 5) engages in conduct aimed at making false representation of a student's academic performance; 6) assists other students in any of these acts." UWS 14 allows for disciplinary sanctions that range from an oral reprimand to suspension or expulsion from the University. You can obtain a copy of the full academic misconduct policy through the Student Services office. If one of your instructors observes academic misconduct, or if suspicions of cheating are reported to us, we will request that the identified parties come to our office to discuss the situation, and the procedures set out in UWS 14 will be followed. We acknowledge that the rules regarding academic misconduct can sometimes be confusing for students with respect to specific assignments or course work. For example, we encourage students to work together on assignments, but we also require each student to submit the work in his/her own words – no copying from your friends, and no all submitting the same word-for word assignment! If you have questions, please discuss this with your instructor before the assignment is submitted. Ignorance or misunderstanding of the UW System policy will not serve as a valid excuse for academic misconduct.

Problems? Questions?

Both of your BIOL 130 instructors hope that you check in with us early on if you have any problems or questions. It is much more useful to deal with problems early in the semester rather than to wait until a few days before the final and expect us to work miracles (our pet peeve). Please feel free to contact us as often as you would like. Although we have office hours listed (where you are our first priority), we are usually available at any non-class time to meet with students – please take advantage of this. Our main purpose for being here is to help you learn about biology!!

TENTATIVE BOTANY SCHEDULE OF EVENTS

WEEK	LECTURES (text chapters)	LABS (lab chapters)
1	Intro to Botany	Scientific Method (Handouts)
2	Ecosystems (1, 46) Energy & Nutrients (44, 31)	Marathon Park walk Species Richness (Handout)
3	Succession & Biomes (46)	Ecological Succession (Handout) <i>Experimental Design Due</i>
4	Communities (45) Populations (45)	Tree Dispersion (Handout)
5	EXAM 1 (Weeks 1-4) Populations (45)	Compositional Index (Handout)
6	Organic Molecules (2,3) Cells & Tissues (4, 30)	Microscopes & Cells (3, 6) <i>Citations due</i>
7	Cells & Tissues (4, 30) Cell Division (10, 11)	Cell Division (11)
8	Genetics (12) Classification (20)	Genetics (Handouts)
9	EXAM 2 (Weeks 5-8) Evolution (18, 19)	Evolution (Handouts)
10	Non-Plants (22, 23, 24) Bryophytes (25)	Cyanobacteria, Algae & Fungi (19, 20, 26) <i>Data Analysis Due</i>
11	Vascular Plant Anatomy (30)	Plant Anatomy (25)
12	Ferns & Allies (25) Gymnosperms (26)	Non-Seed Plants (21, 22)
13	EXAM 3 (Weeks 9-12) Angiosperms (26, 32)	<i>Paper Outline Due</i> Seed Plants (23, 24)
14	How Plants Work (5, 30, 31)	Diffusion/Osmosis (8)
15	Metabolism (6, 7, 8)	Photosynthesis (9) Final Paper Wrap-Up <i>Final Paper Due Wednesday at midnight</i>
16	Exam 4 (Weeks 13-15)/Final Exam: Friday, Dec. 16 10:15-12:15	

* **Note:** see Objectives for each topic for more detailed reading assignments.