



BIOLOGY 130
Introduction to Plant Biology
Fall Semester 2012

Course description: Biology 130 is a five-credit lecture and lab course that emphasizes the diversity, life cycles, structure, and function of plants. This biology course also introduces you to bacteria, fungi, and algae, and their relationships with plants and relevance to people and the environment.

GENERAL LEARNING OBJECTIVES

By the end of this course, you should be able to:

- Explain the basic features of cells, in particular, the unique features of plant cells.
- Explain how cells divide, how they express genetic information, and the basis of inheritance in whole organisms.
- Diagram the basic morphology and cellular anatomy of a typical plant.
- Explain the process and components of photosynthesis and how photosynthetic organisms play a role in global cycles.
- Give examples of how plants develop and grow regulate in response to their environment.
- Describe the key features of plants, fungi, algae, and bacteria as unique types of organisms. Explain how viruses are different from living organisms.
- Appreciate the importance of plants and plant products to humans.

Instructor:	Dr. Terese Barta
Office:	TNR 465
Phone:	715-346-4241
Email:	tbarta@uwsp.edu
Office Hours:	Tues 2-4 pm; Thurs 3-5 pm Also by appointment* or chance whenever I am not in class. My schedule is included in the lecture/lab schedule.

*Feel free to email me, but please include your available times.

Lecture (all sections): 11:00-12:15 T/R Sci A208

Lab section 5: 1:00-2:50 MW TNR 157

Lab section 6: 3:00-4:50 MW TNR 157

Exams: 6:00-7:30 pm, 9/27 (Thurs), 10/25 (Thurs), 11/20 (Tues)

Final exam: 2:45-4:45 pm, Tuesday, Dec. 18.

(no exception unless a student has more than two exams on that day of final)

Review sessions: 6:00-7:00 pm, 9/20, 10/18, 11/15 (Sci A208)

Textbook (required): *Plant Biology, 2nd Ed.*, by Graham, Graham, and Wilcox. Published by Pearson Prentice Hall, Inc. (rental from UC bookstore.)

(Did you know you can buy your textbook at a discount?)

Lab Manual: Essentials of Botany, 7th edition, Fall 2012 version, compiled and written by UWSP botany faculty. Required. Purchase at UC Bookstore by 9/5. Do NOT obtain a used copy.

Optional Lab Supplement: (choose 1)

Photo Atlas for Botany, 1998 by Perry and Morton, Wadsworth Publishing Company –or–
Photographic Atlas for the Botany Laboratory, 5th ed. By Rushforth *et al.*, (Morton Publishing Company)

(Optional but very useful; new or used copies can be purchased at DUC bookstore or from online sources such as Amazon.com).

“Clickers”

Student response units (“clickers”) will be used in this class.¹ Please obtain by Thursday, 9/6. Clickers can be leased from the Help Desk (LRC 023). Please bring your ID.

Help Desk hours: <http://www.uwsp.edu/IT/helpdesk/index.aspx>

DROP DEADLINES:

Last day to drop without a “W:” Thursday, September 13

Last day to drop the course: Friday, November 9

(See me no later than November 8 to get required signature)

Students with Learning Disabilities:

If you need special accommodations for exams due to a recognized learning disability, please consult disability services and notify me at least two weeks before the first scheduled exam.

Veterans: Thank you for your service. Please feel free to stop by my office if there is anything I can do to assist you.

Classroom Courtesies:

Please turn off your cellular phones or switch them to silent mode during class and leave them in your purse or backpack. If you must answer your phone, please leave the room to do so. Please do not use ipods/mp3 players or cell phones during class.

LEARNING RESOURCES

In addition to lectures and the text, the following resources are available to help you learn:

- Lecture supplements posted on the D2L (Desire2Learn) website for the course
- Open labs (Monday and Thursday evenings, 6-8 pm)
- Botany Lab website: <http://www.uwsp.edu/biology/courses/botlab/>
- Wisconsin Common Plant ID Website: <http://www.uwsp.edu/biology/courses/plantid/>
- **Free** Peer Tutoring program (dates and times to be announced; sign up at the Tutoring Learning Center in the library room 018)
- Your professor, that’s right, ME! I invite you to stop by to my office to discuss any of the material in class you aren’t sure of. That’s what office hours are for, and I am also happy to schedule time with you that fits your schedule.

¹ For more info on clickers here’s a helpful link:

<http://www.uwsp.edu/IT/Content/GetInformation.aspx?View=wmsFacView&Content=Clickers&SubTopic=xxn12102nxxStudentInformation>

In all honesty, this is a time-consuming and challenging course. While I cannot do your studying for you, I will do whatever I can to help you *learn how to learn*. If there is something I could do to assist you learning the material, please visit me during office hours. Just complaining to your classmates without sharing your concerns with me first is not productive.

GRADING COMPONENTS AND GRADING SCALE:

Your grade in this course is based on the percentage of points you earn based on the **total possible points** described below. You can estimate your grade status throughout the semester by adding the points you have and dividing them by the possible points that could be accumulated. Your percentage will also be updated in D2L on a regular basis.

A) Lecture exams + Final (450 points). There will be **three lecture examinations** given during the semester (each worth 100 pts, covering 8-10 lectures of material) plus a **final exam (150 points)**. Dates of exams and review sessions are listed on the course schedule. About 2/3 of the final exam will emphasize material from the last unit; however, there will be comprehensive questions on the exam that assess your general knowledge of botany from this course (~1/3). Exams will consist of a combination of multiple-choice and any combination of the following: fill-in-the-blank, definitions, labeling diagrams, matching, and short answer questions. The multiple choice part of the exam is scored electronically and the results are available from the Test Scores on the Web site: <http://testscore.uwsp.edu>. (Log on with your user name and email password).

B) Laboratory quizzes (250 points). The laboratory component of the grade consists of eight quizzes (7 are worth 30 points; the last one is worth 40 points). Lab tests will cover material from three labs (the last one, four), including visual recognition of specimens and/or results and analysis of lab experiments. Please refer to the lab schedule for the dates and material covered on each exam. Please note: if you are late for a test without a valid excuse, there will not be an opportunity to go back to questions you missed. Make up tests will be permitted only by prior arrangement for unavoidable circumstances. The format for the make up may differ from the regular test.

C) Lab reports (40 pts): one on the water potential lab (10 pts), and one from the trichome mass selection experiment carried out in lab (30 pts). Complete directions will be given in lab and posted on D2L.

D) Common plant identification exam (50 points). The exam, which will be given the last week of the semester, will consist of 50 specimens chosen randomly from the list (list is in the back of the lab manual). Two to four images will be shown of each plant. You only need to know the common name for the plant. Specimens are best viewed at the web site: <http://www.uwsp.edu/biology/courses/plantid/>.

E) Attendance and participation. (variable, not more than 10% of the course). These points will be gathered in lecture by using “clickers” to answer questions in class. It is important for you to bring your clicker to lecture every day in order to get these points. There will be no make ups on clicker points. There are opportunities to earn a few more points than are needed for full credit.

F) Miscellaneous assignments or enrichments. (Points to be determined, probably not more than 10 pts). At the beginning or end of some units, there may be a short introductory reading or Web assignment that provides the background material to help you understand the lectures better. The assignments will be posted on D2L and will be turned in by posting to a D2L drop box (NO EXCEPTIONS).

Please note: I reserve the right to add any assignments or clicker points I think necessary for the course if it is to your advantage.

Grading Scale:

Individual tests will not be assigned letter grades. Your grade in this course will be determined by dividing the total points earned by the total possible points to arrive at a percentage. The following scheme will be used for translating percentage into letter grades:

> 92% = A	87.5-89.9% = B+	77.5-79.9% = C+	67-69.9% = D+
90-91.9% = A-	82-87.4% = B	72-77.4% = C	60-66.9% = D
	80-81.9% = B-	70-71.9% = C-	< 60 % = F

If you are on the edge of a D+ and C- plan to repeat this course, please make an appointment with me.

To figure out if a certain grade is possible, take the number of points below (choose your grade), and subtract from it the number you have already. Take the resulting difference and divide the number of points still left to be earned.

$$A/A- = 720 \quad B-/B = 640 \quad C-/C = 560 \quad D = 480$$

EXAMPLE: You have a 70, 75 on the first two exams, and 40, 45, 35 on three lab quizzes. You have about a 76% (265/350). You want to know if you can still get a B/B- (80%):

$$800 - 350 = 450 \text{ points left in the course} \quad \text{Need: } 640/800 \text{ pts} = 80\% \text{ (B/B-)}$$

$$640 - 265 = 375 \text{ (the points you need from what is left to get a B/B-)}$$

$375/450 = 83\%$, the minimum score (%) you need on all the remaining tests. Yes, it is possible point-wise, but only if you can really commit the investment of time and effort.

In addition, your attendance in both lecture and lab will be an important factor in grading. There are no make-ups for the clicker quizzes given in lecture. In addition, **each unexcused absences from the lab will result in a 1% lowering of the grade.** Note: In order for the absence to be excused, it must be unavoidable (see below), and you must notify me in advance. Please do not ask me if we are “doing anything important” on a day you might want to skip class (for reasons like leaving early for a holiday break).

Having stated the importance of attendance, PLEASE DO NOT COME TO CLASS if you believe you have influenza or any other serious communicable disease. For more information about influenza and how to protect yourself, visit www.flu.gov.

GENERAL POLICIES

Attendance and make-up exams. It is expected that you will attend all the lecture and laboratory sessions. You will be expected to stay in lab for the full two hour period unless excused early by instructor. Because of tight room scheduling and the preparation time involved in setting up labs, there will be **no make-ups for missed labs**. However, you know you must be absent, please check with me ahead of time about the possibility of sitting in during another lab section (even another professor's). If you miss a lab, you will be responsible for getting the material on your own from open labs. Also, as noted above, **unexcused absences from the lab will result in a 1% lowering of the grade**. If you a make up lab exam is allowed, the format may be different than the one given in class. Absences due to participation in academically sanctioned events such as athletic events, academic conferences, or music competitions will be considered excused absences if written documentation is provided in advance.

Make-ups on lecture exam will be permitted **ONLY** for unavoidable emergencies provided that you have called in advance. If you cannot call, please have someone else call! Acceptable excuses for missing an exam include²:

- personal injury, extreme illness or hospitalization, or that of an immediate family member (written verification needed from health care worker, parent, or residence hall representative)
- death in the immediate family (verification required)
- verifiable court appearance or jury duty (please provide documentation)
- participation in a university-sponsored extracurricular activity (e.g., conference , competition, or athletic event—please provide verification)

The make-up must be scheduled to take place within two class days of the original test date (except in cases of hospitalization). The format may differ from the original exam.

Late Assignments. The following deductions will be applied to assignments that are turned in late: 1 day, 20% of maximum points; 2 days, 30% maximum points; 3 or more days, 50% maximum points. A weekend will be included as two days. Note: some assignments will not be accepted late.

Technology Issues. I find technology can be helpful in the learning process, but I am also aware it can sometimes cause problems. I am not an expert at solving all possible user problems. If you are having email problems, please contact IT (Information Technology) Help Desk at 346-4357 or check the IT home page to link to “Account Problems.” If you have trouble uploading an assignment to D2L, email me immediately and attach the assignment. You will get full credit if (and only if) I receive the assignment before the due date and time.

² Oversleeping is not a valid excuse for missing class, a lab test, or any exam. Neither is purchase of a plane ticket for a trip. Please do not ask me to allow you to take an exam early so that you can leave early for a holiday or family vacation.

Academic Integrity. You are encouraged to work and study with each other in order to get the most out of the course. Lab experiments often involve working in pairs or groups. However, you are expected to work independently on assignments and examinations.

Standards and Disciplinary Procedures for UWSP can be found at:

<http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/SRR-2010/rightsChap14.pdf>

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.
- (g) Violates electronic communication policies or standards as agreed upon when logging on initially (See ^[11]_[SEP]uwsp.edu/it/policy).

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.

Plagiarism or other forms of academic misconduct will not be tolerated. If any student is found cheating or aiding another student in cheating, I will initiate disciplinary action in accordance with section 14.04 of the UW System Administrative Code. Penalties may range from a zero on that exam to a failing grade in the course.

THE TWO MOST FREQUENTLY ASKED QUESTIONS (FAQs):

FAQ#1: DO I “CURVE” EXAMS?

ANSWER: I do **not** curve exam scores for the following reasons:

- Most student think curving means adding points to everyone’s exam. That is NOT curving.
- Curving really means is that your grade is based on your performance relative to peers and as a result, grading standards fluctuate from test to test.
- Curving discourages students from helping each other learn because students who achieve higher scores on tests in effect "lower" the grade of their peers.
- Curving is only valid when there is a bell-shaped distribution of scores. It assumes the same number of students above and below the class average. This distribution almost never occurs.
- Curving actually limits the number of students who can get an "A" to only the top 7% of the class. (the next 24% must receive a "B," the next 38% must receive a "C," etc.). This also means the *bottom 7% must fail!*

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For these reasons, I employ a mastery learning model in which all students have the same opportunity to get a good grade, and are evaluated on the same standard, which doesn’t change from test to test.

FAQ#2: CAN I DO EXTRA CREDIT TO RAISE MY GRADE?

ANSWER: I do NOT offer extra credit assignments (such as papers, projects, etc.) on an individual basis to students trying to boost a low grade. If you’re having trouble with the material you’re already expected to do, you should not be asking for additional work. Students who ask for extra credit are usually asking for something “easy” to replace something “hard” like learning the regular material. It is better to concentrate on your study habits and test-taking skills rather than look for an "easy fix." Here’s another way to look at it: Would you trust a nurse, doctor, dentist, veterinarian, auto mechanic, or airline pilot that only passed his or her courses because of extra credit? (I know I wouldn’t!) It is also unfair to offer some students grade-boosting opportunities without extending the option to all students. Everyone’s grade should be based on the same criteria. However, having just said that, there might be a few opportunities offered to the entire class to earn “enrichment” points from a course related exercise or academic enrichment activity such as attending a seminar or research presentation.

If you are having trouble in the course, don’t wait-- GET HELP EARLY! Please come see me during office hours to discuss options for improving your grades other than doing "extra credit."

HOW CAN YOU DO WELL IN THIS COURSE?

- **Come to class (on time) everyday.** Be present, mentally as well as physically. Put the cell phone out of reach while in class. Do whatever it takes to stay awake and participate fully. Don't rely on someone else's notes to learn what is important.
- **Preview the material before coming to class.** Skim through the relevant part of the textbook on that material, paying attention to headings and figures.
- **Take good notes.** Develop a good shorthand technique that works for you so you can concentrate on what's being said. Leave lots of space for adding things and clarifying during review.
- **Study every day.** Short term memory lasts only about a day. Waiting more than 48 hours before reviewing notes means starting the learning process all over again instead of building on it. Plan to spend at least an hour each day for studying this class. *Schedule your study time.*
- **Study your notes when they are fresh,** i.e., as soon as possible after class even if only briefly (to get material from short-term memory into long-term memory).
- **Maximize your productivity.** Research has shown that people learn better by studying for short intervals frequently compared to longer periods less frequently). Study intensively, limiting distractions, for 25-30 minutes followed by a short (5 min max) break. Don't try to study just after waking from a nap (your brain needs some time to wake up).
- **Study in an active manner.** Don't just read your notes--analyze them; quiz yourself, make comparative tables, term lists, one-page summaries, etc. Find some way to *make the knowledge your own*. One way to review is to recopy your notes. One technique I do not recommend is note cards because they fragment information, not connect it.
- **Analyze your notes for the most important points.** Use the 80/20 rule. Determine what is the most important 20% of the material first. Get the main points and concepts down, then add additional levels of detail.
- **Use your textbook** for clarification and to study illustrations. Some people may learn by thoroughly reading the text, but remember, the tests are based on lecture notes. There is more in the text than what I cover, and I may cover topics that are not in the text. Be selective.
- **Find a study group or study partner.** You can quiz each other and help each other learn. Participate in Group Tutoring.
- **Spend your time in lab wisely.** Really look at the material and try to understand it. Think about the experiment you are doing. Ask questions. Don't just look for ways of getting out of class early. Use extra time to review old material. Don't rely too much on the black & white lab manual diagrams. You need to review the actual specimens to do well on the lab tests.
- **Make use of my office hours.** If you need help, get it *right away*. You're always welcome to come in and ask me questions, or have me ask you questions to assess your understanding.
- **Put your cell phone away while you are studying.** Texting and calling while studying interferes with your ability to concentrate and learn.
- **Keep a regular schedule, get enough sleep, eat a sensible diet, and stay sober. Seriously.** An all too common consequence of alcohol use is the inability to keep up on academic responsibilities. Research shows a strong negative correlation between alcohol and grades. Students with D/F averages consume 6.4 more drinks per week than "A" students. And even "B average" students drink an average of 1.1 more drinks per week than A students.

SUCCESS IS A CHOICE!

STUDENT COMMITMENT CHECKLIST

I am committed to doing well in this class and therefore I have...

- | | | |
|---|------------------------------|-----------------------------|
| accepted that I am responsible for my own learning and performance. | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| made coursework a priority for my time and effort. | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| arranged a schedule to allow at least 8-10 hours of studying/work per week. | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| done the assigned readings before class. | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| attended every lecture, staying awake and engaged. | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| asked in-class questions to evaluate my grasp of the material. | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| made the fullest possible use of lab time, including review. | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| used the textbook to answer questions or clarify notes. | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| reviewed my notes on a daily basis. | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| used active studying techniques beyond just reading my notes. | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| come to office hours for help when I needed it. | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| participated in group tutoring or other type of study group. | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| made use of resources such as open lab. | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| read over lab exercises before coming to lab. | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| studied for exams at least a week in advance. | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Additional needs? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

My Master Schedule

	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
7-8	← Get up, dress, have breakfast →						
8-9							
9-10							
10-11							
11-12		Bio 130 Lect 11:00- 12:15		Bio 130 Lect 11:00- 12:15			
12-1							
1-2							
2-3							
3-4							
4-5							
5-6							
6-7							
7-8							
8-9							
9-10							
10-11							
11-12	← Relaxation time, Goto Bed →						

Make weekly copies of master schedule for weekly changes; Also create a daily schedule as a portable game plan.