

Syllabus BIOL 3139 – 001 (21322)

Plant Biology Laboratory

Spring 2025

Meeting Times: Mondays 2:00 – 4:50pm

Location: Biology, Education, and Psychology (BEP) Building room 128

First Day of Class: Monday, January 13th

Last Day of Class: Monday, April 21st

Date to Withdraw Without Penalty (Census Date): Monday, January 27th

Spring Break (No Classes): Monday, March 17th – Friday, March 21st

Instructor:

Dr. Joshua Banta

Director, Center for Environment, Biodiversity, and Conservation

Professor, Department of Biology

Office: Hudnall, Pirtle, Roosth Building (HPR) Room 129

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Email: jbanta@uttyler.edu

Office Hours: MWF 12:10pm – 1:10pm, or by appointment, or call my office.

Course Description: This laboratory course focuses on plants and on how we can scientifically study the natural world using them. The goals of this laboratory course are for students to be able to recognize different types of plants and different plant tissues, and to be able to test scientific hypotheses using plants. The curriculum will emphasize the scientific method and hands-on activities.

Student Learning Objectives: By the end of the class, you should be able to...

- 1) Understand what a hypothesis is, and formulate your own hypotheses
- 2) Understand the steps of the scientific method and be able to follow them systematically
- 3) Present scientific results in a concise and informative format
- 4) Recognize different types of plants and different plant tissues, at different points in development

Required Materials (Only Available at the UT-Tyler Bookstore):

- Plant Biology Laboratory Manual, published by Prentice Hall (by Almuth Tschunko).

Grading:

Participation: 5% of the final grade when added together

Lab worksheets: 15% of the final grade when added together

Lab reports: 20% of the final grade when added together

Exam: 25% of the final grade

Quizzes: 10% of the final grade when added together

Plant Press Project: 25% of the final grade when added together

Total: **100%**

90% – 100% = A

80% – 89.999% = B

70% – 79.999% = C

60% – 69.999% = D

59.999 or lower = F

Final overall scores will not be rounded up to the next highest letter. For instance, an 89.999% will be a B and not an A.

Participation:

- This is not an online or a hybrid course. You are expected to be at class on time for every class, and you are expected to stay the whole time. In-class participation is 5% of your grade.
- I will take in-person attendance during every class period. You are not eligible to participate in the course if you are not present.
- You are expected to stay focused during class, or else you will be penalized up to a zero for participation for the day, at my discretion. No warning will be given beforehand, and no notification may be provided afterwards. The following are examples where you may be penalized:
 - Working on any other courses during class time
 - You are not allowed to work on the plant biology lecture course during our class time
 - Studying for other exams, for instance studying for organic chemistry or biochemistry exams
 - Streaming movies or other videos not directly related to the content we are working on
 - Watching social media (Instagram, Snapchat, TikTok, YouTube)
 - Sleeping
 - Not doing the required work or not paying attention for some other reason
 - Arriving late
 - Leaving early

Excused absences:

- I may excuse you from class for the following reasons:
 - Fever or chills, shortness of breath or difficulty breathing, nausea or vomiting, or diarrhea.
 - A sporting or other university-related event
 - The death of a close family member
- Take into consideration:
 - You must tell me right away (on the same day).
 - I will require official documentation, to my satisfaction and at my discretion. Without documentation, absences will not be excused and will result in zeros for participation and for other assignments including exams.
 - This means that you must go to the doctor if you are sick
 - The UT Tyler student health clinic has daily walk-in appointments and does not require health insurance
 - <https://www.uttyler.edu/student-life/health-wellness/university-health-clinic/>
 - Call them beforehand
 - Examples of potentially acceptable official documentation include:
 - A doctor's note directing me to excuse your absence and listing the specific dates covered
 - An official correspondence from the university directing me to excuse your absence and listing the specific dates covered
 - A police report containing your name and the relevant dates
 - A letter or an email from a funeral home listing the deceased person and the date of the funeral
 - Examples of unacceptable documentation include:
 - Photos of yourself holding a thermometer and/or looking sick
 - Airline tickets
 - A doctor's note that you filled out yourself, whether in whole or in part
- You are not excused from class for these reasons:
 - Attending another instructor's or TA's or SI leader's office hours or study sessions
 - Taking a make-up exam or an exam that is scheduled by the testing center
 - Making up a laboratory
 - Attending an advising appointment (even if they are hard to get)
 - Living far away from campus
 - Obligations outside of class such as your work schedule
- If you miss more than 3 classes, whether excused or unexcused:
 - You may have the option to drop or withdraw from the course. But this is at the discretion of the university, not at my discretion
 - If you are not given the option to drop or withdraw from the course, you will generally receive an F as your final overall letter grade, regardless of your overall performance in the course.
 - This F will not be changed in the future, except according to the university's regular grade replacement policy.
 - For more information: <https://www.uttyler.edu/current-students/registrar/policies/repeating-courses-grade-replacement/>

- I will not allow a student to pass the course with more than 10 absences, excused or other otherwise, unless I am directed to do so by the Student Accessibility and Resources (SAR) office or by other university officials.
 - If you have a chronic condition or a disability that may require you to miss more than 10 classes, please work with the Student Accessibility and Resources (SAR) office to come up with a plan and to direct me as to what accommodations I should provide.
 - <https://www.uttyler.edu/academics/success-services/disability-services/>
 - Phone number: 903-566-7079
 - Email: saroffice@uttyler.edu
 - If you are pregnant, resources are available, and the university will direct me as to what accommodations I should provide. But you must opt into this system by contacting the Student Accessibility and Resources (SAR) office and reporting yourself pregnant. The university will maintain the confidentiality of student records and documentation to the extent possible under state and federal law.
 - More information: <https://uttyler.smartcatalogiq.com/en/uttyler/ut-tyler-hop/series-500-student-success/5-14-3-student-pregnancy-and-parenting-nondiscrimination/>
 - Without direction from the SAR office, I must hold you to the same attendance standards as all other students.

Make-up policy:

- If you are not excused from lab, you will not be allowed to make up the assignments and you will receive zeros for those assignments (including the participation points) that cannot be changed.
- If you are excused from lab, there will be a make-up lab on Thursdays from 2 – 4:50pm. Please let me know if this time slot will not fit your schedule.

Correspondence: You are required to activate the email address that is listed for you on Canvas and to check it regularly. You must check this email address at a minimum every Monday morning, for the entire duration of the semester, for any correspondence from me. You are also required to check the Canvas site for this course every Monday morning as well, for the entire duration of the semester, for any announcements. You will be held responsible for any information, including deadlines, that I communicate to you via your email address listed on Canvas and/or through the announcements on the Canvas course site. The information could come from one or both places (email and/or Canvas announcements), so you must check **both** places on the schedule indicated above.

Copying: You can discuss your assignments with your friends or classmates whenever you want and you can discuss anything you want. But you, alone, are expected to write everything that you submit, by yourself, and everything that you submit must be in your own words. It is not allowable to hand in something as a group, or for all members of a group to each hand in the same thing. Any copying whatsoever from others, whether they are part of your study group or not, is entirely prohibited. You are not allowed to pass around your submitted assignments or drafts to anyone else to look at, for any reason, and you are also not allowed to look at submitted assignments or drafts of anything written by anyone else. These prohibitions apply to any materials submitted by students in previous years' classes as well. These prohibitions also apply to any material from any source (newspaper, TV, website, professional journal, magazine, etc.) Simply putting everything in quotation marks does not get around any of these prohibitions, because quoting is not allowed either, no matter what the source is! If you hand in the same assignment as someone else, or if it is copied from someone else, even a little!, or if the assignment contains any quoting from any source, with or without quotation marks, you will receive a zero for the assignment and the person you copied from will receive a zero as well. I will not seek to determine who copied from whom; all persons with similar content will have the same penalty.

Quoting: As mentioned above, quoting is never allowed in this class, even if you use quotation marks. Everything must be written in your own words, not those of your study group or of anyone else.

Citations: When writing your lab reports, you will be consulting other sources. There will be strict rules about what other sources are allowed and how to cite these sources in your paper. The rules about copying will apply as well, and so will the penalties, and this includes the rules forbidding quoting, even with quotation marks. More detailed rules for the lab reports will be provided separately.

Turnitin: All assignments and appeals that you hand in will be checked for copying using a program called Turnitin. This software checks the internet as well as every other student's work who has ever taken this course or any other course. It also checks against any papers that are secretly traded or sold over the internet. It uses artificial intelligence to detect copying. The bottom line is that if you copy someone else's or somewhere else's writing, even a little, the software will catch you and it will give me the names of the other persons and/or the other copied sources.

Appeals: If you think something was scored incorrectly, you will need to follow the following procedure:

- Write a few sentences explaining why you think you should have received a different score.
- Appeals will only be accepted through Canvas, and must be turned in no later than one week after the assignment was graded. Go to the course site and select "Modules" → "Appeals."
- Failure to follow these rules means that your appeal will not be considered.
- The only reasons I will give back points are if: (1) I made a math error; or (2) I decide that your answer was factually correct and followed all applicable rules indicated in the syllabus and elsewhere. By "factually correct," I mean that your answer was really true about the world. Please also note that I, alone, will determine what is factually correct and what is not.
- The following are **not** valid reasons for getting points back: you feel that I explained something badly, you misunderstood what I was saying, or you feel that my PowerPoint slides or other materials were wrong or unclear.
- Please note that I cannot discuss anyone else's scores with you because of privacy reasons, even if you say that you have their permission, and even if they say that I have their permission. I lack the legal expertise to allow someone to waive their privacy privileges, even if they want me to, and even if they have already shared their scores with others on their own.
- Appeals can result in a lower score, the same score, or a higher score than you originally received. Specifically note that I reserve the right to **lower** your score if I re-evaluate it and deem it appropriate.
- The rules about copying apply to appeals as well. See above.

Privacy: Students do **not** have the right to be "anonymous" whether classes are in person or online, or for all-online classes. All discussion will take place within Canvas, and your names will be displayed.

Artificial Intelligence (AI): UT Tyler is committed to exploring and using artificial intelligence (AI) tools as appropriate for the discipline and task undertaken. We encourage discussing AI tools' ethical, societal, philosophical, and disciplinary implications. All uses of AI should be acknowledged as this aligns with our commitment to honor and integrity, as noted in UT Tyler's Honor Code. Faculty and students must not use protected information, data, or copyrighted materials when using any AI tool. Additionally, users should be aware that AI tools rely on predictive models to generate content that may appear correct but is sometimes shown to be incomplete, inaccurate, taken without attribution from other sources, and/or biased. Consequently, an AI tool should not be considered a substitute for traditional approaches to research. You are ultimately responsible for the quality and content of the information you submit. Misusing AI tools that violate the guidelines specified for this course (see below) is considered a breach of academic integrity. The student will be subject to disciplinary actions as outlined in UT Tyler's Academic Integrity Policy.

For this course, AI is permitted only for specific assignments or situations, and appropriate acknowledgment is required.

Quizzes: This is how you will receive your weekly participation score. The quizzes will be presented to you at the beginning of class on the projector screen. You will write your answers on a separate sheet of paper and turn in your answers. From your submission, you will receive a quiz score and the physical document will be used to record your attendance for that week. Tentatively, there will be a quiz every week that we meet for lab. Together with all the other quizzes, in all the other weeks, this will be 10% of your final grade when they are all added together.

Worksheets: Most laboratory exercises will have a worksheet due at the end of each lab period. Each one will be worth 100 points. You must do your own work! Every person is expected to answer all of the questions on their own, in their own words. You are allowed to work together and decide what answers you think are correct, but then each person must write down the answers on their own and in their own words. The rules about copying and quoting apply. You are not allowed to share your answers with others in your group and ask them to change the wording. This is still considered copying. Together with all of the other worksheets, in all the other weeks, this will be 15% of your final grade when they are all added together.

Lab Report: There will be two lab reports during the semester, worth 100 points. The format of the lab reports will be explained in lab. Please follow this format carefully. The goal is to write a formal scientific paper where you set up the hypothesis, explain your methods, concisely present your results, and discuss your findings as they relate to the hypothesis. Just like the worksheets, each person is expected to write their own lab report, in their own words. You are allowed to work together and come up with answers together, but each person must write everything out on their own and in their own words. People who hand in identical or nearly identical lab reports will only receive partial credit (a maximum of 100 points divided by the number of identical lab reports). You are not allowed to share your lab report with others in your group and ask them to change the wording. This is still considered copying.

Grade grubbing: Grade grubbing will not be tolerated. I have quoted some relevant passages below about grade grubbing. They come from an excellent website that I recommend you read:

<https://marktomforde.com/academic/undergraduates/GradeGrubbing.html>

Grade Grubbing (also called "grade begging" or "grade lawyering") is the act of a student going to a professor and asking for a grade to be raised for no legitimate reason. Often the student argues that they feel their work was "not graded fairly", or they made only a small mistake and should get more points, or they knew what they were doing even though they gave the wrong answer. Grade grubbing often involves asking for detailed justification of why certain points were taken off, questioning subjective aspects of grading (e.g., Why is this problem worth 5 points and this one worth 7 points?), and wearing down the professor by arguing, begging, and pleading until they finally relent and increase the student's grade.

...In addition, grade grubbing presents a very negative image of you: it indicates that you do not care about learning the material, and that all that matters to you is your grade in the class, even if you get that grade unfairly or ***when you do not deserve it.***

Grade grubbing greatly affects the way your professors view you and the way they will treat you in the future. If you challenge your grade without a good reason, you will probably not be remembered fondly when you ask that professor for a recommendation...

...If an obvious error has been made in grading, such as points added incorrectly or a clearly correct answer was inadvertently marked wrong, then by all means talk to the professor and they will likely change your grade immediately. Likewise, if you don't understand why you lost points, or want clarification (not justification) of the grading, most professors are happy to talk with you. ***And, if you want to discuss the material, learn what you did wrong, or discuss how to do better on future work, most professors will probably be thrilled to speak to you about this.***

However, if you are going to approach a professor who has spent their life studying, teaching, and doing research on a particular topic, and then argue that their decision of how to grade or award points should be changed to what you say it should be, then you better be prepared with a strong and convincing argument.

Source: <https://marktomforde.com/academic/undergraduates/GradeGrubbing.html>

Please do not ask me to raise your grade when you have not earned it, even if you really need or really want a higher grade. This presents a very negative picture of you. I will not honor those requests. Below is a made-up example:

Dear Dr. Banta, I'm writing about my overall final score of 78.9% to see if it could be adjusted to a B. While I accept that it is my fault, I really need a B to maintain a 3.0 GPA and to keep my scholarships. Thank you for considering my request. Sincerely, _____

Academic integrity: Cheating or any other type of academic misconduct will be reported to the university administration, and at minimum will result in failure of the course.

Weekly Lab schedule (subject to change):

Topic	Lab Manual Chapter	Calendar	Date
Intro/Plant Taxonomy	Handout	Week 1	Jan. 13
Seed Germination	Ch. 6	Week 2	Jan. 27
Thigmomorphogenesis	Ch. 7	Week 3	Feb. 3
DNA Extraction/Nanodrop	Handout/Ch. 4	Week 4	Feb. 10
Tree Investigations (twigs)	Ch. 9	Week 5	Feb. 17
Taxonomy		Week 6	Feb. 24
Tree Investigations (stumps)	Ch. 9	Week 7	Mar. 3
Roots and Leaves	Ch. 10 & 11	Week 8	Mar. 10
Diversity: Seedless Plants	Ch. 16	Week 9	Mar. 24
Diversity: Gymnosperms	Ch. 17	Week 10	Mar. 31
Finish herbaria		Week 11	Apr. 7
Diversity: Flowering Plants (Reproduction)	Ch. 18	Week 12	Apr. 14
Diversity: Flowering Plants (Seeds and Fruits)	Ch. 17 & 18	Week 13	Apr. 21

Student Resources and University Policies: These can be found on the Canvas course page under “Modules” → “Course Information.”