Special Note: The format of this course is subject to change, depending on the situation with COVID. Presently the format is entirely in-person. It is possible that we may have to take the course partially or entirely online in the future, at least for certain periods of time.

Syllabus

**BIOL 3139-001 (20490)**
**Plant Biology Lab**
**Spring 2022**

**Meeting Times:** Mondays 2:00 – 4:50 pm  
**Location:** Biology, Education, and Psychology Building (BEP), Room 128  
**First Day of Class:** Monday, January 10th  
**Last Day of Class:** Friday, April 22nd  
**Final Exam:** There is no laboratory practicum or final exam  
**Date to Withdraw Without Penalty (Census Date):** Monday, January 24th  
**Martin Luther King, Jr. Holiday (No Classes):** Monday, January 17th

**Instructor:**  
Dr. Joshua Banta  
Director, Center for Environment, Biodiversity, and Conservation  
Professor, Department of Biology  
Office: Hudnall, Pirtle, Roosth Building (HPR) Room 129. NOTE: Since this is an all-online class, office hours will be held over the phone, not at my office.  
Phone: (903) 565-5655  
Email: jbanta@uttyler.edu  
Office Hours: MWF 10:00 – 11:00 am or by appointment or simply call my phone number.

**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 Textbook (Only Available at the UT-Tyler Bookstore):**  
Grading:
Video Quizzes and In-Person Participation: 33% of the final grade when added together
Lab worksheets: 33% of the final grade when added together
Lab report: 33% of the final grade when added together
Total: 100%

100 – 90% = A  
89 – 80% = B  
79 – 70% = C

69 – 60% = D  
< 60% = F
COVID precautions:

- Quoting from the university’s website: “Face coverings are expected indoors. Per CDC guidelines, they are strongly encouraged for those who are not vaccinated.”
  - https://www.uttyler.edu/coronavirus/
- Quoting from the Center for Disease Control’s (CDC’s) website: “People who are fully vaccinated should wear a mask indoors in areas of substantial or high transmission.”
  - Community spread levels of COVID in our area can be seen here:
- Face masks are safe and effective at slowing the spread of COVID.
  - https://www.youtube.com/watch?v=2JN5_8I0cU
  - https://uihc.org/health-topics/do-face-masks-make-you-retain-carbon-dioxide
- Quoting from the university’s website: “We strongly encourage all students, faculty and staff to get vaccinated [against COVID].”
  - https://www.uttyler.edu/coronavirus/
  - The COVID vaccines are safe and effective at preventing serious illness. The Pfizer and Moderna mRNA vaccines have been under development for almost 30 years.
    - https://dshs.texas.gov/covidvaccine/
    - https://www.nature.com/articles/d41586-021-02483-w

Attendance and make-up policy: 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 entire time. If you have obligations that keep you from coming to lab, on time, on a regular basis, and staying the entire time, then you may need to drop the course. I will take in-person attendance during every lab period (unless you are sick). There will always be make-up work to do at home if you miss class, so communicating with me in a timely manner is very important.

Excused absences:

- Please do not come to class if you have any of the following symptoms, even a little bit, even if you think it’s only allergies, even if you think it’s just a little cold, or even if you think it’s just something that you ate:
  - Fever or chills
  - Cough
  - Shortness of breath or difficulty breathing
  - Fatigue
  - Muscle or body aches
  - Headache
  - New loss of taste or smell
  - Sore throat
  - Congestion or runny nose
  - Nausea or vomiting
  - Diarrhea
- You are automatically excused from class if you have any of the symptoms listed above, as long as you tell me right away (on the same day).
  - No doctor’s note is required and no proof is required, but you must tell me right away (on the same day).
You will still have work to do at home! And there will be strict deadlines.

- If you wait to tell me about it until after that day, you will not be allowed to make up the missed assignments and you will get zeros for that day and the zeros cannot be changed.

- If you provide care for a loved one (a spouse, a (grand)parent, or a child) and they have fallen ill right before class, then you may be excused from that class period, at my sole discretion.
  - You must tell me right away (on the same day).
  - You will still have work to do at home! And there will be strict deadlines.
  - If you wait to tell me about it until after that day, you will not be allowed to make up the missed assignments and you will get zeros for that day and the zeros cannot be changed.
  - You may be excused from only that one class period, in order to allow you to make other arrangements that will allow you to come to the next class period and to continue attending class from there on out.
    - If you have a loved one with a more chronic or long-term illness that keeps you from coming to class on a regular basis, then you may need to drop the course, or you may need to take an incomplete grade and finish the course later.

- I may excuse other absences that are not due to illness, at my sole discretion. Valid excuses may include:
  - A sporting or other university-related event
    - A note from a university official or other official documentation is required
  - A death in the family
    - Some form of documentation to my satisfaction is required.
  - A car breakdown that occurs directly on the way to class or on the night before class.
    - Documentation is required, such as:
      - A bill from a mechanic’s shop
      - A video from your phone showing that the car has just broken down
      - A police report showing that you were just involved in an accident on the way to class or on the night before class.
      - Routine vehicle maintenance, such as an oil change, is not excused, even if the maintenance is overdue.
      - Car repairs, even urgent ones, are not excused, unless the car suddenly stops running on the day of class or on the night before class and the car wouldn’t move.
      - Beyond an immediate car breakdown that occurred on the day of class or the night before class, the lack of a dependable vehicle is not an excuse to miss class.
        - If your car dies, you are expected to make alternate arrangements right away (such as procuring a rental car, arranging a carpool, or taking public transportation) and to be able to attend the next class period. Otherwise, you will receive a zero for all assignments for the next class period and the zeros cannot be changed.
        - Future classes will not be excused while you wait for repairs to your vehicle, even if the mechanic’s shop is backed up or if it takes longer than expected.
  - Attending a wedding
    - I may allow no more than one day of excused absence to attend a wedding, at my sole discretion. Documentation to my satisfaction is required and you must let me know far (at least a week) in advance.

- Simply being concerned about catching COVID, if you yourself do not have it and if you do not have any symptoms of it, does not count as a valid excuse for missing class.

- If you have a disability that prevents you from attending class on a regular basis, you must document your disability right away through the Student Accessibility and Resources (SAR) office. They will direct me as to how to best accommodate your disability.
  - Their phone number is 903-566-7079 and their email address is saroffice@uttyler.edu.
  - Until the SAR office reaches out to me, I am required to insist on your attendance along with everyone else, and I must give you the same penalties for missing class that I give to everyone else.

**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, Wednesday, and Friday 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, Wednesday, and Friday 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.

**Due Dates and Deadlines:** You are required to have this course visible in your calendar on Canvas. To do so, make sure the box for the course has a check mark. You will be held responsible for all of the due dates and deadlines for this course that are indicated in your Canvas calendar.

**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.

**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.

**Unicheck:** All assignments and appeals that you hand in will be checked for copying using a program called Unicheck™. 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.
Weather and/or closures: In the event of weather-related or other closures, the course will proceed entirely online instead. Deadlines will not be altered except under extreme circumstances at my discretion. The bottom line is that, even if the university gets closed, this course will always stay “open” as originally scheduled.

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.
**Weekly Lab schedule** (subject to change):  

<table>
<thead>
<tr>
<th>Topic</th>
<th>Lab Manual Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>Ch. 1</td>
</tr>
<tr>
<td>Microscopy and Plant Cells</td>
<td>Ch. 2</td>
</tr>
<tr>
<td>Photosynthesis</td>
<td>Ch. 3</td>
</tr>
<tr>
<td>Seed Germination</td>
<td>Ch. 6</td>
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<tr>
<td>Plant Development</td>
<td>Ch. 7</td>
</tr>
<tr>
<td>Tree Investigations</td>
<td>Ch. 9</td>
</tr>
<tr>
<td>DNA in Plant Cells</td>
<td>Ch. 4</td>
</tr>
<tr>
<td>Leaves and Roots</td>
<td>Chs. 10 and 11</td>
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<tr>
<td>Diversity: Seedless Plants</td>
<td>Ch. 16</td>
</tr>
<tr>
<td>Diversity: Seed Plants</td>
<td>Ch. 17</td>
</tr>
<tr>
<td>Diversity: Flowering Plants (Reproduction)</td>
<td>Ch. 18</td>
</tr>
<tr>
<td>Diversity: Flowering Plants (Seeds and Fruits)</td>
<td>Ch. 18</td>
</tr>
</tbody>
</table>
**Video Quizzes and In-Person Participation:** This portion of your grade is a combination of your scores on quizzes, which you will take at home, and in-person participation, which you will earn during class.

The quizzes will be embedded into pre-recorded videos on Canvas. In other words, you will take the quizzes as you watch videos. The quiz questions will automatically pop up on your screen as you go along. The due dates of the quizzes will be indicated in your Canvas calendars. The videos with the embedded quizzes will be available at least one week before the due dates. The quizzes will tentatively be due every Sunday evening throughout the entire semester. There will almost always be multiple videos with quizzes to watch each week.

I will be taking in-person attendance every week (unless you are sick, in which case you are excused). Your weekly in-person participation scores will come from (a) showing up to lab in person, (b) being on time, (c) staying the entire time, (d) working very carefully on the assignments during the lab period, (e) cleaning up to my satisfaction when you are done, and (f) checking with me before you leave. Failure to follow these rules to my satisfaction will result in lower participation scores.

You will be excused from in-person participation if you are feeling sick (as long as you tell me right away), and you will be given make-up assignments instead.

The video quizzes combined with your participation scores will be 33% of your final grade when they are all added together.

**Worksheets:** Most laboratory exercises will have a worksheet that is due a week after lab. Each one will be worth 100 points. Follow the instructions I provide to you in the videos, and then use the link on Canvas to turn it in before the due date/time. 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 33% of your final grade when they are all added together.

**Lab Report:** There will be one lab report. The format will be explained in lab. Please follow this format carefully. There will be additional assignments as part of the lab report that you will complete along the way that will count towards your lab report grade. You will be collecting data and writing in the style of 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. The rules about copying and quoting apply. 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. All of the lab report points will be 33% of your final grade when they are added together.
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://www.math.uh.edu/~tomforde/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
**Student Resources and University Policies:** These can be found on the Canvas course page under “Modules” ➔ “Course Information.”