

Biology 1110L Fall 2023 Syllabus



Course at a glance
Biology for non-majors lab, section 501
Tuesdays, 12:00-2:45
Valencia Arts and Sciences room 135

Welcome to biology for non-majors! This course is an overview of biological principles and laboratory techniques important for non-majors to gain an understanding of science and the living world around them. *Credit is not applicable toward a biology major or minor.*



Course Learning Objectives:

- 1.) Students will employ critical thinking skills to judge the validity of information from a scientific perspective (Lab 1, 12).
- 2.) Students will use the scientific method to formulate questions and develop testable hypotheses (Lab 1, 2, 4, CURE).
- 3.) Students will be able to use laboratory equipment to collect relevant, quality data (Lab 2, CURE).
- 4.) Students will recognize biodiversity in different ecological habitats and communities of organisms (Lab 7, 8, 9).
- 5.) Students will be able to communicate effectively about scientific topics and ideas (all).



Instructor: Ben Flicker, Ph.D.

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Email and Canvas mail are the best contact methods for me.

Drop in hours*:

Mondays: 10:30-12:30

Tuesdays 10:00-10:30

Wednesdays: 10:30-12:30

Thursdays: 12:00-1:30

*And really, anytime my door is open outside of these times.

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Course Webpage:

We will be using the Canvas platform this year, canvas.unm.edu. Our class will make some use of this, though there will not be any required information or assignments provided only there. You will be able to find documents like the lab activities and exam study guides in the 'files' tab. Grades will be posted here as well. Finally, the syllabus with schedule will be found here.

Textbook:

There is **No** lab manual for this class. The weekly lab activities will be provided for you by your instructor. Digital copies will also be made available on the course Canvas page.

Course Materials: You are required to bring a notebook of unlined paper to keep as a lab notebook. You will turn this in regularly for your participation points, so if you obtain one with perforated pages you can submit your work without submitting your entire notebook. I also recommend you work in your notebook primarily in pencil. I will bring colored pencils if you want to get fancy (optional).



Hi all,
Welcome to biology 1110L! I am a molecular and evolutionary biologist, specializing in plant evolution and systematics. Currently, my research interests include systematics of Piñon pine in New Mexico as well as the microbial diversity in the Middle Rio Grande. When I am not working, I love music and running. I am excited to work with you all this fall!

Tips for Success in this Course:

- Actively and conscientiously read and complete each lab exercise.
- Read over the appropriate lab exercises as well as your results to prepare for the quizzes and exams.**
- Actively participate in your group.
- Communicate with instructor in the case of absence.



COVID-19 Health and Awareness: UNM is a mask friendly, but not a mask required, community. To be registered or employed at UNM, Students, faculty, and staff must all meet UNM's [Administrative Mandate on Required COVID-19 vaccination](#). If you are experiencing COVID-19 symptoms, please do not come to class. If you have a positive COVID-19 test, please stay home for five days and isolate yourself from others, per the [Centers for Disease Control \(CDC\) guidelines](#). If you do need to stay home, please communicate with me via email (emailaddress@unm.edu) or Canvas course messaging; I can work with you to provide alternatives for course participation and completion. UNM faculty and staff know that these are challenging times. Please let us know that you need support so that we can connect you to the right resources and please be aware that UNM will publish information on websites and email about any changes to our public health status and community response

CURE Project: This semester, the main project, and source of points, will be a semester long research experiment you will complete and present as part of a group. This is what is referred to as a CURE – a Course-based Undergraduate Research Experience. This means this is a class where you will conduct a research project in class in the same way they are done in a regular working lab. You will see this project through from the planning phase, to the implementation of the experiment, the collection and analysis of data to the final presentation of your results. This project will be made up of the following components:

Proposal: a written document explaining what you plan to do during the course of your experiment. This will include details like the plant(s) you will be working on, the materials you will need, and the data types you will collect.

Maintenance: As part of your experiment, you will be growing and maintaining plants in our campus greenhouse. These plants will need water and other care, so at least one member of the group per week must arrange with the instructor a day and time outside of the lab day (Tuesday) to come in and water and maintain your plants.

Collect data: You will be collecting data throughout the semester as your plants grow. You will be responsible for recording these data for analysis but also to turn in at the end of the semester. You will have time during lab each week to collect your data.

Present results: The final portion of your project will be to present your results. This will be done as part of a poster presentation where you will share and display all the steps of your project from the design to the final conclusions of the experiment.

Point allotment:

- Proposal: 15 points
- Maintenance: 20 points
- Data collection: 40 points
- Final Poster: 75 points

Support:

[PASOS Resource Center](mailto:pasos@unm.edu) (505) 925-8546, <mailto:pasos@unm.edu>. The Resource Center is an on-campus center that serves as a “one-stop” for all non-academic needs of UNM-Valencia students.

[Student Health and Counseling \(SHAC\)](#) at (505) 277-3136. If you are having active respiratory symptoms (e.g., fever, cough, sore throat, etc.) AND need testing for COVID-19; OR if you recently tested positive and may need oral treatment, call SHAC.

[LoboRESPECT Advocacy Center](#) (505) 277-2911 can offer help with contacting faculty and managing challenges that impact your UNM experience.



Course Graded Assignments:

Quizzes: 2 quizzes will be given throughout the term. These will be worth 25 points each. They will cover recent lab activities and be a mixture of practical and written elements.

CURE: A major portion of your lab grade will be your group research project. This grade will be subdivided into several assignments throughout the semester, the final point total for all assignments that are a part of this project is 150. See the CURE section of the syllabus for a description of these activities.

Class Participation: Actively participating with your group is essential to this course. As such, 96 of your points possible in the course will come from class participation. These points will be allotted based on: Regular attendance, being engaged in lab work, actively, and accurate completion of the lab activities.

Laboratory Policies:

- 1.) No food or drink is allowed in the lab at any time.
- 2.) No chewing gum in the lab.
- 3.) Absolutely no horseplay will be tolerated.
- 4.) Come on time and prepared for the lab activity and quiz for that day.
- 5.) Treat all lab equipment carefully and with respect.

Title IX: Our classroom and our university should always be spaces of mutual respect, kindness, and support, without fear of discrimination, harassment, or violence. Should you ever need assistance or have concerns about incidents that violate this principle, please access the resources available to you on campus. Please note that, because UNM faculty, TAs, and Gas are considered "responsible employees" by the Department of Education, any disclosure of gender discrimination (including sexual harassment, sexual misconduct, and sexual violence) made to a faculty member, TA, or GA must be reported by that faculty member, TA, or GA to the university's Title IX coordinator. For more information on the campus policy regarding sexual misconduct, please see: <https://policy.unm.edu/university-policies/2000/2740.html>.



Course Grading Policy: Your grade in this class will be made up of the following:

96 points: Participation (12 lab exercises @ 8 points each)

50 points: Quizzes (2 quizzes @ 25 points each)

150 points: CURE project

100%=A+, 92-99=A, 90-91=A-, 89=B+, 82-88=B, 80-81=B-, 79=C+, 72-78=C, 70-71=C-, 69=D+, 62-68=D, 60-61=D-, <60=F.

Date	Lab Exercise	Assessment
1/16/2024	Course Introduction	
1/23/2024	Scientific Method, Planting Seeds	
1/30/2024	Photosynthesis & Data Collection	
2/06/2024	The Basic Plant Body and more Data Collection	
2/13/2024	Plant Cells and Microscopy	
2/20/2024	Asexual Reproduction	
2/27/2024	Plant Ecology	
3/05/2024	Land Plant Evolution	Quiz 1
3/12/2024	Spring Break	
3/19/2024	Genetics 1	
3/26/2024	Genetics 2	
4/02/2024	Flowers	
4/09/2024	Fruits	Flowers
4/16/2024	Final Data Collection	Fruits
4/23/2024	Final Poster Prep	Quiz 2
4/30/2024	Final Poster Presentation	