BIOL 106: Contemporary Biology Syllabus, Fall 2024
Thursdays at 8:30 AM, 10:30 AM and 2:30 PM

Course description

Laboratory studies in Contemporary Biology. Experiments are directed toward understanding current issues in biology. Emphasis is on the practical use of the methods of science. Pre/co-requisites: BIOL 105.

Instructors

ULIs

8:30 section – Thomas Back (tcb4@geneseo.edu)
10:30 section – Annika Hurley (ah52@geneseo.edu)
2:30 section – Emelie Muller (evm1@geneseo.edu)

Faculty instructors

Nathan Morris (nmorris@geneseo.edu, ISC139)
Josie Reinhardt (reinhardt@geneseo.edu, ISC349), office hours 12:30-1:45 Wed/Thurs

Textbook

There is no textbook for the course. Appropriate resources will be posted on Brightspace.

Required Supplies

*Notebook/folder and binder for manuals and notes
*You will need STURDY SHOES and Long Pants and coats/shirts for outdoor labs. You should also have rain gear available, as we will go out rain or shine on outdoor lab days.
*A lab coat is optional

Learning goals

- Students will demonstrate an understanding of the methods biologists use to explore natural phenomena, including observation, hypothesis development, measurement and data collection, experimentation, evaluation of evidence, and employment of data analysis or mathematical modeling
- Students will demonstrate scientific reasoning including an application of scientific data, concepts, and models in the biological and biomedical sciences

Flow of the class

Unlike some labs you've taken in previously, labs in this course do not have an outcome that can be known ahead of time – so you won't know what "the right" answer is. **Instead, you will learn how to carefully design studies to produce data, and then interpret the data you generate to attempt to answer a scientific question.**

Each project we will do in lab is multiple weeks in length. At the end of the semester, students will present the class's results for one project as part of a group presentation with their classmates.

Each week students will complete a quiz due Wednesday night. The purpose of this is to ensure students are prepared for lab the next day. Before leaving each day, you will also complete an "exit ticket" which ensures every student participated in and understood the activities of the lab that week. These will be completed individually but you may work with your groups.

Lab Policies and Procedures

* You must attend lab in order to be successful in this course. If you must be absent including for illness, family emergency, religious observation, military duty, athletics, etc, please reach out to myself, your ULI and your group members ahead of time, as we will attempt to make reasonable accommodations. You may be able to make up a lab with another section if you will only be gone for part of the day. Microsoft Teams (remote) may be an alternative means of attendance depending on the circumstances. **More than three absences** for any reason requires that the lab be re-taken in a subsequent semester.

* All students are expected to behave in a respectful way towards one another. Science is a collaborative endeavor, and we must come together with trust and respect for one another! Any type of bullying behavior, explicit or implicit won't be tolerated. Making assumptions about someone based on any protected characteristic is entirely unacceptable.

* Leave your backpacks and coats in the atrium area. Absolutely no food or drink is allowed at the bench. If you wish to eat/drink you may take a break in the hall when work allows.

* Every day, wear shoes which cover your toes and have something to tie back your hair if you have long hair. On **outdoor** lab days, wear sturdy shoes with long socks, and long pants made of sturdy materials like jeans or khaki pants, and prepare for inclement weather (rain).

*Be sure you know what protective gear and safety equipment is necessary and follow lab safety guidelines.

*Follow proper waste disposal procedures

*Cell phones should not be out during laboratory time except if we are using them as part of the lab. Talk to your instructor about emergencies.

*Students should check Brightspace and their Geneseo email regularly for course updates.

Evaluation

Activity	Weight (percentage)
Prelab Brightspace quiz (lowest dropped)	30 %
Exit Tickets (lowest dropped)	30 %
Final Oral Presentation (in groups)	40 %

Grading Scale

Grades are based on the percentage of points you earned, rounded to the nearest 10^{th} place and weighted as shown above. The scale below will be used to calculate final letter grades after rounding to the nearest 10^{th} of a percent following regular rounding rules.

	B+ 87.0-89.9%	**C+** 77.0-79.9%	
A 93.0-100%	**B** 83.0-86.9%	**C** 73.0-76.9%	**D** 60.0-69.9% **E** <60%
A- 90.0-92.9%	**B-** 80.0-82.9%	**C-** 70.0-72.9%	

Accessibility & Disability

SUNY Geneseo is dedicated to providing an equitable and inclusive educational experience for all students. The Office of Accessibility (OAS) will coordinate reasonable accommodations for persons with disabilities to ensure equal access to academic programs, activities, and services at Geneseo. Students with approved accommodations may submit a semester request online to renew their academic accommodations. Please visit the OAS website for information on the process for requesting academic accommodations and contact the Office of Accessibility Services for questions related to access and accommodations: Erwin Hall 22, (585) 245-5112
In addition to reaching out to the OAS as appropriate, please know that you that if you are worried that you may not be able to participate in an activity for whatever reason, that you can reach out to your instructors, so we can figure out the best way to ensure your participation! Science is for everyone ☺

Mental Health Policy

We take mental health problems as seriously as we would issues with your physical health. Counseling Services, a part of the Lauderdale Center for Student Health & Counseling, offers free, confidential psychological services to help you manage personal challenges that may threaten your well-being. Call 585-245-5716 to make an appointment (and also see this page for emergency resources: https://www.geneseo.edu/health/emergency-info.

Academic Dishonesty & Plagiarism

All students are expected to follow the specific rules of academic honesty and plagiarism for SUNY Geneseo. Presenting others' work as if it were your own, or providing such help to others, constitutes academic dishonesty. Assignments that fall into this category will be scored as a zero and students may be given an E for the course. Please refer to the 2021-2022 Undergraduate Bulletin of the following link for more details:
https://www.geneseo.edu/dean_office/dishonesty

Course Schedule – subject to change as circumstances require!

Prelab quizzes are *always* due the night before lab (Wednesday at 11:59 PM). You will find the quizzes as well as the lab to which they refer on Brightspace by Tuesday morning each week.

Three of our labs will be conducted **OUTDOORS**, at various field sites, rain or shine. These sites contain plants with thorns that will scratch you, and quite a bit of poison ivy. On those days it is essential that you wear sturdy shoes with long socks, and **long pants** made of sturdy materials like jeans or khaki pants (NOT tights or leggings), and dress according to the weather (e.g. raincoat).

Date	Laboratory	
29-Aug	Getting to know you(r 2D:4D ratio)	Practice Quiz
5-Sep	Trees, the Planet and You 1	**OUTDOOR LAB** Pre-Lab Quiz 1
12-Sep	Evolution in a tube 1	Pre-Lab Quiz 3
19-Sep	Trees, the Planet and You 2	**OUTDOOR LAB** Pre-Lab Quiz 1
26-Sep	Trees, the Planet and You 3	**OUTDOOR LAB** Pre-Lab Quiz 5
3-Oct	Plants on Mars 1	Pre-Lab Quiz 4
10-Oct	Evolution in a tube 2	Pre-Lab Quiz 5
17-Oct	Plants on Mars 2	Pre-Lab Quiz 7
24-Oct	Hearts big and small 1	Pre-Lab Quiz 8
31-Oct	Hearts big and small 2	Pre-Lab Quiz 9
7-Nov	Hearts big and small 3	Pre-Lab Quiz 10
14-Nov	Evolution in a tube 3 / Plants on Mars 3	Pre-Lab Quiz 11
23-Nov	**Thanksgiving break no lab**	
30-Nov	Choose and prepare presentations	Pre-Lab Quiz 12
7-Dec	Final Presentations	

The final presentation will be done in groups based on the four major labs (everything but the first week). The labs are:

Evolution in a tube
Plants on Mars
Trees, the Planet, and You
Hearts Big and Small