

BIOL 413 Principles of Biology I (Lecture)

Credits: 4.0

Term: Summer 2025 – Summer Session 1 (May 19- June 20)

Course Format: Online Asynchronous

Instructor: Christine Andrews, christine.andrews@unh.edu, Adjunct Professor, Office hours TBD

Preferred Contact Method: christine.andrews@unh.edu will respond within 48 hours.

Department and Program: Dept. of Life Sciences, Program in Biological Sciences

Course Description

Introduction to biological principles; cell structure, function, replication, energetics and transport mechanisms; physiological processes; Mendelian, molecular genetics and gene technology. Required for students majoring in the life sciences.

Discovery: Inquiry (Discovery), Discovery Lab Course, Biological Science(Discovery)

Meeting Times/Locations

This is an online asynchronous course with no scheduled meeting times. Students can arrange individual online appointments with the instructor for support.

Required Course Materials

- Free access to [Openstax Biology 2e](#)
- All other course materials are provided via our Canvas course. You should have a computer/laptop with good internet access.

Grading

- Scale

Final grades in this course will be based on the following scale:

94-100=A; 90-93.9=A-; 87-89.9=B+; 83-86.9=B; 80-82.9=B-; 77-79.9=C+; 73-76.9=C; 70-72.9=C-; 67-69.9=D+; 63-66.9=D; 60-62.9=D-; Below 60=F

- Distribution

Grades will be available at any time through our Canvas course. The final grade will be calculated as follows (expanded descriptions of each category can be found further in the syllabus):

5% Course Preparatory Skill Building
25% Weekly Assignments & Activities
50% Average of Mid-term and Final Assessment
20% Laboratory Grade

Course Activities

Weekly Assignments take two forms:

- *Reading Responses* require a discussion post that addresses one of the week's learning objectives as well as a follow-up to a peer's post. This activity is designed to engage you with your peer's for collaborative learning
- *Activities* explore the topic(s) of the week and help you make real-world connections

Mid-term and Final Assessments will evaluate your knowledge of biological principles as outlined by learning objectives,

Course Policies

Credit Hours: The University of New Hampshire is in compliance with the federal definition for credit hour. The University requires, at a *minimum*, the equivalent of three hours of student academic work and engagement each week. Academic work includes, but is not limited to, direct faculty instruction, e-learning, fieldwork, readings, reflections, essays, reports, inquiry, problem solving, rehearsal, collaborations, theses, and electronic interactions.

Attendance: Due to the online asynchronous nature of this course, there will be no scheduled meetings.

Online Conduct: Respect for your classmates, the instructor and the environment are required at all times in your communications and online postings.

Assignment Deadlines: Assignment due dates are provided in Canvas. The **weekly activities** rubric is on a 10 point scale -1 point (10%) for each day late. **Assessments** must be taken during the time period they are available. Exceptions are only considered in extreme circumstances and on a case-by-case basis.

Use of AI: All assignments must be solely your own work. The use of AI-assisted writing (such as ChatGPT) is strictly prohibited on any assignment in this course unless otherwise instructed.

Biology Program Academic Honesty: The Biology Program at UNH Manchester will strictly adhere to the University policy on academic honesty, as published in the UNH Student Rights, Rules, and Responsibilities Handbook (<http://unh.edu/vpsas/handbook/academic-honesty>). By turning in any piece of work in this course, you declare that you have read and understood the policy and that you did not engage in any form of academic dishonesty as defined in the Handbook.

Plagiarism can take many forms, such as: submitting someone else's work - in whole or in part - as your own; collaborating on answers for individual assignments or allowing your own work to be used by another student; copying information from a website or other text without proper documentation; buying a pre-written paper or lab report.

Cheating is mainly concerned with copying on exams or in the lab, bringing crib notes into an exam, or referring to notes or the textbook or any other source such as a programmable calculator, tablet, or cell phone during an exam.

Any instances of cheating or plagiarism will result in consequences that can range from a failing grade on the assignment for all students involved to dismissal from the University, as defined in the UNH Student Rights, Rules, and Responsibilities Handbook.

Any form of academic misconduct on any graded work in this course (including assignments, quizzes, or exams) will result in an automatic zero on the assignment. Additional consequences may result at the discretion of the instructor.

Course Schedule

(may be altered by the instructor due to weather, course progress or other unforeseeable events. All changes will be announced and made through our Canvas course)

Week	Topic	Assignments/Readings Due
1	<ul style="list-style-type: none">• The Science of Biology• Chemistry of Life• Cells	Reading & Response 1 Activities 1-3
2	<ul style="list-style-type: none">• Cell Membrane & Transport• Cell Signaling• Energy & Metabolism	Reading & Response 2 Activities 4-6
3	<ul style="list-style-type: none">• Cellular Respiration• Photosynthesis	Reading & Response 3 Activities 7-8 Mid-Term Assessment
4	<ul style="list-style-type: none">• Cell Cycle & Division• DNA & DNA Replication• Mendelian Inheritance	Reading & Response 4 Activities 9-11
5	<ul style="list-style-type: none">• Gene Expression: Gene to Protein• Gene Regulation• Biotechnology & Viruses	Reading Response 5 Activities 12-14 Final Assessment

Additional Resources and Information

Library: The UNH Manchester librarians are available to assist you with the research process. Visit the library's website at <https://cps.unh.edu/library>Links to an external site. to learn about library services and to search for reliable academic sources. You can contact the library at 603-641-4173 or at unhm.library@unh.edu. The links below guide you to useful online library resources:

- Make a **Research Appointment** with a librarian: <https://libraryguides.unh.edu/remotearchive/researchhelp>Links to an external site.
- Use the **Library Search Box** to find information: https://libraryguides.unh.edu/librarysearchbox_unhmanchesterLinks to an external site.
- Reserve a **Study Room**: <https://cps.unh.edu/library/support-services>Links to an external site.

- Discover resources for **Citing Sources**: <https://libraryguides.unh.edu/unhmcitingsourcesLinks> to an external site.
- Learn strategies for **Evaluating Sources**: <https://libraryguides.unh.edu/ENGL401UNHManchester/evaluatingsourcesLinks> to an external site..

Temporary Academic Supports for Extended Absences: If you are dealing with an unexpected, extenuating circumstance that will keep you out of class or affect your performance for more than a day or two, reach out to Lisa Enright, Assistant Dean of Student Success, at lisa.enright@unh.edu to request a letter be sent to all your faculty.

Mental Health and Wellness: Your academic success and overall mental health are very important. If, during the course, you find you are experiencing emotional or mental health issues, please reach out. In partnership with The Mental Health Center of Greater Manchester, UNH Manchester offers free mental health sessions for students. You may email unhm.wellness@unh.edu to make an appointment to meet with a counselor. The National Suicide Prevention Lifeline provides 24/7, free and confidential support via phone or chat for people in distress, resources for you or your loved ones, and best practices for professionals. Call (800) 273-TALK (8255).

Basic Needs: It can be challenging to do your best in class if you have trouble meeting basic needs like safe shelter, sleep, and nutrition. If you have difficulty affording groceries or accessing sufficient food to eat every day or lack a safe and stable place to live, I urge you to contact The Dean of Students and/or me if you are comfortable. You can also find a [list of resources](#). We are here to help.

Academic Alerts: The University is invested in your academic success. If I am concerned about your academic behavior or performance, I may submit an academic alert. Academic alerts are not punitive. The goal is to provide you with support and resources to support your success. They act as an important check-in point and, if you receive an academic alert, you will receive an email to your UNH email address. It is strongly recommended that you meet with a professional advisor and connect with me to discuss the reason for the alert.

UNH Land, Water, and Life Acknowledgement: As we all journey on the trail of life, we wish to acknowledge the spiritual and physical connection the Pennacook, Abenaki, and Wabanaki Peoples have maintained to N'dakinna (homeland) and the aki (land), nebi (water), olakwika (flora), and awaasak (fauna) which the University of New Hampshire community is honored to steward today. We also acknowledge the hardships they continue to endure after the loss of unceded homelands and champion the university's responsibility to foster relationships and opportunities that strengthen the well-being of the Indigenous People who carry forward the traditions of their ancestors.

Accessibility Services: According to the Americans with Disabilities Act (as amended, 2008), each student with a disability has the right to request services from UNH to accommodate his/her/their disability. If you are a student with a documented disability or believe you may have a disability that requires accommodations, please contact Student Accessibility Services (SAS) located on the Manchester campus in the Student Services Suite (Office 405A). Accommodation letters are created by SAS with the student. Please follow-up with me as soon as possible to ensure timely implementation of the identified accommodations in the letter. Faculty have an obligation to respond once they receive official notice of accommodations from SAS but are under no obligation to provide

retroactive accommodations. For more information refer to www.unh.edu/sas or contact SAS at 603.862.2607, 711 (Relay NH) or sas.office@unh.edu.

Food Pantry: The campus food pantry has pre-packed bags of non-perishable food items for students in room 437. If you have any questions, contact lisa.enright@unh.edu