



Master Course Syllabus

For additional course information, including prerequisites, corequisites, and course fees, please refer to the Catalog: <https://catalog.uvu.edu/>

Semester: Spring

Year: 2025

Course Prefix: BIOL

Course and Section #: 1015-202

Course Title: General Biology Laboratory

Credits: 1

Course Description

Covers introductory topics in general biology. Complements the student's experience in the General Biology 1010 course with emphasis on the application of the scientific method. Includes actual student experiences with living organisms, use of the microscope, and an introduction to techniques used in the study of life.

Course lab fee of \$13 for supplies applies.

Course Attributes

This course has the following attributes:

- General Education Requirements
- Global/Intercultural Graduation Requirements
- Writing Enriched Graduation Requirements
- Discipline Core Requirements in Program
- Elective Core Requirements in Program
- Open Elective

Other: *Click here to enter text.*

Instructor Information

Instructor Name: Meaghan Hughes

Student Learning Outcomes

Upon successful completion of this course, you should be able to:

1. Demonstrate safe and effective use of basic laboratory equipment.
 2. Use the processes of scientific inquiry to examine biological concepts including diffusion and osmosis, photosynthesis, cellular respiration, and ecological interactions.
 3. Explain the biological principles of cell division, genetics, evolution, and the rationale behind the techniques used in biotechnology.
 4. Effectively communicate scientific findings with peers and through written laboratory reports.
 5. Compare and contrast reproductive structures of plants and animals.
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Course Materials and Texts

No required materials or texts

Course Requirements

Course Assignments, Assessments, and Grading Policy

- Lab Worksheets: Weekly worksheet for guidance and reporting of lab activities performed in class. 240 points
- Pre-lab Quizzes: Weekly quiz to prepare for in class lab activities. 110 points
- Final Assessment: Observation and evaluation of College Biology I lab (Biol 1615) student research presentations. 100 points
- Participation: Active participation and contribution to group effort in class as determined by the instructor. 33 points

There are 50 additional points possible in the course than what the final score is calculated out of. Final grades are calculated by adding total points earned and dividing by total points possible. Final grades are not rounded and follow the grading scheme below:

A = 93-100 B - = 80-82.9 D+ = 67-69.9
A - = 90-92.9 C+ = 77-79.9 D = 63-66.9
B+ = 87-89.9 C = 73-76.9 D - = 60-62.9
B = 83-86.9 C - = 70-72.9 F = 0-59.9

Required or Recommended Reading Assignments

All required readings are provided via “Background Documents” accessible via Canvas. These are written by UVU Biologists and align with lab topics listed below.

General Description of the Subject Matter of Each Lecture or Discussion

Lab 1: Lab Safety and Scientific Method – Course introduction, lab safety, scientific observations, prediction formation, Black Box

Lab 2: Biological Macromolecules- Detection of biological macromolecules, experimental controls, data collection

Lab 3: Microscopes and Cells – Usage of microscopes, structure of plant and animal cells, diffusion/osmosis

Lab 4: Cellular Division – Mitosis and Meiosis, chromosome and chromatid functions during cell division

Lab 5: Photosynthesis – Photosynthesis, cellular pathways associated with photosynthesis and relation to respiration, experimental design

Lab 6: Microbiology – Pandemic, infectious disease, bacteria culture, microbial growth

Lab 7: Plant Reproduction – Taxonomic key, plant identification, plant reproductive morphology

Lab 8: Human Physiology – Human metabolism, metabolic readings, medical and exercise physiology

Lab 9: Animal Anatomy and Reproduction – Organs and organ systems, male and female anatomy, reproduction

Lab 10: Mendelian Genetics – Inheritance, complete dominance, incomplete dominance, codominance, Punnett squares, dihybrid cross

Lab 11: Natural Selection – Natural selection postulates, descent and survival with inheritance

Lab 12: Ecology– Ecological succession, trophic structures, ecosystems

Lab 13: Final Assessment – Observation, evaluation, and analysis of student research projects

Required Course Syllabus Statements

Generative AI

Plagiarism is the act of appropriating any other person's or group's ideas or work (written, computerized, artistic, etc.) or portions thereof and presenting them as the product of one's own work in any academic exercise or study. This includes copying sentences from sources even if the source is cited. Generating and submitting any material using artificial intelligence, such as ChatGPT also constitutes plagiarism and will result in a grade of zero. Repeated offenses or blatant disregard for policy will result in failure of the course and report made to Student Conduct office.

AI is a tool with potential usefulness. However, AI is also fraught with serious issues. It possesses accuracy problems while simultaneously sounding very confident about its incorrectness. It also frequently generates fake citations and quotations. It cannot understand the complexities and contexts of human communication. Finally, the way AI is trained on other texts poses several ethical questions about copyright and intellectual theft of property (along with uncritically inheriting the biases of the texts it's trained on).

To be clear, unless given explicit permission from the course instructor, copying the wording of an AI chatbot is considered plagiarism and means that a student will be held accountable for violating academic integrity. Although many citation guides are already presenting ways to properly use and cite AI, citing AI in your work is not in line with the standards of scientific writing.

Using Remote Testing Software

This course does not use remote testing software.

This course uses remote testing software. Remote test-takers may choose their remote testing locations. Please note, however, that the testing software used for this may conduct a brief scan of remote test-takers' immediate surroundings, may require use of a webcam while taking an exam, may require the microphone be on while taking an exam, or may require other practices to confirm academic honesty. Test-takers therefore shall have no expectation of privacy in their test-taking location during, or immediately preceding, remote testing. If a student strongly objects to using test-taking software, the student should contact the instructor at the beginning of the semester to determine whether alternative testing arrangements are feasible. Alternatives are not guaranteed.

Required University Syllabus Statements

Accommodations/Students with Disabilities

Students needing accommodations due to a permanent or temporary disability, pregnancy or pregnancy-related conditions may contact UVU [Accessibility Services](#) at accessibilityservices@uvu.edu or 801-863-8747.

Accessibility Services is located on the Orem Campus in BA 110.

Deaf/Hard of Hearing students requesting ASL interpreters or transcribers can contact Accessibility Services to set up accommodations. Deaf/Hard of Hearing services can be contacted at DHHservices@uvu.edu

DHH is located on the Orem Campus in BA 112.

Academic Integrity

At Utah Valley University, faculty and students operate in an atmosphere of mutual trust. Maintaining an atmosphere of academic integrity allows for free exchange of ideas and enables all members of the community to achieve their highest potential. Our goal is to foster an intellectual atmosphere that produces scholars of integrity and imaginative thought. In all academic work, the ideas and contributions of others must be appropriately acknowledged and UVU students are expected to produce their own original academic work.

Faculty and students share the responsibility of ensuring the honesty and fairness of the intellectual environment at UVU. Students have a responsibility to promote academic integrity at the university by not participating in or facilitating others' participation in any act of academic dishonesty. As members of the academic community, students must become familiar with their [rights and responsibilities](#). In each course, they are responsible for knowing the requirements and restrictions regarding research and writing, assessments, collaborative work, the use of study aids, the appropriateness of assistance, and other issues. Likewise, instructors are responsible to clearly state expectations and model best practices.

Further information on what constitutes academic dishonesty is detailed in [UVU Policy 541: Student Code of Conduct](#).

Equity and Title IX

Utah Valley University does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, gender expression, age (40 and over), disability, veteran status, pregnancy, childbirth, or pregnancy-related conditions, citizenship, genetic information, or other basis protected by applicable law, including Title IX and 34 C.F.R. Part 106, in employment, treatment, admission, access to educational programs and activities, or other University benefits or services. Inquiries about nondiscrimination at UVU may be directed to the U.S. Department of Education's Office for Civil Rights or UVU's Title IX Coordinator at 801-863-7999 – TitleIX@uvu.edu – 800 W University Pkwy, Orem, 84058, Suite BA 203.

Religious Accommodation

UVU values and acknowledges the array of worldviews, faiths, and religions represented in our student body, and as such provides supportive accommodations for students. Religious belief or conscience broadly includes religious, non-religious, theistic, or non-theistic moral or ethical beliefs as well as participation in religious holidays, observances, or activities. Accommodations may include scheduling or due-date modifications or make-up assignments for missed class work.

To seek a religious accommodation, a student must provide written notice to the instructor and the Director of Accessibility Services at accessibilityservices@uvu.edu. If the accommodation relates to a scheduling conflict, the notice should include the date, time, and brief description of the difficulty posed

by the conflict. Such requests should be made as soon as the student is aware of the prospective scheduling conflict.

While religious expression is welcome throughout campus, UVU also has a [specially dedicated space](#) for meditation, prayer, reflection, or other forms of religious expression.