

BIOL1106 – Biology 1 Lab for Majors Fall 2026 Syllabus

INSTRUCTOR AND COURSE DESCRIPTION



Instructor:	Dr. Thornton Larson
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Office Hours:	By Appointment
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Lecture:	Asynchronous Online
Classroom:	Online

Course Description

This is the lab that accompanies Biology 1 for Majors. Labs are designed to help reinforce many of the concepts learned in lecture, pairing them with activities. These activities also represent a sample of techniques common within various subdisciplines of Biology. These skills are directly transferable to the job market in those subject areas, though more repetition of those skills would serve you well.

We will cover basic laboratory safety and areas such as enzymes and macromolecules. You will learn through virtual labs how to use a microscope. The virtual microscope labs may even be more applicable than you might think to modern biological science as many advanced microscope techniques utilize microscopes controlled by computing devices. I hope you will enjoy this delivery style of lab and that you go through the protocols carefully and thoroughly. Understanding and following protocols are as much of a skill to learn as any of the other skills learned through laboratory science.

A key thing to note with this style of lab presentation is that you will obtain a kit with everything you need to complete the labs for the semester. These will require clean, clear spaces to work, a kitchen is usually adequate, but depending on your home situation it may not be, so be intentional about your space. Ventilation is not highly needed for any labs but is often something that can and should be considered. The reason a kitchen is often ideal is because of the sink and also many homes, for safety reasons, will also contain a fire extinguisher. There is at least one lab that utilizes some form of chemical fire and should be conducted with the utmost caution and safety considerations. If you have children or younger siblings keep all materials away from them. There are a few chemicals of concern, but overall nothing is significantly harmful, but there is glass and other materials.

Dual Credit Specifics: The labs for the most part will be presented in a one lab a week format. The lab design is a hybrid design, meaning some of the labs will be completed online and some

will be completed using the ordered lab kits that have been designed specifically for this course. You will order the lab kit using a voucher code, at Sul Ross it is provided by the Bookstore, so please reach out to your dual credit advisor on campus to see how to obtain your voucher code as you do not need to cover the materials the same way a Sul Ross student does. The code allows you access to both the online labs and also covers the cost of the lab kits. The labs the first half of the semester are online to give time for the lab kits to arrive, though they typically arrive within two weeks of ordering. At the time of the kits arrival, you should conduct an inventory of the kit to make sure everything is there and there is a lab to help you confirm that. If anything is missing, simply reach out to Science Interactive and they will send a replacement for anything missing or broken during shipping.

Required Materials

Access to Science Interactive for lab protocols and assignments as well as ordering the lab kit

Laboratory kit and access can be obtained with a voucher from the Bookstore however for dual credit voucher codes should be obtained for you to receive from your dual credit advisor.

Exams and Grading

Lecture and Lab are separate courses and therefore have separate grades make sure you are enrolled into the lab section as well if you need that as part of your course load.

Lab:

13	Lessons	40%
14	Homework/Quizzes	60%

A 90 – 100% B 80 – 89% C 70 – 79% D 60 – 69% F <60%

COURSE OBJECTIVES, LEARNING OUTCOMES, MARKETABLE SKILLS, POLICIES, AND UNIVERSITY SERVICES

Course Objectives: At the end of the semester, students will:

1. Understand basic laboratory safety and how to follow a protocol
2. Implement the scientific method
3. Understand and analyze basic statistical data and graphs
4. Recognize key tests to identify aspects of cellular function
5. Utilize basic microscopy skills for identifying microscopic organisms and cell structures.

Student Learning Outcomes (SLOs) for Biology:

1. Demonstrate an understanding of evolution by natural selection.
2. Demonstrate an integration of environmental awareness into everyday modern life.

3. Understanding how to incorporate molecular biology into the study of the whole organism.
4. Demonstrate utilization of various field techniques toward addressing scientific questions in the discipline.
5. Conduct basic laboratory experiments utilizing standard observational strategies.

Marketable Skills

1. Ability to organize, analyze, and interpret data.
2. Proficiency in using presentation software.
3. Experience in managing time and meeting deadlines.
4. Ability to speak effectively and write concisely about scientific topics.
5. Experience in the development of professional email correspondence.

Asynchronous setup and expectations:

Since this course is delivered in an asynchronous format that means it is on you as the student to interact with all of the provided material. The laboratory material is meant to be worked through at a reasonable pace to learn concepts and techniques. Deadlines are clearly stated with a large amount of time allowed to complete the labs so as the student it is your responsibility to complete all associated lessons, homeworks, and quizzes by the associated deadlines.

The majority of these labs do not require a significant amount of time to complete but the assignments are expected to be completed with full sentences and use of critical thinking skills. You will need to upload images taken of experiments for this course.

The labs have been arranged in a way that initially prioritizes the time it takes to obtain the lab kit followed by course organization.

All the labs are run through the Science Interactive website and that will be where grades are taken from and placed into Blackboard which will represent the actual lab grade as outlined earlier within this syllabus.

Please carefully consider the deadlines of labs and assignments. All course materials will open the Saturday that preceeds the week and the deadline will be the Sunday following (excluding week 1 labs), effectively giving 2 weekends to complete the material. I strongly recommend going over the labs the first weekend as some do have aspects that take a few days to prep.

Assignment deadlines will be adhered to strictly. Each assignment will have expected turn in and response dates. Failure to meet those dates will result in a grade of '0', the only exception to this is the Summary assignment where the late work policy is followed strictly.

Time Commitment Expectations:

Laboratory courses are given the credit amount of 1 credit hour though they equate to 2 contact hours and 4-6 hours outside of the lab "in-class" expectation. This means you should expect to

dedicate 2 hours a week to the labs as “class time” and 4 hours a week to study and homework time.

Late Work Policy:

There are no extensions for any assignments, if they are turned in past the due date they will be awarded the score of ‘0’.

SRSU Library Services

The Sul Ross Library offers FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library’s website, library.sulross.edu. Off-campus access requires your LoboID and password. Check out materials using your photo ID. Librarians are a tremendous resource for your coursework and can be reached in person, by email (srsulibrary@sulross.edu), or phone (432-837-8123).

SRSU Disability Services:

SRSU Disability Services. Sul Ross State University (SRSU) is committed to equal access in compliance with Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the student’s responsibility to initiate a request each semester for each class. Alpine Students seeking accessibility/accommodations services must contact SRSU's Accessibility Services Coordinator at 432-837-8203. The office is located on the first floor of Ferguson Hall, room 112, and our mailing address is P.O. Box C122, Sul Ross State University, Alpine. Texas, 79832.

Academic Integrity:

Students in this class are expected to demonstrate scholarly behavior and academic honesty in the use of intellectual property. Students should submit work that is their own and avoid the temptation to engage in behaviors that violate academic integrity, such as turning in work as original that was used in whole or part for another course and/or professor; turning in another person’s work as one’s own; copying from professional works or internet sites without citation; collaborating on a course assignment, examination, or quiz when collaboration is forbidden. Students should also avoid using open AI sources **unless permission is expressly given** for an assignment or course. Violations of academic integrity can result in failing assignments, failing a class, and/or more serious university consequences. These behaviors also erode the value of college degrees and higher education overall.

I will reiterate here that I take academic dishonesty and plagiarism very seriously. Citations are your friend. There is a difference between knowingly being dishonest with what is your work and mistakes through learning.

University AI Policy

The University does not recommend or endorse any specific AI tools or resources. Students should be aware that many generative AI tools (e.g., ChatGPT, Google Gemini, Microsoft Copilot) store user input and may use this data to train future models. For this reason, students should never upload or share personal, confidential, or identifiable information—such as names, ID numbers, health data, or assignment submissions containing such details—into any generative

AI platform. When using AI tools, students should verify whether the tool complies with student privacy standards as indicated by the University. Faculty may recommend specific tools that better align with institutional data privacy policies, but ultimate responsibility for data protection rests with users. Students are encouraged to use faculty-recommended platforms when engaging in coursework involving generative AI. The University is not liable for any adverse experience or impact when students interact with these tools.

Specific AI policy for course work

Dr. Larson recognizes the uses of AI Learning Language Models and does try to encourage the use of them in class spaces. However, many students have utilized AI to complete entire assignments for them or used AI resources to heavily edit their writing to the point that student contribution to the assignment cannot be measured and therefore gets awarded a **score of '0'**. For the purposes of this class do not use any form of AI to correct your grammar or sentence structure: this includes some of the more advanced functions in google docs and word as well as use of Grammarly. If you are unsure at the appropriateness of AI use for a particular assignment either confirm with Dr. Larson or err on the side of not using such a tool. The goal of the assignments is typically to improve upon skills such as scientific writing and demonstration of understanding, so do not use AI tools unless you have confirmed use to use them for the safety of your own grade.

Classroom Climate of Respect

Importantly, this class will foster free expression, critical investigation, and the open discussion of ideas. This means that all of us must help create and sustain an atmosphere of tolerance, civility, and respect for the viewpoints of others. Similarly, we must all learn how to probe, oppose and disagree without resorting to tactics of intimidation, harassment, or personal attack. No one is entitled to harass, belittle, or discriminate against another on the basis of race, religion, ethnicity, age, gender, national origin, or sexual preference. Still we will not be silenced by the difficulty of fruitfully discussing politically sensitive issues.

Required Student Responsibilities Statement

All full-time and part-time students are responsible for familiarizing themselves with the Student Handbook and the Undergraduate & Graduate Catalog and for abiding by the University rules and regulations. Additionally, students are responsible for checking their Sul Ross email as an official form of communication from the university. Every student is expected to obey all federal, state and local laws and is expected to familiarize themselves with the requirements of such laws.

For Remote/Online Courses Only - SRSU Distance Education Statement.

Students enrolled in distance education courses have equal access to the university's academic support services, such as library resources, online databases, and instructional technology support. For more information about accessing these resources, visit the SRSU website. Students should correspond using Sul Ross email accounts and submit online assignments through Blackboard, which requires secure login. Students enrolled in distance education courses at Sul

Ross are expected to adhere to all policies pertaining to academic honesty and appropriate student conduct, as described in the student handbook. Students in web-based courses must maintain appropriate equipment and software, according to the needs and requirements of the course, as outlined on the SRSU website. Directions for filing a student complaint are located in the student handbook.

Tutoring Center

The Lobo Den Tutoring Center offers FREE tutoring support to help you excel in your courses. Whether you need assistance in Writing, Math, Science, or other subjects, we're here to help!

Important Information:

Drop-in and Scheduled Appointments: Flexible options to fit your needs.

Hours of Operation: Monday–Friday, 8:00 AM – 5:00 PM.

Workshops: Attend our regularly hosted academic workshops on STEM topics and professional development, often in collaboration with specialized faculty.

Location: BWML Room 128.

Contact Us: For more information or to book an appointment, email tutoring@sulross.edu or call (432) 837-8726.

Looking for additional support?

Tutor.com offers FREE 24/7 online tutoring in over 200 subjects, including specialized support for ESL and ELL learners with native Spanish-speaking tutors.

Access Tutor.com via Blackboard: Log in to your Blackboard account to get started anytime, anywhere.

Take advantage of these valuable resources to boost your confidence and performance in your classes. We look forward to helping you succeed!

TENTATIVE LECTURE SCHEDULE

Lab	Week	Lab Title	Due Dates
Lab 1	8/31	Getting Started	9/6
Lab 2	8/31	Lab Safety	9/6
Lab 3	9/7	The Scientific Method	9/13
Lab 4	9/14	Using the V-Scope	9/20
Lab 5	9/21	Introduction to Microscopy	9/27
Lab 6	9/28	Math and Graphing Prep	10/4
Lab 7	10/5	Cell Types – Structure and Function	10/11
Lab 8	10/12	Cellular Respiration and Metabolism (extra prep)	10/18
Lab 9	10/19	DNA, RNA, and Protein Synthesis	10/25
Lab 10	10/26	Photosynthesis	11/1

Lab 11	11/2	Enzymes	11/8
Lab 12	11/9	Biological Macromolecules	11/15
Lab 13	11/16	Cell Membrane Transport	11/22