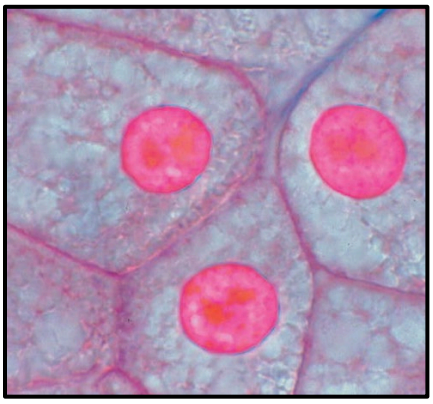
BIOL 1306 – Biology I for Majors Fall 2025 Syllabus



Instructor:	**Dr. Thornton Larson**
Office:	**WSB 221**
Office Hours:	**M 9 AM – 11 PM; T 5 PM – 8 PM**
Office Phone:	**(432)837-8084**
Email:	**TRL21JZ@sulross.edu**
Lecture:	**TR 12:30 PM – 1:45 PM**
Classroom:	**WSB 101**
Labs:	**Check your schedule for times, but all are in Room WSB 206**

Course Description

This course is meant to be part 1 of an overview of biology as a whole. This course will cover the foundational aspects of biology, including the makeup of basic biological components and what makes up a living thing. Working from a standard biological perspective starts small, with elements growing into single-celled organisms and their structure, function, and ability to replicate and diversify. These concepts will directly feed into Biology II for Majors, where the discussion regarding more complex, multicellular organisms with cell specialization occurs.

This course will include concepts that include the molecular makeup of life, what a cell is, the basic structure and functions of cells, cellular respiration, photosynthesis, cellular metabolism and an introduction to cellular genetics and the proliferation of cells. These form the basis of understanding how structure and function relate in living things, leading to the diversity of life at micro levels that can be applied later on to more macro-level concepts and scientific questions.

This course will introduce the scientific method and modern research papers to promote scientific literacy early in the curriculum to create scientists able to follow scientific protocol and understand the purpose of experimentation. From these basic stepping stones, we will develop fully independent and objective biologists able to function within laboratories and in natural field work by the end of the program in biology.

Required Materials

Hawkes Learning Biology Online text and homework are in Blackboard through “Sign in to Hawkes” Module (link for this will be included in every module for easier access for weekly reading and homework)

Labs will be posted on Blackboard and assignments addressed on a syllabus specific to the lab section.

Exams and Grading

Lecture:

4 lecture exams (each ~12% of total grade)	50%
2 Writing Assignments (each 10% of total grade)	20%
Attendance	10%
Hawkes Homework and Reviews	15%
Exit Notes	5%

Lab:

Attendance	5%
Prelab Quizzes (8)	10%
Group Assignments (4)	20%
Individual Assignments (2)	20%
Group Presentation (1)	25%
Research Summary (1) (Individual)	20%

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. Display a basic knowledge of biology from the chemical makeup to how it replicates.
2. Know the basic building blocks of biology.
3. Know what constitutes a cell and the differences between different basic cell types.
4. Understand what a living thing is.
5. Understand the basic levels of photosynthesis and respiration in cells.
6. Demonstrate how function and structure are related in biology

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.
6. Critical Thinking. Students will develop critical thinking skills to include creative thinking, innovation, inquiry, analysis, evaluation, and synthesis of information.
7. Students will develop communication skills to include effective development, interpretation, and expression of ideas through written, oral, and visual communication.

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.

Attendance:

Mandatory. I will have a sign-in sheet at the front of the class, but this course is sized to where I will recognize when someone is not present. **I am allowed to drop you from my class** if you miss **more than six times** (that accounts for 3 full weeks of lecture). Although permitted, I do not typically drop students from the course and will instead leave it as your responsibility; as a result, you will be left with an 'F' for the course. I do not wish to hear excuses for missing class, and do not want to hear about it every time you are gone. Absences are excused only if you have a **documented**, university-approved excuse (hospitalization, funeral, etc.)

IMPORTANT!! Too often, students arrive incredibly late for classes, to the point where I have started class with either only the online students or even just one student in the classroom, while everyone else saunters in. This is massively inappropriate and I take it as a sign of disrespect. **Tardiness will result in a half deduction of attendance points for that day**, this does include students attending online (whom I have seen pop in incredibly late as well). If you have issues with being on time, such as coming from a class in the RAS building, please speak to me and we can discuss accommodations.

If you miss a class, it is not my responsibility to provide you with notes, materials, etc., it is yours. It is recommended that you speak to a classmate regarding what you missed. If you feel that is not helpful for you between the assigned reading and talking with a classmate, please come to my office hours. I have tried to make them accessible to all students, including athletes by staying incredibly late to accommodate students after practice. I do also accept appointments.

DO NOT MISS EXAMS unless you have a documented, university-approved excuse. If you do not inform me of your approved absence before the exam it will be a **ZERO**.

Late Work Policy:

Late work is discouraged for assignments that are due. All assignments will be due turned in to the appropriate assignment section (Blackboard or other online program). **Review the deadlines in Blackboard for specific due dates and times.** After the deadline time has passed, you will lose 10% on the assignment. After 24–48 hours late it will be 20% off, and 48–72 hours late it will be 30% off. Beyond these times it will be a '0' on the assignment. These terms are designed to strike a balance between timeliness and flexibility of deadlines and will be strictly upheld.

SRSU Library Services

The Bryan Wildenthal Memorial Library and Archives of the Big Bend in Alpine offer FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library's website, https://library.sulross.edu/. Off-campus access requires logging in with your LoboID and password. Librarians are a tremendous resource for your coursework and can be reached in person, by email (srsulibrary@sulross.edu), or by phone (432-837-8123).

No matter where you are based, public libraries and many academic and special libraries welcome the general public into their spaces for study. SRSU TexShare Cardholders can access additional services and resources at various libraries across Texas. Learn more about the TexShare program by visiting library.sulross.edu/find-and-borrow/texshare/ or ask a librarian by emailing srsulibrary@sulross.edu.

Mike Fernandez, SRSU Librarian, is based in Eagle Pass (Building D-129) to offer specialized library services to students, faculty, and staff. Utilize free services such as InterLibrary Loan (ILL), ScanIt, and Direct Mail to get materials delivered to you at home or via email.

SRSU Disability Services:

SRSU Accessibility Services. Sul Ross State University (SRSU) is committed to equal access in compliance with the 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. Students seeking accessibility/accommodations services must contact Mrs. Mary Schwartze Grisham, LPC, SRSU's Accessibility Services Director or Ronnie Harris, LPC, Counselor, at 432-837-8203 or email mschwartze@sulross.edu or ronnie.harris@sulross.edu. RGC students can also contact Alejandra Valdez, at 830-758-5006 or email alejandra.valdez@sulross.edu. Our 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.

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.

Supportive Statement

I aim to create a learning environment for my students that supports various perspectives and experiences. I understand that the recent pandemic, economic disparity, and health concerns, or even unexpected life events may impact the conditions necessary for you to succeed. My commitment is to be there for you and help you meet the learning objectives of this course. I do this to demonstrate my commitment to you and to the mission of Sul Ross State University to create a supportive environment and care for the whole student as part of the Sul Ross Familia. If you feel like your performance in the class is being impacted by your experiences outside of class, please don't hesitate to come and talk with me. I want to be a resource for you.

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.

TENTATIVE LECTURE SCHEDULE

	TOPIC	Chapter
Week 1 **Aug 25th**	Welcome/ Student Expectations/ Syllabus	
	The Study of Life	Chapter 1
Week 2 **Sept 1st**		
	Labor Day no lecture Mondays/Tuesdays	
	Chemical Context of life and Water	Chapter 2.1, 2.2
Week 3 **Sept 8th**		
	Carbon	Chapter 2.3
	Macromolecules	Chapter 3.1, 3.2
Week 4 **Sept 15th**		
	Macromolecules	Chapter 3.3, 3.4, 3.5
	Review	
Week 5 **Sept 22nd**		
	Exam I	
	The Cell	Chapter 4
Week 6 **Sept 29th**		
	Plasma Membranes Structure and Function	Chapter 5
	Cellular Metabolism: How Cells Function **Journal Summary 1 due**	Chapter 6
Week 7 **Oct 6th**		
	Cellular Respiration	Chapter 7.1, 7.2, 7.3
	Cellular Respiration	Chapter 7.4, 7.5, 7.6, 7.7
Week 8 **Oct 13th**		
	Photosynthesis	Chapter 8
	Review	
Week 9 **Oct 20th**		
	Exam II	
	Cell Communication and Signaling	Chapter 9

Week 10 **Oct 27th**		
	Cellular Reproduction	Chapter 10
	Meiosis and Sexual Reproduction	Chapter 11
Week 11 **Nov 3rd**		
	Mendelian Genetics and Heredity	Chapter 12
	Modern Genetics and Inheritance	Chapter 13
Week 12 **Nov 10th**		
	Review	
	Exam III	
Week 13 **Nov 17th**		
	DNA the Molecules of heredity	Chapter 14
	Genes and Proteins; **Journal Summary 2 Due**	Chapter 15
Week 14 **Nov 24th**		
	Gene Expression	Chapter 16
	Thanksgiving No Class Wed/Thurs	
Week 15 **Dec 1st**		
	What can we do with it? Biotechnology and Genomics	Chapter 17
	Review	
Week 16	**FINALS**	

LAB SCHEDULE

	DATE	TOPIC
Week 1	Aug 26	No Lab
Week 2	Sept 2	Scientific Method
Week 3	Sept 9	Data Analysis, Presentation, and Writing
Week 4	Sept 16	Microscopy and Cells
Week 5	Sept 23	Macromolecules
Week 6	Sept 30	Diffusion and Osmosis
Week 7	Oct 7	Enzymes
Week 8	Oct 14	Open Lab (**Dr. Larson will be present to help with writing questions**)
Week 10	Oct 21	Cellular Respiration and Photosynthesis
Week 10	Oct 28	Nucleic Acids 1
Week 11	Nov 4	Nucleic Acids 2
Week 12	Nov 11	Presentation Workshop
Week 13	Nov 18	Presentations
Week 13	Nov 20	**Thanksgiving No More Labs**