BIOL 1306 – Biology I for Majors Fall 2024 Syllabus
INSTRUCTOR AND COURSE DESCRIPTION

Instructor: Mrs Jena Carey **Office Hours:** MW 1-3 PM; TR 1-3; or by appt

Office: WSB 220 **Office Phone:** (432)837-8820

Email: jcarey@sulross.edu Please include "BIOL 1306" in your subject line

Lectures: Monday/Wednesday 9:30 AM to 10:45 AM **Laboratory:** Depends on lab section

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 homeworks)

Labs will be posted on Blackboard and assignments addressed on alternative syllabus

Exams and Grading

Lecture:

4 lecture exams (each ~12% of total grade)	50%
2 Writing Assignments (each 10% of total grade)	20%
Attendance	10%
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. Roll will be by sign in sheet at front of the class. I am allowed to drop you from my class if you miss more than six times (that accounts for 3 full weeks of lecture). I generally do not drop you myself so don't expect that I will. 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.) 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 frowned upon for assignments to be turned in. All assignments will be due turned in to the appropriate assignment section (Blackboard or other online program) before class starts that day. That means if class starts at 11:00 AM the assignment is in Blackboard by 10:59.59 AM. After this time, 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 meant to respect both timeliness and flexibility of deadlines and will be 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, I take academic dishonesty and plagiarism very seriously. Citations are your friend.

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.

TENTATIVE LECTURE SCHEDULE

	TOPIC	Chapter
Week 1 **Aug 26th**	Welcome/ Student Expectations/ Syllabus	
Aug 28th	The Study of Life	Chapter 1
Week 2 **Sept 2th**	Labor Day no lecture Mondays	
Sept 4th	Chemical Context of life and Water	Chapter 2.1, 2.2
Week 3 **Sept 9th**	Carbon	Chapter 2.3
Sept 11th	Macromolecules	Chapter 3.1, 3.2
Week 4 **Sept 16th**	Macromolecules	Chapter 3.3, 3.4, 3.5
Sept 18th	Macromolecules	
	Review ***Journal Summary 1 due 9/18***	
Week 5 **Sept 23th**	**Exam I**	
Sept 25th	The Cell	Chapter 4
Week 6 **Sept 30th***	Plasma Membranes Structure and Function	Chapter 5
Oct 2*	Cellular Metabolism: How Cells Function	Chapter 6
Week 7 **Oct 7th***	Cellular Respiration	Chapter 7.1, 7.2, 7.3
Oct 9th*	Cellular Respiration	Chapter 7.4, 7.5, 7.6, 7.7
Week 8 **Oct 14th**	Photosynthesis	Chapter 8
Oct 15th	Review	
Week 9 **Oct 21st***	**Exam II**	
Oct 22	Cell Communication and Signaling	Chapter 9
Week 10 **Oct 28th**	Cellular Reproduction	Chapter 10
Oct 30th	Meiosis and Sexual Reproduction	Chapter 11
Week 11 **Nov 4th**	Mendelian Genetics and Heredity	Chapter 12
Nov 6th	Modern Genetics and Inheritance	Chapter 13
Week 12 **Nov 11th**	Review	
Nov 13th	**Exam III**	
Week 13 **Nov 18th**	DNA the Molecules of heredity	Chapter 14
Nov 20th	Genes and Proteins	
	11/20 Journal Summary 2 Due	Chapter 15
Week 14 **Nov 25-7th**	**Thanksgiving No Class!! (:**	
Week 15 **Dec 2nd**	Review	
Dec 4th	**STUDY DAY!!**	

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 (**Course Instructor will be present to help with writing questions**)
Week 10	Oct 21*	Cellular Respiration and Photosynthesis Part 1
Week 10	Oct 28	Cellular Respiration and Photosynthesis Part 2
Week 11	Nov 4	Nucleic Acids
Week 12	Nov 11	Presentation Workshop
Week 13	Nov 18	Group Presentations
Week 13	Nov 20	**Thanksgiving No More Labs**

*= Attendance to Dr Thorton Larson's lecture on MW 09:30-10:45 a.m. in WSB 201 will be required! Please make sure you attend his lectures. Please get with him to discuss best lab section to attend. Attendance will be taken in each section and will be noted. Online assignments will also be required via Hawkes Learning.