

BIOL 2301 Human Anatomy & Physiology Lecture & Lab (3 credit hours)
SRSU Syllabus and Course Information Fall 2023

Instructor: Ms. Anne Marie Hilscher
Office: WSB 220
Phone: 432.837.8820
Class time: TR 9:30-10:45 WSB 201

Office hours: M 9-11 & 2-3; W 9-11; R 2-3; F by appt. Please email me at any time. I will respond within 24 hours (up to 48 hours on weekends).
Email: ahilscher@sulross.edu
Type "BIOL 2301" in the subject line & sign your email

- **Optional Textbook:** Saladin, K. S. *Anatomy and Physiology*. or another comparable A&P text
- **Free online open-source textbook:** <https://openstax.org/details/books/anatomy-and-physiology>
*The important thing is for you to have a textbook that is useful to **you** personally.*

Course Description: The purpose of this course is to introduce students to the importance of the human body and its various organ systems. This is designed as the first semester of a two-semester course, and will cover basic internal life processes, as well as emphasizing the skeletal, muscular, nervous, and endocrine systems. Combined with the laboratory, students should come away with an understanding of the above systems, mitosis, protein synthesis, and basic cellular functionality.

Student Learning Objectives for this Course:

1. Students will define the cellular aspects of human organ systems and identify the part of the cell.
2. Students will illustrate knowledge of the central nervous system.
3. Students will diagram the location of muscles and bones within the body and explain their use and function.
4. Students will demonstrate an understanding of the mechanics of muscle movement
5. Students will apply the genetic code to solving protein synthesis questions
6. Students will compare and contrast the use and effectiveness of the various senses.

Grading:

LECTURE		LAB (You'll receive a separate lab syllabus.)	
Student Introduction (due online 9/07)	20	Lab Practicals	120
Assignments (2 @ 50 pt ea)	100	Lab Quizzes	60
Lecture Exams (4 @ 100 pt ea)	400	Lab Handouts	60
TOTAL	520	TOTAL	240

ATTENDANCE, DUE DATES, & EXAMS.

- If you arrive for an exam after other students have completed and turned in their exams, you will not be allowed to take the exam.
- Missing any exam without notifying me in advance will result in a zero for that exam grade—no exceptions. Exam dates are in the syllabus, so plan ahead.
- You'll have five days (including weekends) from the test date to make up the missed exam.
- Assignment due dates are listed. If you know you'll be gone (appt, athletics, etc.) submit the assignment *before you leave*—10% penalty each day late.
- If you fail to appear (or appear late) for your scheduled makeup exam, you will receive a zero.
- Finally, if you miss a class, it is your responsibility to get notes and other important information from a classmate. I will not provide copies of my notes.

Tentative Schedule

Date	Lecture topic
Aug 29	Introduction; Major themes of A&P
Aug 31	Chemistry of Life review
Sept 05	Cellular Form/Function; Membranes
Sept 07	Histology; <i>Student Intro due</i>
Sept 12	The Integumentary System
Sept 14	The Integumentary System, cont.; <i>Assignment #1 due</i>
Sept 19 (Tuesday)	Exam I
Sept 21	Cellular Respiration
Sept 26	Cellular Respiration, cont.
Sept 28	DNA Structure & Replication
Oct 03	Protein Synthesis
Oct 05	Human Genome
Oct 10	Nervous System Basics
Oct 12	Nervous System Basics, cont.
Oct 17 (Tuesday)	Exam II
Oct 19	Membrane Potentials
Oct 24	Neurons
Oct 26	Synapses
Oct 31	Neurotransmitters
Nov 02	Central Nervous System
Nov 07	Brain Functions
Nov 09	Brain Functions, cont.
Nov 14 (Tuesday)	Exam III
Nov 16	Olfaction; Gustation
Nov 21	Vision
Nov 23	Thanksgiving Holidays – NO CLASS
Nov 28	Skeletal muscle
Nov 30	Skeletal muscle, cont. <i>Assignment #2 due</i>
Dec 05	Regulation of Contraction and Design of Muscles
Dec 07	STUDY DAY—NO CLASSES
Dec 11 (Monday)	Exam IV 11 Dec @ 8:00-10:00 AM

STUDENT LEARNING OUTCOMES (SLOS) The biology student graduating with a BS in Biology should be able to:

- 1) The student will be able to demonstrate an understanding of basic biological concepts, including but not limited to evolution via natural selection, cell theory, and the role and function of DNA.
- 2) The student will be able to demonstrate utilization of various field techniques toward addressing scientific questions in the specific discipline. These field techniques can include, but are not limited to, plant collection and processing, various animal collection techniques, ecological surveying and sampling, and biodiversity indexing.
- 3) The student will be able to use biological instrumentation to solve biological problems using standard observational strategies.
- 4) The student will develop writing skills by summarizing and critiquing recent relevant biological literature.

CORE OBJECTIVES ADDRESSED:

- 1) Communication Skills – Students will effectively communicate the results of scientific investigations, using oral, written, and visual communication, either in group discussions or on written exams.
- 2) Critical Thinking Skills – Students will include creative thinking, innovation, inquiry, and analysis required to relate new information with previous information in a way that demonstrates the diversity and similarity due to evolutionary ancestry.
- 3) Empirical and Quantitative Skills – Students will use basic math skills to solve problems (e.g., related to genetic outcomes, cellular energy production, and probability) resulting in informed conclusions.
- 4) Teamwork Skills – Students will work effectively with others to support a shared goal during lab sessions on activities, such as dissections, problem solving, and other experimental procedures.

MARKETABLE SKILLS: A student getting a degree in the biological sciences would be expected to acquire the following marketable skills by graduation.

- 1) Students will be able to organize, analyze, and interpret data.
- 2) Students will be proficient at using presentation software.
- 3) Students will acquire experience in managing time and meeting deadlines.
- 4) Students will gain the ability to speak effectively and write concisely about scientific topics.
- 5) Students will acquire experience and guidance in the development of professional email correspondence.

SRSU Attendance Policy. Roll will be taken during each class meeting. The SRSU catalog states “The instructor may, at their discretion, drop a student from a course when the student has a total of nine absences in lecture and three absences in lab. An absence is defined as non-attendance in fifty minutes of class. Exams must be taken on the scheduled exam date that will be announced at least a week prior unless other arrangements have been made with the instructor. Exams must be made up within a week from the scheduled date. **RULE TO LIVE BY: DON’T MISS ANY CLASSES!** If you absolutely must miss, make sure you let me know before.

Academic Integrity. Students in this class are expected to demonstrate scholarly behavior and academic honesty in the use of intellectual property. A scholar is expected to be punctual, prepared, and focused; meaningful and pertinent participation is appreciated. Examples of academic dishonesty include but are not limited to: 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.

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 Mary Schwartz Grisham, M.Ed., LPC, SRSU's Accessibility Services Coordinator at 432-837-8203 (please leave a message and we'll get back to you as soon as we can during working hours), or email mschwartz@sulross.edu Our office is located on the first floor of Ferguson Hall (Suite 112), and our mailing address is P.O. Box C-122, Sul Ross State University, Alpine, Texas, 79832.

Technical Support. SRSU 24/7 Blackboard Technical Support: Toll-Free: 888.837.6055. Email: blackboardsupport@sulross.edu

SRSU Library Services. The Bryan Wildenthal Memorial Library in Alpine 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 by phone (432-837-8123).

The Southwest Texas Junior College (SWTJC) Libraries at Uvalde, Del Rio, and Eagle Pass offer additional access to library spaces and resources. Del Rio, Eagle Pass, and Uvalde students may also use online resources available through SWTJC website, <https://library.swtjc.edu>. The SWTJC Libraries serve as pick-up locations for Interlibrary Loan (ILL) and Document Delivery from the Alpine campus.

Classroom Climate of Respect. Importantly, this class will foster free expression, critical investigation, and 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 based on 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.

Diversity Statement. SRSU aims to create a learning environment for my students that supports a diversity of thoughts, perspectives, and experiences, and honors your identities (including race, gender, class, sexuality, religion, ability, socioeconomic class, age, nationality, etc.). We also understand that the crisis of COVID, economic disparity, health concerns, or even unexpected life events could impact the conditions necessary for you to succeed. Our commitment is to be there for you and help you meet the learning objectives of this course.