

BIOLOGY 1313 GENERAL ZOOLOGY (3 CREDIT HOURS)
Spring 2024 Sul Ross State University

Instructor: Ms. Anne Marie Hilscher **Office:** WSB 220
Lecture: MWF 9:00-9:50 WSB 101 **Office Hours:** MWF 10-11; M 2-3; TR 11-12; by appt.
Email: ahilscher@sulross.edu (Type **Zoology** in subject line)

TEXTBOOKS:

Lecture: No textbook required. Any college-level Zoology textbook may be used as a reference.

Lab: If you are taking the lab, your lab requirements will be provided by your lab TA.

COURSE DESCRIPTION

General Zoology provides a general survey of the animal kingdom, which considers the fundamentals of biological facts, laws, and principles as they apply to animals and functions of the organs and systems of representative animals.

COURSE OBJECTIVES

- 1) Students will identify, recall, and label basic cellular structures and processes.
- 2) Students will identify animal-like protists and classify organisms within the kingdom Animalia
- 3) Students will be able to summarize and explain the processes of evolution.
- 4) Students will be expected to demonstrate understanding of the genetic code and how it relates to protein synthesis.
- 5) Students will understand physiological systems, such as aerobic respiration and reproduction

ATTENDANCE

- Missing any test/exam without notifying me in advance will result in a zero for that exam grade—no exceptions. You must email or tell me in person **BEFORE** the test/exam begins.
- You will have **FIVE** days (including weekends) from the test date to make up a missed test; often, the makeup will be different from the original exam. If you fail to appear (on time) for your scheduled test or a makeup test, you will be given a zero.
- If you arrive for test/exam after other students have completed and turned in their exam, you will not be allowed to take the test/exam.
- Finally, if you miss a class, it is your responsibility to get notes and other important information from a classmate.

GRADING

Student Introduction	20
Discussions (2 @ 30 pts)	60
Exams (3 @ 100 pts)	300
Final Exam	120 (comprehensive)
TOTAL	500 points

The use of books, notes, cell phones, etc. during exams is not permitted. The only item allowed at your desk during an exam is a writing implement.

WEEK	DATE	TOPICS
1	M 15 Jan	NO CLASS – MLK DAY
	W 17 Jan	Introduction to Zoology and the Ecological Perspective
	F 19 Jan	The Chemistry of Life
2	M 22 Jan	The Chemistry of Life, cont.
	W 24 Jan	Cells, Tissues, Organs
	F 26 Jan	Cell Division and Inheritance (Mitosis & Meiosis) <i>Student Introductions due; Discussion #1 initial response due</i>
3	M 29 Jan	DNA Structure, DNA Replication
	W 31 Jan	Protein Synthesis
	F 02 Feb	Animal Taxonomy; <i>Discussion #1 two replies due</i>
4	M 05 Feb	Animal Taxonomy, cont.
	W 07 Feb	Exam #1
	F 09 Feb	Cellular Respiration
5	M 12 Feb	Cellular Respiration, cont.
	W 14 Feb	Evolution: History & Evidence
	F 16 Feb	Evolution: Gene Frequencies
6	M 19 Feb	Evolution: Gene Frequencies, cont.
	W 21 Feb	Reproduction & Development
	F 23 Feb	Reproduction & Development, cont.
7	M 26 Feb	Poriferans
	W 28 Feb	Cnidarians
	F 01 Mar	Platyhelminthes
8	M 04 Mar	Catch Up and Review
	W 06 Mar	Exam #2
	F 08 Mar	Annelids
9	NO CLASSES—SPRING BREAK MARCH 11-15	
10	M 18 Mar	Annelids, cont.; Nematodes
	W 20 Mar	Nematodes, cont.
	F 22 Mar	Intro to Mollusks
11	M 25 Mar	Mollusks, cont.
	W 27 Mar	Intro to Arthropods
	F 29 Mar	Arthropods, cont.
12	M 01 Apr	Intro to Chordates
	W 03 Apr	Fishes
	F 05 Apr	Fishes, cont.; <i>Discussion #2 initial response due</i>
13	M 08 Apr	Amphibians
	W 10 Apr	Amphibians, cont.
	F 12 Apr	Reptiles; <i>Discussion #2 two replies due</i> LAST DAY TO WITHDRAW WITH A "W."
14	M 15 Apr	Reptiles, cont.
	W 17 Apr	Exam #3
	F 19 Apr	Birds
15	M 22 Apr	Birds, cont.
	W 24 Apr	Mammals
	F 26 Apr	Mammals, cont.
16	M 29 Apr	Principles of Ecology
	W 01 May	LAST CLASS -- Wrap-up and Review
17	Final Exam. See SRSU Final Exam schedule for date and time.	

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 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 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.

Texas Educator Standards. For students seeking certification, this course will cover aspects of the following SBEC educator standards and competencies for Science EC-6 Standard IV:

Competency 002 (History and Nature of Science): *The teacher understands the history and nature of science, the process and role of scientific inquiry and the role of inquiry in science instruction.* A,J,M,N,P

Competency 003 (Impact of Science): *The teacher understands how science impacts the daily lives of students and interacts with and influences personal and societal decisions.* S,T,U

Competency 004 (Concepts and Processes): *The teacher knows and understands the unifying concepts and processes that are common to all sciences.* C,F,H

Competency 005 (Students as Learners and Science Instruction): *The teacher has theoretical and practical knowledge about teaching science and about how students learn science.* C,F,G,H

Competency 006 (Science Assessment): *The teacher knows the varied and appropriate assessments and assessment practices for monitoring science learning in laboratory, field and classroom settings.* B,C,D

Competency 011 (Structure and Function of Living Things): *The teacher understands the structure and function of living things.* H,I,J,L

Competency 012 (Reproduction and the Mechanisms of Heredity): *The teacher understands reproduction and the mechanisms of heredity.* A,B,C,E

Competency 013 (Adaptations and Evolution): *The teacher understands adaptations of organisms and the theory of evolution.* A,F,G

Competency 014 (Organisms and the Environment): *The teacher understands the relationships between organisms and the environment.* B,C,D,E,F