

BIOLOGY 1313_002 GENERAL ZOOLOGY (3 CREDIT HOURS)
Fall 2021 Sul Ross State University

Instructor: Missy Schenkman **Office Hours:** M 11:00-12:00; R 2:30-3:30; or by appt.
Office: Midland College; Fox 102 **Lecture:** WEB
Email: msch4288@sulross.edu (Type **Biology 1313** in subject line)

TEXTBOOK

NOT REQUIRED. ANY COLLEGE-LEVEL TEXT WILL WORK. THIS IS THE TEXTBOOK I WILL BASE LECTURES ON:
Miller, Stephen A. and John P. Harley. 2013. *Zoology*, 11th edition. McGraw Hill.
ISBN 978-1-260-16204-2

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

PLEASE SEE INSTRUCTOR ADDENDUM FOR SPECIFIC COURSE POLICES FOR THIS WEB CLASS

GRADING

| | |
|---------------------|-------------|
| Assignments/Quizzes | 30% |
| <u>Exams</u> | <u>70%</u> |
| TOTAL | 100% |

The use of books, notes, cell phones, etc. during exams is not permitted. You will be required to show the area around your computer to ensure this!

| Tentative Course Schedule | | | |
|---------------------------|--|--|--|
| WEEK | DATE | Topics | Notes: |
| 1 | 8/23-8/29 | Zoology & the Ecological Perspective | <i>Syllabus Quiz and Student Introductions Due SUNDAY, 8/29 by 11:59pm</i> |
| | | The Chemistry of Life | |
| 2 | 8/30-9/5 | Cells, Tissues, Organs | <i>Quiz 1 Due 9/5 by 11:59 pm</i> |
| | | Cell Division and Inheritance: Mitosis & Meiosis | |
| 3 | 9/6-9/12 | DNA Structure, DNA Replication | <i>Quiz 2 and Assignment #1 due 9/12 by 11:59 pm</i> |
| | | Protein Synthesis | |
| 4 | 9/13-9/19 | Animal Taxonomy | Comprehension Test #1 Due 9/19 by 11:59 pm |
| | | Cellular Respiration | |
| | | | |
| 5 | 9/20-9/26 | Evolution: History & Evidence | Begins Exam 2 material |
| | | Evolution: Gene Frequencies | <i>Quiz 3 Due 9/26 by 11:59 pm</i> |
| 6 | 9/27-10/3 | Reproduction & Development | <i>Quiz 4 Due 10/3 by 11:59 pm</i> |
| 7 | 10/4-10/10 | Poriferans | <i>Quiz 5 Due 10/10 by 11:59 pm</i> |
| | | Cnidarians | |
| 8 | 10/11-10/17 | Platyhelminthes | End Exam 2 material |
| | | Annelids | Begins Exam 3 material |
| | | | Comprehension Test #2 Due 10/17 by 11:59 pm |
| 9 | 10/18-10/24 | Nematodes | <i>Quiz 6 Due 10/24 by 11:59 pm</i> |
| | | Intro to Arthropods | |
| 10 | 10/25-10/31 | Crustaceans | <i>Quiz 7 Due 10/31 by 11:59 pm</i> |
| | | Hexapods | |
| 11 | 11/1-11/7 | Intro to Chordates | <i>Quiz 8 and Assignment 2 Due 11/7 by 11:59 pm</i> |
| | | Fishes | |
| | | Amphibians | |
| 12 | 11/8-11/14 | Reptiles | <i>Quiz 9 Due 11/14 by 11:59 pm</i> |
| 13 | 11/15-11/21 | Birds | End Exam 3 material |
| | | | Comprehension Test #3 Due 11/21 by 11:59 pm |
| 14 | 11/22-11/28 | Mammals: Part 1 | <i>Quiz 10 Due 12/5 by 11:59 pm</i> |
| | Nov 24-28 NO CLASSES -Thanksgiving Holidays | | |
| 15 | 11/29-12/5 | Mammals: Part 2 | |
| | | Comprehensive review | |
| 16 | Final Comprehensive Exam December ___ @ _____ | | |

Distance Education Statement: Students enrolled in distance education courses have equal access to the university's academic support services, library resources, and instructional technology support. For more information about accessing these resources, visit the SRSU website. Students should submit online assignments through Blackboard, which requires secure login information to verify students' identities and to protect students' information. The procedures for filing a student complaint are included in the student handbook. 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.

STUDENT LEARNING OUTCOMES (SLOs)

The graduating 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.

ADA Statement: Sul Ross State University is committed to equal access in compliance with the Americans with Disabilities Act of 1973. Students with qualifying disabilities who seek accommodations must initiate a request for a meeting for accessibility services. Students seeking accessibility services must contact Rebecca Greathouse Wren, M.Ed., LPC-S, Counseling & Accessibility Services, Telephone: 432-837-8203, or email: rebecca.wren@sulross.edu. For more information see: <https://www.sulross.edu/page/1384/accessibility-services>

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).

COVID-19. COVID-19 Response: Hand sanitizer stations are placed at all building entrances and students are encouraged to use them in addition to handwashing. Given the high level of contagion of this coronavirus and the implications of its disease COVID-19, it's highly recommended you wear a mask and socially distance in public spaces.

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