BIOLOGY 1313_001 GENERAL ZOOLOGY (3 CREDIT HOURS)
Spring 2022 Sul Ross State University

Instructor: Ms. Anne Marie Hilscher **Office:** WSB 220
Lecture: MWF 9:00 am -9:50 am, WSB 101 **Office Hours:** MWF 8:30-9:00 & 10-11:30; M 1:00-3:00; TR 2-3:00; & by appt.
Email: ahilscher@sulross.edu (Type **Biology 1313_001** 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 given 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.
- 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
Comprehension Tests (3 @ 100 pts)	300
Assignments (2 @ 40 pts ea)	80
Final lecture exam	120 (comprehensive)
TOTAL	**520 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	MWF 9:00-9:50
1	M Jan 10	Zoology & the Ecological Perspective
	W Jan 12	Animal Taxonomy
	F Jan 14	Animal Taxonomy, cont.
2	**M Jan 17**	**NO CLASSES – Martin Luther King, Jr. holiday**
	W Jan 19	The Chemistry of Life
	F Jan 21	The Chemistry of Life, cont.; ***Student Introductions due***
3	M Jan 24	Cell Division and Inheritance (Mitosis & Meiosis)
	W Jan 26	DNA Structure, DNA Replication
	F Jan 28	DNA Replication, cont.; ***A#1 due***
4	M Jan 31	Protein Synthesis
	W Feb 02	Current Topic in Zoology – TBA
	F Feb 04	Cellular Respiration
5	M Feb 07	Cellular Respiration, cont.
	W Feb 09	**Comprehension Test #1**
	F Feb 11	Evolution: History & Evidence
6	M Feb 14	Evolution: Gene Frequencies, cont.
	W Feb 16	Reproduction & Development
	F Feb 18	Reproduction & Development, cont.
7	M Feb 21	Poriferans
	W Feb 23	Cnidarians
	F Feb 25	Platyhelminthes
8	M Feb 28	Annelids
	W Mar 02	Annelids, cont.
	F Mar 04	Mollusks
9	**NO CLASSES – SPRING BREAK MARCH 07-11**	
10	M Mar 14	Mollusks
	W Mar 16	**Comprehension Test #2**
	F Mar 18	Intro to Arthropods
11	M Mar 21	Arthropods, cont.
	W Mar 23	Arthropods: Crustaceans
	F Mar 25	Arthropods: Hexapods, Myriapods
12	M Mar 28	Intro to Chordates
	W Mar 30	Fishes
	F Apr 01	Fishes, cont.
13	M Apr 04	Amphibians; ***A#2 due***
	W Apr 06	Amphibians: Cane Toads
	F Apr 08	Reptiles
14	M Apr 11	Reptiles, cont.
	W Apr 13	**Comprehension Test #3**
	F Apr 15	**NO CLASSES – Good Friday holiday**
15	M Apr 18	Birds
	W Apr 20	Birds: Crows
	F Apr 22	Mammals
16	M Apr 25	Mammals, cont.
	W Apr 27	LAST CLASS -- Wrap-up and Review
17	***Final Exam Tuesday, 03 May, from 8:00 – 10:00 (IN PERSON)***	

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: Any student who because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor as soon as possible to make necessary arrangements. If an accommodation is needed, students must present their accommodation letter, obtained from Accessibility Services, as soon as possible. Please note that instructors are not permitted to provide classroom accommodations to a student until the appropriate verification has been received. Accessibility Services is in Ferguson Hall room 112. You can make an appointment by calling Mary Schwartze Grisham at 432 837-8203.

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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.

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