BIOL 1307 – Biology 2 for Majors Spring 2024 Syllabus

INSTRUCTOR AND COURSE DESCRIPTION

Instructor: Dr. Thornton R. Larson **Office Hours:** MW 9 AM to 11 AM

T 4 PM to 7 PM

Office: WSB 221 **Office Phone:** (432)837-8084

Email: trl21jz@sulross.edu

Lectures: TR 11 AM to 1215 PM **Laboratory:** Depends on lab section

Course Description

This course is meant to be part 2 of an overview of biology as a whole. For those of you who enjoy things larger than a single cell, this is the class for you. This course will start by looking at species origins and how populations differentiate from one another to become reproductively isolated species. We will review several major groups within organismal biology, including Prokaryotes, Protists, Fungi, Plants, and Animals. After establishing the whats that make up the whos, we will delve into some basic ecological concepts as we work toward understanding how we look at species as individuals, groups, groups of groups, and then global ideas.

This course will set you up as a route through biology at Sul Ross State University as we focus on an organismal approach to the subject. This means we love our species and how they interact in the larger world. While still considered a survey of the field, this course will build your knowledge of the larger organisms in biology and how we study them. These basic ideas will allow you to have a better understanding of the world around you and its functionality between living and non-living elements

This course will expect you to be able to find and read current scientific literature and express that knowledge in a digested format (Summary) to other people. You will have access to a learning community through Codon Learning, in which you will interact more consistently with the materials presented in the course. We want you to come away from this course with a passion for nature and an understanding of how these foundational elements will build on any career within science.

I look forward to instructing this course this semester and strongly encourage you to come to my office hours, or whenever you feel the need and my door is open.

Required Materials

- Internet to connect to **Openstax biology textbooks** the link for this particular textbook is: https://openstax.org/details/books/biology-2e
- Enrollment into Codon Learning is also required for this course
- Labs will be posted on Blackboard

Exams and Grading

Lecture and Lab are disconnected grades that have individual weights regarding how classes are reported. It is, therefore, in your best interest to keep full attendance and keep up with assignments in both aspects of the course.

Lecture:

3 lecture exams (E1 13.5%, E2 16.5%, E3 20%)	50%
3 Summary Papers (S1 8%, S2 10%, S3 12%)	30%
Attendance	10%
Codon Assignments	10%

Lab:

Prelab Quizzes (8)	10%
Group Assignments (4)	20%
Individual Assignments (2)	20%
Group Presentation (1)	25%
Research Summary (1) (Individual)	25%

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. Understand the Origin of Life
2. Explain the different classifications of organisms and their differences
3. Demonstrate basic steps of the evolutionary process through organismal classification
4. Demonstrate basic ideas of Ecology, Populations, and Conservation
5. Recognize the scope of understanding presented in biology and how one can relate ideas from a single organism to a functional Ecosystem to Biosphere.

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.

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 the 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 lectures). 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 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).

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 Schwartze Grisham, LPC, SRSU's Accessibility Services Coordinator at 432-837-8203 or email mschwartze@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 DISHONESTY:

The University expects all students to engage in all academic pursuits in a manner that is beyond reproach and to maintain complete honesty and integrity in the academic experiences both in and out of their classroom. The University may initiate disciplinary proceeding against a student accused of any form of academic dishonesty, including but not limited to, cheating on an examination or other academic work, plagiarism, collusion, and the abuse of resource materials. "Cheating" includes 1. Copying from another student's test paper, laboratory report, other report, or computer files, data, listings, and/or programs, or allowing another student to copy from same. 2. Using, during a test, materials not authorized by the person giving the test. 3. Collaborating, without authorization, using, buying, selling, stealing, transporting, soliciting, copying, or possessing, in whole or in part, the contents of an non-administered test. 5. Substituting for another student; permitting any other person, or otherwise assisting any other person to substitute for oneself or for another student in the taking of an examination or test or the preparation of academic work to be submitted for academic credit. 6. Bribing another person to obtain a non-administered test or information about a non-administered test. 7. Purchasing, or otherwise acquiring and submitting as one's own work any research paper or other writing assignment prepared by an individual or firm. This section does not apply to the typing of a rough and/or final version of an assignment by a professional typist. 8. "Plagiarism" means the appropriation and the unacknowledged incorporation of another's work or idea in one's own written work offered for credit. 9. "Collusion" means the unauthorized collaboration with another person in preparing written work offered for credit. 10. "Abuse of resource materials" means the mutilation, destruction, concealment, theft or alteration of materials provided to assist students in the mastery of course materials. 11. "Academic work" means the preparation of an essay dissertation, thesis, report, problem, assignment, or other project that the student submits as a course requirement or for a grade. 12. "Falsification of Data" means the representation, claim, or use of research, data, statistics, records, files, results, or information that is falsified, fabricated, fraudulently altered, or otherwise misappropriated or misrepresented. All academic dishonesty cases may be first considered and reviewed by the faculty member. If the faculty member believes that an academic penalty is necessary, he/she may assign a penalty but must notify the student of his/her right to appeal to the department chair, the dean and eventually, to the Provost and Vice President for Academic and Student Affairs before imposition of the penalty. At each step in the process, the student shall be entitled to written notice of the offence and/or of the administrative decision, an opportunity to respond, and an impartial disposition as to the merits of his/her case. The decision of the Provost and Vice President for Academic and Student Affairs shall be final.

I will reiterate here that I take academic dishonesty and plagiarism very seriously. I will report you and give you a zero for the assignment, test, etc., for such indiscretions on the first offense and remove you from the course with a grade of F for consistent offenses.

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.

For Remote/Online Courses Only - SRSU Distance Education Statement.

Students enrolled in distance education courses have equal access to the university's academic support services, such as library resources, online databases, and instructional technology support. For more information about accessing these resources, visit the SRSU website. Students should correspond using Sul Ross email accounts and submit online assignments through Blackboard, which requires secure login. 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. Directions for filing a student complaint are located in the student handbook.

TENTATIVE LECTURE SCHEDULE

	TOPIC	Chapter
Week 1 **Jan 15**		
	MLK, Jr. Day (No Class)	
	Introduction to Course, How to find/read papers, study suggestions for class, College 101	
Week 2 **Jan 22**		
	Origin of Species	18
	Evolution of Populations	19
Week 3 **Jan 29**		
	History of Life on Earth	20
Week 4 **Feb 5**		
	Prokaryotes	22
	Protists	23
Week 5 **Feb 12**		
	Review	
	EXAM 1	

Week 6 **Feb 19**		
	Fungi	24
	Seedless Plants	25
Week 7 **Feb 26**		
	Seed Plants	26
	Intro to Animal Diversity	27
Week 8 **March 4**		
	Invertebrates	28
Week 9 **March 11**	**SPRING BREAK**	
Week 10 **March 18**		
	Vertebrates	29
Week 11 **March 25**		
	Review	
	EXAM 2	
Week 12 **April 1**		
	Animal Reproduction	43
	Introduction to Ecology and Biosphere	44
Week 13 **April 8**		
	Population and Community Ecology	45
Week 14 **April 15**		
	Ecosystems	46
Week 15 **April 22**		
	Conservation Biology and Biodiversity	55
Week 16 **April 29**		
	Review	
	No Class Wed/Thurs for Mental Health Day	
Week 16	**FINALS**	

LAB SCHEDULE

	DATE	TOPIC
Week 1	Jan 15	First Week of Class No Lab
Week 2	Jan 22	Animal Behavior Lab
		Individual Assignment
Week 3	Jan 29	Hardy-Weinberg Lab?
		In-Class Assignment
Week 4	Feb 5	Community Ecology Setup and Predictions
		Group Assignment
Week 5	Feb 12	Community Ecology Data Collection
		Group Assignment (Paraphrasing), Lab Report Assigned
Week 6	Feb 19	Morphology lab (Need ideas unless we have collection of Hominid skull models
		Group Assignment
Week 7	Feb 26	Molecular Evidence of Evolution (Need Laptops)
		Group Assignment
Week 8	March 4	Human Population Dynamics (Need to design
		Individual Assignment
Week 9	March 11	**SPRING BREAK**
Week 10	March 18	Setup Planarian Lab and make predictions
		Group Assignment
Week 11	March 25	How to Design a Poster Presentation
		Assign Poster Presentation
Week 12	April 1	Final data collection of Planarians
Week 13	April 8	Poster Presentation