SUL ROSS STATE UNIVERSITY
GENERAL BOTANY, BIOL 1311, Fall 2014

Instructor: Dr. Martin Terry
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(Please include **"Botany" or "1311"** in the subject field of your email, so that I'll know which course you're writing to me about.)

Office Hours: M 3:00–5:00 p.m., T 2:00–5:00 p.m., or by appointment.
Drop in at random if you feel lucky. If I'm in the office, you're welcome.

Time and Venue of Lecture: TR 11:00–12:15, WSB 101

Textbooks: Evert and Eichhorn, *Raven Biology of Plants*, 8th Edition.
Zech and Powell, *Discover the Chihuahuan Desert: General Botany. A Laboratory Manual for Biology 1401*, 2nd Edition.

OBJECTIVES OF THIS COURSE (INCLUDING LAB):

- Understand the role of key figures and events in the history of biological science.
- Understand evolution and the processes that influence it
- Understand terminology relevant to biological laboratory and field work.
- Explore the applications of scientific skills and knowledge to daily living.
- Understand the safe and proper use of laboratory and field equipment and supplies.
- Understand the principles of experimental laboratory research and proper reporting techniques.
- Understand principles of classification and naming of living organisms.
- Recognize major cell structures and their functions.
- Analyze cell division and reproduction.
- Understand aerobic respiration and photosynthesis—their similarities and differences.
- Be able to identify the processes of molecular biology—replication, transcription and translation—and the roles of DNA and RNA in the process of protein synthesis.
- Understand the structure and functions of genes and chromosomes.
- Compare the fundamental concepts of Mendelian genetics.
- Analyze characteristics of fungi, algae, mosses, and ferns.
- Analyze characteristics of gymnosperms and angiosperms.
- Analyze characteristics of roots, stems, and leaves.
- Understand mechanisms of plant reproduction.
- Understand the effects humans have on the environment and vice versa.

GRADING: Grades as a percentage of 900 total points will be reported as letter grades according to the following percentage intervals: A = 89.5–100%. B = 79.5–89.5%. C = 69.5–79.5%. D = 59.5–69.5%. F = 0–59.5%. For borderline grades, the instructor may apply criteria which are qualitative rather than quantitative — e.g., class participation or other evidence of effort in the course or lack thereof — to determine whether to round the letter grade up or down.

POINT DISTRIBUTION:

Three Lecture Exams @ 100 points	300
Final Exam (comprehensive)	150
Lecture quizzes: 10 pop quizzes @ 10 points =	100
TOTAL POINTS LECTURE:	550
TOTAL POINTS LAB:	350
TOTAL POINTS COURSE:	**900**

Tentative Lecture Schedule and Reading Assignments:

DATE	LECTURE TOPICS	CHAPTER	PAGES
AUG 26	Introduction **Get textbook ASAP!!!!!!!!**	1	1-15
AUG 28	Introduction, Chemistry of Life (Carbs)	1, 2	1-15, 16-37
SEP 2	**Labor Day, no class**		
SEP 4	Chemistry of Life (Lipids, Proteins)	2	22-29
SEP 6	Chemistry of Life (Nucleic Acids, Secondary Metabolites)	2	29-35
SEP 9	Cell Structure & Function	3	38-74
SEP 11	Growth, Cell Cycle, Mitosis, Cytokinesis	3	62-74
SEP 13	Sexual Reproduction; Meiosis	8	152-159
SEP 16	Molecular Biology (DNA, RNA: how they function)	9	174-181
SEP 18	Molecular Biology (Protein synthesis)	9	180-191
SEP 20	Diffusion of Chemicals through Membranes	4	75-81
SEP 23	**FIRST EXAM**		
SEP 25	Other kinds of movement through membranes	4	82-91
SEP 27	Flow of Energy, Oxidation & Reduction; Enzymes	5	94-106
SEP 30	Photosynthesis (Solar Energy —> Chemical Energy)	7	122-149
OCT 2	Photosynthesis	7	122-149
OCT 7	Respiration (Chemical Energy —> ATP Energy)	6	107-121
OCT 9	Respiration	6	107-121
OCT 14	Genetics	8	152-173
OCT 16	Genetics	8	152-173
OCT 21	Evolution	11	209-231
OCT 23	Evolution	11	209-231
OCT 28	**SECOND EXAM**		
OCT 30	Nomenclature, Taxonomy & Systematics	12	234-240
OCT 23	Prokaryotes & Eukaryotes; Alternation of Generations	12, 17	240-255; Fig. 17-8
OCT 25	Tissues and Organs of the Plant Body	23	538-557
OCT 28	Roots	24	558-578
OCT 30	Shoots (stems, leaves)	25	579-613
NOV 4	Nonvascular Plants: Bryophytes	16	366-390
	Moss Life Cycle		Fig. 16-15
NOV 6	Seedless Vascular Plants	17	391-429
	Lycopodium Life Cycle		Fig. 17-16
NOV 11	Seedless Vascular Plants	17	391-429
	Polypodium Life Cycle		Fig. 17-35
NOV 13	Vascular Seed Plants: Gymnosperms	18	430-456
	Pine Life Cycle	18	Fig. 18-19
NOV 18	Vascular Seed Plants: Angiosperms	19	457-476
	Angiosperm Life Cycle		Fig. 19-22
NOV 20	Angiosperms: Monocots, Eudicots	20	477-500
NOV 25	Angiosperms: Flowers, Fruits	20	477-500
NOV 18	Ecology	www.whfreeman.com/raven8e	
NOV 20	Plants and People	21	501-523
NOV 22	Plants and People	21	501-523
NOV 25	**THIRD EXAM**		
NOV 26–28	**THANKSGIVING HOLIDAYS**		
DEC 2	Plant Hormones; review	27	638-659
DEC 4	Dead Day (R.I.P.)		
DEC 9	**FINAL EXAM**: Tuesday, 10:15 a.m., WSB 101		

ATTENDANCE is required in both lecture and lab. Students will be dropped with an F for excessive absences, defined as absences that exceed 20% of the course (e.g., 6 lectures or 3 labs or proportional combinations of lectures & labs in this course).

DISABILITIES INFORMATION: It is Sul Ross State University policy to provide reasonable accommodation to students with disabilities. Qualified students with disabilities needing academic or other accommodations to ensure full participation in the programs, services and activities at Sul Ross State University should contact the Counseling and Accessibility Center, Ferguson Hall 112, Box 122, Alpine, TX 79832 (phone 432-837-8203).