

SUL ROSS STATE UNIVERSITY - GENERAL BOTANY 1311 - FALL SEMESTER 2018

Professor: Jim Zech
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Office Hours: By appointment or T: 9:30 - 11:30 A.M.; MW: 9:30 – 11:00 A.M.

Time and Place: Lecture: MWF: 11:00 - 11:50 A.M.; 201 WSB

Text: Biology of Plants, 8th Ed.; Raven, Evert, and Eichhorn
 If You're Taking the Lab, BIOL 1111: Discover the Chihuahuan Desert: General Botany. A Laboratory Manual for Biology 1401, 2nd Ed.; James C. Zech and A. Michael Powell

Tentative Class Schedule and Reading Assignments:

WEEK	DATE	LECTURE TOPICS	CHAPTERS	PAGES
1	8/27	Introduction	1	1-15
	8/29	Subdisciplines	1	10-11
	8/31	Subdisciplines	1	10-11
2	9/3	LABOR DAY		---
	9/5	Building Blocks	2	18-30
	9/7	Cells	3	38-62
3	9/10	Cells	3	38-62
	9/12	Cells	3	38-62
	9/14	Cells	3	38-62
4	9/17	Cell Cycle: Mitosis	3	62-71
	9/19	DNA: Structure	9	174-178
	9/21	DNA: Replication	9	174-178
5	9/24	Protein Synthesis	9	179-18
	9/26	Protein Synthesis	9	179-185
	9/28	FIRST EXAM		---
6	10/1	Primary Growth: Tissues	23; 25	538-557; 579-583
	10/3	Primary Growth: Tissues	23; 25	538-557; 579-583
	10/5	Primary Growth: Roots	24	558-578
7	10/8	Primary Growth: Stems	25	583-590
	10/10	Primary Growth: Leaves	25	590-599
	10/12	Secondary Growth: Stems	26	614-635
8	10/15	Photosynthesis	7	122-149
	10/17	Aerobic Respiration	6	107-119
	10/19	SECOND EXAM		---
9	10/22	Transport: Diffusion	4	75-85
	10/24	Translocation	30	722-727
	10/26	Taxonomy	12	234-250
10	10/29	Alternation of Generations	12	250-254
	10/31	Alt. of Gen.: Details	17	397
	11/2	Meiosis; Homosporous/Heterosporous	8; 17	155-172; 397-398
11	11/5	Nonvasc. Plts.: Bryophytes	16	366-390
	11/7	Bryophytes: Moss Life Cycle	16	386-387
	11/9	THIRD EXAM		---
12	11/12	Seedless Vascular Plants	17	391-429
	11/14	Fern Allies: Life Cycle	17	406-407; 410-411
W	11/16	Fern Allies: Life Cycle	17	426-427
13	11/19	Ferns: life Cycle	17	422-423
	11/21	THANKSGIVING - NO CLASSES		---
	11/23	THANKSGIVING - NO CLASSES		---
14	11/26	Vasc. Seed Plts: Gymnosperms	18	430-455
	11/28	Gymnosperms: Pine Life Cycle	18	442-443
	11/30	Vasc. Seed Plts: Angiosperms	19	457-459
15	12/3	Angiosperms: Flowers; M & EuD	19	460-465
	12/5	Angiosperms: Life Cycle	19; 20	465-476; 487-496
	12/7	FINAL EXAMS BEGIN - NO CLASS		
16	12/11	FINAL EXAM (10:15 - 12:15 P.M.)		

EuD = EuDicot; M = Monocot; Vasc = Vascular; Plts = Plants

POINT DISTRIBUTION:

Examinations:
 First, Second, Third Exams @ 100 = 300
 Final (Selectively Comprehensive) 150
 Literature Reviews (**NOT ACCEPTED LATE**): 2 @ 50 points each 100
TOTAL POINTS CLASS: 550

GRADING:

Your final grade in General Botany will be determined by the total points you receive divided by the total points possible and the scale listed below. There will be no deviation from this scale. I will also be determining a subjective grade. This will be determined by my evaluation of your attendance, participation, and attitude. The subjective grade will influence your final grade in the course, especially in borderline cases.

Grading Scale (percent of total points): A: 90-100; B: 80-89; C: 70-79; D: 60-69; F: 59 and lower

RULES TO LIVE BY:

This lecture has been scheduled for 50 minutes. You should plan to be here for the **ENTIRE** time block. I will start at the hour, plan to be on time. Please sit towards the front. Bring your text to class and read any applying material before coming to class. Keep the classroom clean. No tobacco, eating, **CHEATING** (University Policy), **weapons**, headphones, **NO CELL PHONES, SLEEPING, PHOTOS, FEET ON FURNITURE**, etc. **Number one source.**

ABSENCES:

MY BEST ADVICE IS DON'T BE. Regular attendance is expected and required to pass the course. If you must miss class see me **BEFORE** class or inform me **BEFORE** class so other arrangements can be made. I will not give make-up exams unless I am contacted **BEFORE** the absence and/or presented with a written valid medical excuse or documentation of other valid reasons such as sickness or death in the family. Exams must be made up within **1 week** of their originally scheduled date.

FINDING THE BALANCE; CHOICES; BE RESPONSIBLE FOR YOUR ACTIONS OR LACK OF ACTIONS

STUDENT LEARNING OUTCOMES:

SLO1 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.

SLO2 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.

SLO3 The student will be able to use biological instrumentation to solve biological problems using standard observational strategies.

SLO4 The student will develop writing skills by summarizing and critiquing recent relevant biological literature.

OBJECTIVES OF THIS COURSE:

- Understand the role of key figures and events in the history of biological science.
- Understand terminology relevant to biological laboratory and field work.
- Explore the applications of scientific skills and knowledge to daily living.
- Understand principles of classification.
- Recognize major cell structures and their function.
- Analyze cell division and reproduction.
- Understand respiration and photosynthesis.
- Understand the role of DNA and RNA in the process of protein synthesis.
- Understand genes, and chromosomes.
- Analyze characteristics of 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.

CORE OBJECTIVES ADDRESSED:

- Team Work
 - Communication
 - Critical Thinking Skills
 - Empirical and Quantitative Skills
 - Social Responsibility
 - Personal Responsibility
-

TEA AFNR EDUCATOR STANDARDS:

The teacher understands:

- Basic plant classification, morphology, physiology, and genetics, and
- Horticulture, floriculture, and hydroponics.

DISABILITIES INFORMATION:

Qualified students with disabilities needing academic or other accommodations to ensure full participation in the programs, services and activities at SRSU should contact Counseling and Accessibility Services, 112 Ferguson Hall, Box C-122, 432-837-8203.