

**SUL ROSS STATE UNIVERSITY - GENERAL BOTANY 1311 - FALL SEMESTER 2014**

**Professor:** Jim Zech  
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**Office Hours:** By appointment or T: 9:00 - 11:00 A.M.; 1:00 - 1:50 P.M.; MWF: 10:00 - 10:50 A.M.

**Time and Place:** Lecture: MWF: 9:00 - 9:50 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, 2<sup>nd</sup> Ed.; James C. Zech and A. Michael Powell

**Tentative Class Schedule and Reading Assignments:**

WEEK	DATE	LECTURE TOPICS	CHAPTERS	PAGES
1	8/25	Introduction	1	1-15
	8/27	Subdisciplines	1	10-11
	8/29	Subdisciplines	1	10-11
2	9/1	<b>LABOR DAY</b>		---
	9/3	Building Blocks	2	18-30
	9/5	Cells	3	38-62
3	9/8	Cells	3	38-62
	9/10	Cells	3	38-62
	9/12	Cells	3	38-62
4	9/15	Cell Cycle: Mitosis	3	62-71
	9/17	DNA: Structure	9	174-178
	9/19	<b>FIRST EXAM</b>		---
5	9/22	DNA: Replication	9	174-178
	9/24	Protein Synthesis	9	179-185
	9/26	Protein Synthesis	9	179-185
6	9/29	Primary Growth: Tissues	23; 25	538-557; 579-583
	10/1	Primary Growth: Tissues	23; 25	538-557; 579-583
	10/3	Primary Growth: Roots	24	558-578
7	10/6	Primary Growth: Stems	25	583-590
	10/8	Primary Growth: Leaves	25	590-599
	10/10	Secondary Growth: Stems	26	614-635
8	10/13	Photosynthesis	7	122-149
	10/15	Aerobic Respiration	6	107-119
	10/17	<b>SECOND EXAM</b>		---
9	10/20	Transport: Diffusion	4	75-85
	10/22	Translocation	30	722-727
	10/24	Taxonomy	12	234-250
10	10/27	Alternation of Generations	12	250-254
	10/29	Alt. of Gen.: Details	17	397
	10/31	Meiosis; Homosporous/Heterosporous	8; 17	155-172; 397-398
11	11/3	Nonvasc. Plts.: Bryophytes	16	366-390
	11/5	Bryophytes: Moss Life Cycle	16	386-387
	11/7	<b>THIRD EXAM</b>		---
12	11/10	Seedless Vascular Plants	17	391-429
	11/12	Fern Allies: Life Cycle	17	406-407; 410-411
<b>W</b>	11/14	Fern Allies: Life Cycle	17	426-427
13	11/17	Ferns: life Cycle	17	422-423
	11/19	Vasc. Seed Plts: Gymnosperms	18	430-455
	11/21	Gymnosperms: Pine Life Cycle	18	442-443
14	11/24	Vasc. Seed Plts: Angiosperms	19	457-459
	11/26	<b>THANKSGIVING - NO CLASSES</b>		---
	11/28	<b>THANKSGIVING - NO CLASSES</b>		---
15	12/1	Angiosperms: Flowers; M & EuD	19	460-465
	12/3	Angiosperms: Life Cycle	19; 20	465-476; 487-496
	12/5	<b>DEAD DAY - NO CLASS</b>		
16	12/10	<b>FINAL EXAM (8:00 - 10:00 A.M.)</b>		

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

**POINT DISTRIBUTION:**

Examinations:  
 First, Second, Third Exams @ 100 = 300  
 Final (Selectively Comprehensive) 150  
 Quizzes: 4 quizzes at 10 points each 40  
**TOTAL POINTS CLASS: 490**

## 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

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## 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 texts to class and read any applying material before coming to class. Keep the classroom clean. No tobacco, eating, **CHEATING** (University Policy), headphones, **NO CELL PHONES, SLEEPING, FEET ON FURNITURE**, etc. **Number one source.**

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## 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 quizzes or 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. Quizzes and exams must be made up within **1 week** of their originally scheduled date.

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

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## PROGRAM LEARNING OUTCOMES:

- Demonstrate a mastery of aerobic respiration and its significance for living organisms.
  - Be able to identify evolution and the processes that influence it.
  - Be able to identify the components of cell structure and their functions.
  - Compare the fundamental concepts of Mendelian genetics.
  - Compare and contrast the process of photosynthesis to other cellular processes.
  - Be able to identify the processes of molecular biology.
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## OBJECTIVES OF THIS COURSE (INCLUDING LAB):

- 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 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.
  - 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 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.
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## 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 regarding metric conversions, as well as problems related to genetic outcomes and probability resulting in informed conclusions.
- 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.
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## 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.