SUL ROSS STATE UNIVERSITY - GENERAL BOTANY 1311 - SPRING SEMESTER 2015

Prof: Jim Zech
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Office Hours: By appointment *or* W: 9:00 - 11:00 A.M., 1:00 – 2:00 P.M.; TTH: 9:30 - 10:30 A.M.

Time and Place: Lecture: TTH: 11:00 - 12:15 P.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:

WK	DATE	LECTURE TOPICS	CHAPTERS	PAGES
1	1/20	Introduction	1	1-15
	1/22	Subdisciplines	1	10-11
2	1/27	Building Blocks	2	18-30
	1/29	Cells	3	38-62
3	2/3	Cells	3	38-62
	2/5	Cells	3	38-62
4	2/10	Cell Cycle: Mitosis	3	62-71
	2/12	DNA: Structure; DNA: Replication	9	174-178
5	2/17	Protein Synthesis	9	179-185
	2/19	**FIRST EXAM**		
6	2/24	Primary Growth: Tissues	23; 25	538-557; 579-583
	2/26	Primary Growth: Roots	24	558-578
7	3/3	Primary Growth: Stems	25	583-590
	3/5	Primary Growth: Leaves	25	590-599
8	3/10	Secondary Growth: Stems	26	614-635
	3/12	Photosynthesis	7	122-149
9	3/17	**SPRINGBREAK**		
	3/19	**SPRINGBREAK**		
10	3/24	Aerobic Respiration	6	107-119
	3/26	**SECOND EXAM**		
11	3/31	Transport: Diffusion; Translocation	4; 30	75-85; 722-727
	4/2	Taxonomy	12	234-250
12	4/7	Alternation of Generations	12	250-254
	4/9	Alt. of Gen.: Details & Meiosis	17; 8	397; 155-172
13	4/14	Homosporous/Heterosporous	17	397-398
	4/16	Nonvasc. Plts.: Bryophytes; Moss Lf Cy	16	366-390
14	4/21	Seedless Vascular Plants	17	391-429
	4/13	**THIRD EXAM**		
W	4/24	**LAST DAY TO DROP ANY COURSE WITH A W**		
15	4/28	Fern Allies: Lf Cy; Ferns: Lf Cy	17	406-407; 410-411; 422-423
	4/30	Vasc. Seed Plts: Gymnos.; Pine Lf Cy	18	430-455; 442-443
16	5/5	Vasc. Seed Plts: Angio.; Flowers; M & EuD; Lf Cy	19; 20	457-459; 460-465; 465-476; 487-496
	5/7	**DEAD DAY**		
17	5/12	**FINAL EXAM (10:15 A.M. - 12:15 P.M.)**		

Lf Cy = Life Cycle; Gymnos = Gymnosperms; EuD = EuDicot; M = Monocot; Vasc = Vascular; Plts = Plants; Angio = Angiosperm

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**

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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 75 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, ***CELL PHONES*****, FEET ON FURNITURE,** ***SLEEPING***, 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:

- 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.

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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.
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.

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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.