

Sul Ross State University
Genetics 3306
Syllabus
Fall 2016

Instructor: Dr. Sean P. Graham
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Office Hours: MWF 11-12; T-TH 2-3; or by appointment (email)

Lecture: Tues & Thurs 11-12:15 WSB 101

Text: Genetics "From Genes to Genomes" Hartwell,
 et al 4th Edition (NOT REQUIRED)

Tentative schedule (subject to change)

Week	Topic	Chapter
1	Intro: Genetics: the secret of life (genetics doesn't have to be hard!)	1
1	Mendel	2
2	Mendel's Principles	2
2	Extension of Mendelian Laws	3
3	Chromosomes	4
3	Linkage	5
4	Recombination	5
4	Mapping	5
First Exam: September 29, 2016		
5	DNA structure	6
6	DNA structure (special lab day this week...you will see DNA!)	6
6	What is a gene?	7
7	Gene Expression	8
7	Gene Exp (cont)	8
8	Genomes and Proteomes	10
8	Genomes and Proteomes	10
Second Exam; October 27, 2016		
9	Gene movement on Chromosomes	12-13
10	Chromosomal rearrangements and Cytogenetics	12-13
10	Prokaryotic Genetics	14
11	Gene Regulation	15-16
11	Gene Regulation	15-16
12	Mutation and Cancer	17

12	Mutation and Cancer (11/11 Last day to drop with a W)	
Thanksgiving Holiday (Nov. 23-25)		
13	Developmental Genetics	18
13	Variation and Selection	19

Final Exam; TBA-Finals Week Dec 5-7

Exams: Exams will consist of a mixture of multiple choice, true/false and short answer questions. ALL material discussed during the class is potential material that will appear on the exam. There will not be a “study guide” narrowing the focus for each exam. The easiest way to know the material that is being stressed is to ATTEND CLASS!!! There will be no extra credit assignments; however the questions on the quizzes will provide practice for exam questions and will be similar if not identical to many exam questions. During exams Bathroom breaks are not allowed so plan ahead!!!

Points Distribution:

Exam 1	100
Exam 2	100
Exam 3	100
Assigned Problems/Quizzes	100
Total Points	400

Grading Scale (percentage of total points)

A = >90 B=80-89 C=>70-79 D=60-69 F=59 or lower

Sul Ross State University is committed to equal access in compliance with the Americans With Disabilities Act of 1973. It is the student’s responsibility to initiate a request for accessibility services. Students seeking accessibility services must contact Grace Duffy in Counseling and Accessibility Services, Ferguson Hall, Room 112. The mailing address is P.O. Box C-171, Sul Ross State University, Alpine, Texas 79832. Telephone: 432-837-8203.

Classroom Etiquette: Cell phones should be silent and not used during class and texting is forbidden, in addition please do not make unnecessary noise, when the instructor is speaking you should not be talking to your friend!!! Cell phone usage, texting, or talking during class time can equal a loss of points at the instructors discretion. Please be on time.

Attendance: Students missing more than 6 lectures will be dropped from the class as per university policy and receive an F in the course. Arrangements for excused absences must be made beforehand. Exams missed for any reason must be made up within one week of the original exam date, but the reason for missing must adhere to the university acceptable absences policy (they must be documented family or health emergencies).

Ethical Conduct: Cheating and or plagiarism will not be tolerated and will be dealt with according to university policies. This includes quizzes—turn in your own work or else.

Student Learning Objectives: The student will be able to understand the principles of the heredity and develop an in depth understanding and appreciation of the processes of evolution, including classical Mendelian genetics, molecular genetics, and epigenetics.

Program learning Outcomes:

1. *Demonstrate an understanding of evolution by natural selection*
2. Demonstrate an integration of environmental awareness into everyday modern life
3. *Understand how to incorporate molecular biology into the study of whole organisms*
4. Demonstration utilization of various field techniques toward addressing scientific questions in the discipline
5. Conduct basic laboratory experiments utilizing standard observational strategies