

INTRODUCTORY GENETICS - BIOL 3350 - Fall 2015

Instructor: Dr. Janey Youngblom **Office Phone:** 667-3487
Office Hours: Tues. and Thurs . 11:15 – 12:45 **Rm:** N-265
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Required Text: Concepts of Genetics, by Klug and Cummings. Eleventh edition (©2015)

<u>Week</u>	<u>Topic</u>	<u>Reading (chapter)</u>
Aug. 25- 27	An Introduction to Genetics Mitosis and Meiosis	1 2 and p.516-518
Sept. 1-3	Mendelian Genetics Genetics Concept Assessment	3 (omit Chi Square 56-58)
Sept. 8-10	Extensions of Mendelian Genetics	4
Sept. 15- 17	TUESDAY- Informed Consent Session- MUST ATTEND CLASS Sex Determination and Sex Chromosomes	7
SEPT 21	LAST DAY TO DROP	
Sept. 22- 24	TUESDAY – GUEST SPEAKER- CAROLINA ALFARO TUESDAY- Decision date for 23andme testing Chromosome Mapping in Eukaryotes	5
Sept.29- Oct. 1	Genetic Analysis and Mapping in Bacteria and Bacteriophages	6
Oct 6-8	TUESDAY - EXAM #1 THURSDAY – Video on Epigenetics INSTRUCTOR AT ASHG MTG- BALTIMORE	Special Topics p.674- 683
Oct. 13-15	Chromosome Mutations	8
OCT 20-22	TUESDAY- QUIZ #1 on Epigenetics/ Film on Stem cells THURSDAY- ETHICS DISCUSSION – MUST ATTEND CLASS turn in worksheets INSTRUCTOR AT NSGC MTG- PITTSBURGH	
Oct. 27-29	Tools for analyzing 23andMe data	three homework assignments
Nov. 3- 5	Extranuclear Inheritance DNA Structure and Analysis	9 10
Nov. 10-12	DNA Replication and Recombination DNA Organization in Chromosomes	11 12
Nov. 17-19	TUESDAY - Exam #2 The Genetic Code and Transcription	13
Nov. 24-26	Translation and Proteins Thursday - Thanksgiving – NO CLASS	14
Dec. 1-3	Recombinant DNA technology Applications and Ethics of Genetic Engineering and Biotechnology	20 22
Dec. 8- 10	Population Evolutionary Genetics	25
Dec. 17	FINAL EXAM (COMPREHENSIVE) -THURSDAY, 8:30-10:30 - 75 pts.	
NOTES:		

- Pre-requisites for this course are BOTY 1050, ZOOL 1050, and CHEM 1100, 1110, or equivalent.. You must have passed all these classes.
- The exams will be based on lecture material, assigned chapter readings, and material covered in the Mastering Genetics homework assignments. Each exam will consist of 4 sections: multiple choice, matching or True/False, essays, and problems. **BRING SCANTRON FORM NO. 882-E for each exam, including the final.**
- **Exams** - There are a total of 3 exams; 2 midterms and one final. Each midterm exam worth 50 pts. The final exam is cumulative and worth 75 pts. The total number of points from exams is 175 pts.
- **Quiz** - There will be one quiz worth 20 points. The quiz will be based on the epigenetics video and the “Special Topics” assigned readings in the text book.
- **Class and Homework assignments** – 4 total assignments.
 - 1) Complete and turn in the Ethics worksheet on the day of the Ethics Discussion groups – 10 pts
 - 2) Pharmacogenomics – analyze 4 specific genes from demo 23andme dataset. Homework assignment – 15 pts.
Due 11/12/15
 - 3) Mendelian genes – analyze 2 specific genes from demo 23andme dataset. Homework assignment- 13
Due 11/24/15
 - 4) Select 2 genes of your choice to explore in more depth on your own. Details of the analysis provided in class – 12 pts
Due 12/8/15

***** Must turn in all assignments using your individual randomly assigned number*****

- **Genetics Concepts Assessment** – 5 pts for taking the test in the beginning and end of the course
- The total maximum number of points from all categories (exams, quizzes, assignments) is 250 points
- There will be no make up for missed exams or quiz, unless you contact me before the test is given.
- This class can only be taken for a letter grade. Credit/no credit grading is NOT an option. The plus/minus grading system will be used as follows:

93.5-100%	= A
90-93%	=A-
87-89.5%	=B+
83.5-86.5%	=B
80-83%	=B-
77-79.5%	=C+
73.5-76.5	=C
70-73%	=C-
67-69.5%	=D+
63.5-66.5	=D
60-63%	=D-
<60%	=F