

INTRODUCTORY GENETICS - BIOL 3350 - Fall 2019

Instructor: Dr. Janey Youngblom; jyoungblom1@csustan.edu
Office Hours: Tues. and Thurs . 2:00 - 3:30

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Required Text: Concepts of Genetics, by Klug and Cummings. 12th edition (©2019)

<u>Date-week of</u>	<u>Topic</u>	<u>Reading (chapter)</u>
August 22	An Introduction to Genetics	1
August 27	Mitosis and Meiosis	2 and p.583-584
September 3	Mendelian Genetics	3 (omit Chi Square)
September 10	Extensions of Mendelian Genetics	4
September 12	Instructor will be out of town- NO CLASS, but two online homework quiz assignments: View “Patterns of Inheritance” Genomic Education Module and take quiz (4 pts)- due Sept 15 View “Family History” Genomic Education Module and take quiz (4 pts)- due Sept 15	
September 17	EXAM 1 - 50 pts. (Tuesday) Sex Determination and Sex Chromosomes	7
September 24	Epigenetic Regulation of Gene Expression Video – Epigenetics – view link at home First Reflection paper due (hybrid embryos) – September 26	19
October 1	Chromosome Mapping in Eukaryotes Genetic Analysis and Mapping in Bacteria and Bacteriophages	5 (only p, 94-101 and p.112-4) 6
October 8	Quiz #1 –(Oct. 8, Tuesday)- on Epigenetics Chromosome Mutations	8
October 15	EXAM 2 - (Oct. 15- Tuesday) – 50 pts. Extranuclear Inheritance	9
October 22	DNA Structure and Analysis DNA Replication and Recombination	10 11
October 29	DNA Organization in Chromosomes Recombinant DNA technology CRISPR & Genome Editing	12 20 Special Topics 649-660 CRISPR
November 5	Instructor attending meeting in Salt Lake City, Utah all week Tuesday Nov 5– Quiz #2 – CRISPR & Genome Editing Tuesday, Nov. 7 - NO CLASS, but view video lecture – linked provided on Blackboard	
November 12	EXAM 3 - (Tuesday) – 50 pts. Applications and Ethics of Genetic Engineering and Biotechnology	22
November 19	The Genetic Code and Transcription	13
November 26	Reflection Paper #2 due (“In the Family video)– Nov. 26- (5 pts) Translation and Protein NO CLASS THURSDAY – THANKSGIVING	14

December 3	Translation and Proteins continued	14
December 10	Population Evolutionary Genetics	26
December 17	FINAL EXAM (TUESDAY, 8:30-10:30) - 75 pts. (COMPREHENSIVE)	

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 4 exams; 3 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 225 pts.
- **Quizzes** - There will be two quizzes, each worth 20 points. The quizzes will be based on readings assigned by the instructor. The total number of points for class quizzes is 40 points.

For the first quiz on Epigenetics, view the Epigenetics video – link provided on Blackboard

For second quiz on CRISPR, read the Special Topics section in your text

- **Mastering Genetics** – A maximum total of 40 EQUIVALENT points can be obtained by turning in your Mastering Genetics assignments before the deadline for each assignment. **Please mark the due dates for each assignment on your calendar.** You will not be able to get any credit if you try to turn in your assignments past the due date. **However, you get ONE pass that allows you to turn in ONE of your chapter assignments up to 2 days late without any penalty.** You must notify me BEFORE the 2 extra days deadline date for any given chapter if you want to use the pass.

To register for the Mastering Genetics program, go to <http://www.masteringenetics.com>

Click the “Student” button. You will need to provide your student access code. It is a printed code provided with the purchase of your new textbook and is located inside the Mastering Genetics Student Access Kit. If you purchased a used textbook, you have the option to purchase an access code online during your registration process. You do NOT need to buy access to Virtual Labs. You also have the option to purchase an electronic version of your textbook.

In Mastering Genetics, the name of the course is BIOL 3350-Fall 2019- Janey Youngblom. To register, enter the Course ID: **MGENYOUNGBLOM0388523**

If you encounter any technical problems while conducting your work online, click the “Support” tab located near the upper right hand corner of your page.

- **Genomic Education Modules** – View two modules titled:

1) “Patterns of Inheritance” - <https://www.youtube.com/watch?v=37EVkLpJbk8>

2) “Family history” - https://www.youtube.com/watch?v=wfeWZ7JddQQ&list=PLQnwECjj19Tpz-BwKmtD3Y8Icgx_ADodY&index=3&t=0s

Take the quiz associated with each video, and pass with at least 50% correct. 4 points for each module. Total = 8 pts.

Due date: September 15

- **Reflection Papers** – There will be 2 reflection papers worth 5 points each, for a total of 10 points. Each paper should be 2 pages long, double spaced, 12 point font, 1” margins all around. You should write about your own personal thoughts after listening to or viewing the assigned piece.

1) The first paper focuses on the new technology called CRISPR and hybrid embryos. Check Blackboard for the assigned material to review.

Due date: September 26. Submit your paper in class. (5 pts.)

2) The second paper will be based on a video you will watch towards the end of the semester titled "In the family". The site for this video will be provided on Blackboard. Due. November 26.
Due date: November 26. Submit your paper in class (5 pts.)

- The total maximum number of points from all categories (exams, quizzes, Mastering Genetics, miscellaneous) is 323 points
- There will be no make up for missed exams or quizzes, 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