

BIOL 305-01: Genetics
Spring 2017 Syllabus
MWF 9:30 am – 10:20 am
HWWE 213

Instructor:	Dr. Melissa Scheiber
Office:	SSMB 212
Office Hours:	Mondays and Wednesdays 11am-12pm or by appointment
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Course Description: The basics of the science of heredity. The course encompasses Mendelian genetics, the molecular basis of inheritance, changes in chromosome number and structure, gene mapping, mutations and cancer genetics.

Learning Outcomes:

- To learn the basic principles, concepts, theories, and language that constitutes the discipline of genetics.
- To provide a framework for understanding how genetic information is organized, changes, and influences biological processes.
- To provide an understanding as to how genetics is used for addressing biological problems.

Course Objectives:

- Gaining familiarity with appropriate data, information and knowledge-gathering techniques and research skills in the discipline
- Using effective skills and strategies for working collaboratively
- Mastering a thorough understanding of the main concepts of genetics and how Mendelian genetics can be applied and expanded by an understanding of the mechanisms involved at the molecular level
- Developing critical and analytical skills through problem solving activities
- Relating genetics to other fields of biology, in particular molecular and cancer biology

Prerequisites: BIOL 111/111L and BIOL 112/112L.

Co-requisites or prerequisites: BIOL 211 and 211D, MATH 250 or equivalent course in statistics or permission of instructor.

Course Policies:

Grading: Based on a total of **950 points** by the following system:

Attendance: 50 points (5.3%) (1 point per day)

In-class/Homework assignments: 100 points (10.5%) (25 points per assignment)

Weekly Quizzes: 200 points (21.1%) (20 points per quiz)

Unit Exams: 400 points (42.1%) (100 points per exam)

Final Exam: 200 points (21.1%)

Final Grading Scale:

A (93.5-100), A- (90-93.49), B+ (88.5-89.9), B (83.5-88.49), B- (80-83.49), C+ (78.5-79.9), C (73.5-78.49), C- (70-73.49), D+ (68.5-69.9), D (63.5-68.49), D- (60-63.49), F (<60)

Required Materials:

1. Genetics: A Conceptual Approach, 5th edition, by Benjamin A. Pierce
2. Top Hat Subscription (see below for details)

Optional Materials:

1. Solutions Manual for Genetics: A Conceptual Approach, 5th edition

Attendance: At random times during every class period, students will be given a code to enter via the Top Hat classroom response system. Entering this code will verify your attendance for the day and earn you 1 attendance point. Students that miss the attendance code, without prior permission from professor, will receive 0 attendance points for the day.

Top Hat Subscription: We will be using the Top Hat (www.tophat.com) classroom response system in class. You will be able to submit answers to in-class questions using Apple or Android smartphones and tablets, laptops, or through text message. You can visit the Top Hat Overview (<https://success.tophat.com/s/article/Student-Top-Hat-Overview-and-Getting-Started-Guide>) within the Top Hat Success Center which outlines how you will register for a Top Hat account, as well as providing a brief overview to get you up and running on the system.

An email invitation has been sent to you by email, but if don't receive this email, you can register by simply visiting our course website: <https://app.tophat.com/e/903767>

Note: our Course Join Code is 903767

Top Hat will require a paid subscription, and a full breakdown of all subscription options available can be found here: www.tophat.com/pricing. Subscription cards are also available in the CofC bookstore. Should you require assistance with Top Hat at any time, due to the fact that they require specific user information to troubleshoot these issues, please contact their Support Team directly by way of email (support@tophat.com), the in app support button, or by calling 1-888-663-5491. You must be registered before **January 18th**.

Lectures: This class has been structured so that two-thirds of class time will be spent going through the traditional PowerPoint lectures. The remaining class time will be filled with class discussions, quizzes and activities. Therefore, the PowerPoint material is meant to only to provide illustrations and outline topics but not to write out every idea. The PowerPoint material will be available on OAKS the night before lecture.

In-class/Homework Assignments: You will have 4 exams and for each these exams you will be given an assignment covering material on that exam. These assignments will begin as group activities that if not finished in class are to be completed as homework. You may work together inside and outside of the classroom to complete this assignment. However, your answers must be in your own words and not identical. Each assignment is worth 25 points.

Weekly Quizzes: Once a week, a quiz will be given in class via the Top Hat classroom response system. Quizzes will be on material covered in previous lectures. Each quiz is worth 20 points. Quizzes will not be given during exam weeks. There will be **no make-up quizzes given**.

Exams: There will **four unit exams each worth 100 points and one cumulative final exam worth 200 points**. Each of the exams will consist of multiple choice, true/false, fill in the blank, and **LOTS of problem-solving and short answer questions**. Test questions will be pulled from the textbook, PowerPoint lectures, in-class/homework activities, and class discussions. You will not pass this course simply by memorizing facts. If you are having difficulties with the online homework problems, seek help from your instructor.

Calculators, but **NOT** cell phones, are allowed at exams. Calculators cannot be shared.

If your **hand writing is illegible** you will receive **0 points** for that question.

NO MAKE-UP EXAMS will be given without prior permission. If a student misses a scheduled examination without prior permission, s/he will receive a grade of zero. Only medical conditions with a written note from a medical professional will be excused without prior permission. Requests to miss examinations must be made personally, not by note, voice mail, or email.

College Policies:

Center for Student Learning: I encourage you to utilize the Center for Student Learning's (CSL) academic support services for assistance in study strategies, speaking & writing strategies, and course content. They offer tutoring, Supplemental Instruction, study strategy appointments, and workshops. Students of all abilities have become more successful using these programs throughout their academic career and the services are available to you at no additional cost. For more information regarding these services please visit the CSL website at <http://csl.cofc.edu> or call (843)953-5635.

Center for Disability Services: (<http://disabilityservices.cofc.edu/for-faculty/fags.php>)

- Any student eligible for and needing accommodations because of a disability is requested to speak with the professor during the first two weeks of class or as soon as the student has been approved for services so that reasonable accommodations can be arranged.
- The College will make reasonable accommodations for persons with documented disabilities. Students should apply for services at the Center for Disability Services/SNAP located on the first floor of the Lightsey Center, Suite 104. Students approved for accommodations are responsible for notifying me as soon as possible and for contacting me one week before accommodation is needed.
- This College abides by section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. If you have a documented disability that may have some impact on your work in this class and for which you may require accommodations, please see an administrator at the Center of Disability Services/SNAP, 843.953.1431 or me so that such accommodation may be arranged.

College of Charleston Honor Code and Academic Integrity:

Lying, cheating, attempted cheating, and plagiarism are violations of our Honor Code that, when identified, are investigated. Each incident will be examined to determine the degree of deception involved.

Incidents where the instructor determines the student's actions are related more to a misunderstanding will be handled by the instructor. A written intervention designed to help prevent the student from repeating the error will be given to the student. The intervention, submitted by form and signed both by the instructor and the student, will be forwarded to the Dean of Students and placed in the student's file.

Cases of suspected academic dishonesty will be reported directly by the instructor and/or others having knowledge of the incident to the Dean of Students. A student found responsible by the Honor Board for academic dishonesty will receive a XXF in the course, indicating failure of the course due to academic dishonesty. This grade will appear on the student's transcript for two years after which the student may petition for the XX to be expunged. The F is permanent. The student may also be placed on disciplinary probation, suspended (temporary removal) or expelled (permanent removal) from the College by the Honor Board.

It is important for students to remember that unauthorized collaboration--working together without permission-- is a form of cheating. Unless the instructor specifies that students can work together on an assignment, quiz and/or test, no collaboration during the completion of the assignment is permitted. Other forms of cheating include possessing or using an unauthorized study aid (which could include accessing information via a cell phone or computer), copying from others' exams, fabricating data, and giving unauthorized assistance. Research conducted and/or papers written for other classes cannot be used in whole or in part for any assignment in this class without obtaining prior permission from the instructor. Students can find the complete Honor Code and all related processes in the Student Handbook at <http://studentaffairs.cofc.edu/honor-system/studenthandbook/index.php>

****Dates and Course content on this syllabus are subject to change****

Course Outline:

Date	Lecture	Due Dates
W Jan 11	Class Orientation	
F Jan 13	Chapter 2	Extra credit passport assignment due
M Jan 16	No class, MLK day	
W Jan 18	Chapter 2,3	Top Hat subscription must be activated and ready to go
F Jan 20	Chapter 3	
M Jan 23	Chapter 4	
W Jan 25	Chapter 4	
F Jan 27	Chapter 6.1-6.2	
M Jan 30	Exam 1	Assignment #1 due in class
W Feb 1	Chapter 5	
F Feb 3	Chapter 5	
M Feb 6	Chapter 5, 21	
W Feb 8	Chapter 24	
F Feb 10	Chapter 24, 25	
M Feb 13	Chapter 25	
W Feb 15	Chapter 7	
F Feb 17	Chapter 7	
M Feb 20	Chapter 7	
W Feb 22	Exam 2	Assignment #2 due in class
F Feb 24	Chapter 10	
M Feb 27	Chapter 10, 11.1-11.3	
W Mar 1	Chapter 12	
F Mar 3	Chapter 12	
M-F Mar 5-10	Spring Break No Class	
M Mar 13	Chapter 12,8	
W Mar 15	Chapter 8	

F Mar 17	Chapter 8,18	
M Mar 20	Chapter 18	
W Mar 22	Chapter 18	
R Mar 23		Last day to withdraw with a "W"
F Mar 24	Exam 3	Assignment #3 due in class
M Mar 27	Chapter 13.1-13.2, 13.4	
W Mar 29	Chapter 14.1-14.2	
F April 1	Chapter 15	
M April 3	Chapter 15	
W April 5	Chapter 19	
F April 7	Chapter 19	
M April 10	Chapter 20	
W April 12	Chapter 20	
F April 14	Exam 4	Assignment #4 due in class
M April 17	Chapter 23	
W April 19	Chapter 23	
F April 21	Chapter 23	
M April 24	Review	
W April 26	Review	
R April 27	Reading day, no class	
F April 28	Final exam 8am-11am	