BIOL 305-01: Genetics
Spring 2016 Syllabus
MWF 9:30 am -10:20 am
HWWE 213

Instructor:	Dr. Melissa Scheiber
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Office Hours:	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.

Grading: Based on a total of **665 points** by the following system:

Attendance: 15 points (2.25%)
Homework Assignments: 200 points (30.1%) (20 chapter assignments)
Unit Exams: 300 points (45.1%) (75 points per exam)
Final Exam: 150 points (22.55%)

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. i-clicker2 remote response pad
3. "SaplingLearning" course access

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

Attendance: At the beginning of every class period (except for exam days), students will be given one question to answer via the i-clicker response system. The question will be pulled from the previous lecture. These questions will not only help the students gage how well they are understanding the material, but also count for attendance points. Students will be given 0.25 points for an attempt of the question and an additional 0.25 points if the answer is correct. Students that arrive late to class or miss the class entirely, without prior permission from professor, will receive 0 attendance points for the day.

i-Clicker2: available at CofC bookstore. Go to http://www.iclicker.com/registration/ to register your i-clicker. For your "Student ID" at this website, use your CofC Student ID. For the "Remote ID," look at the back of your i-clicker and type the code that appears under the bar code. If any of this does not work, please come and see the professor for help. You must be registered before **January 15th**.

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 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 Group Activities: Throughout the semester there will in-class scientific activities. These activities are meant to drive class discussions. Students will not receive a grade for the in-class activities. However, any material discussed during the activities is considered potential exam questions. In-class activities will **NOT** be available on OAKS. It is highly suggested that you do not miss class.

Homework Assignments: You will be assigned online interactive homework assignments through Sapling Learning. If you bought the new textbook specifically for this course section, a web access code was included in your book bundle. If you bought a used book or a new book without the bundle, you will have to purchase the web access separately ($40). To enroll in the course (College of Charleston – BIOL 305 – Spring16 – SCHEIBER), please visit this website: http://bit.ly/saplinginstructions. **Sapling Learning offers a grace period on payment; for most courses, this is 14 days from the first day of the term**. Sapling will also provide access cards to Cougar bookstore to any students whose financial aid packages require them to purchase their course material through them (please contact bookstore or visit (http://www2.saplinglearning.com/bookstores). During sign up or throughout the term, if any

students are having technical problems or grading issues, please send an email to support@saplinglearning.com explaining the issue. Please enroll early. **The first homework assignment is due January 20th.** Late assignments will receive a 25% deduction of points for each day they are late.

Exams: There will **four unit exams each worth 75 points and one cumulative final exam worth 150 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 activities, class discussions, and homework assignments. 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.

Students with Disabilities: If there is a student in the class who has a documented disability and has been approved to receive accommodations through the Center for Disability Services / SNAP, please come and discuss this with the professor after class or during office hours

Academic Honor and Integrity:
Excerpt from the College of Charleston Honor Code:
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 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 XF 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 X to be expunged. The student may also be placed on disciplinary probation, suspended (temporary removal) or expelled (permanent removal) from the College by the Honor Board.

Students should be aware 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.

Excerpt for the College of Charleston Code of Conduct:

The Student Code of Conduct of the College of Charleston specifically forbids:
Disruption or obstruction of teaching, studying, research, administration, disciplinary proceedings, living/learning environment or other college activities, including its public service functions on or off Campus, or other authorized non-college activities, when the act occurs on college premises.

Students can find the complete Honor Code, Code of Conduct, 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
F Jan 8	Class Orientation	
M Jan 11	Chapter 2	Passport Assignment Due (extra credit) Last day to drop/add
W Jan 13	Chapter 2,3	
F Jan 15	Chapter 3,4	Must have i-clicker registered before class
M Jan 18	No class, MLK day	
W Jan 20	Chapter 4	Chapters 2, 3 Homework Assignments Due by 8am
F Jan 22	Chapter 6.1-6.2	
M Jan 25	*In class activity*	
W Jan 27	**Exam 1**	Chapters 4, 6.1-6.2 Homework Assignments Due by 8am
F Jan 29	Chapter 5	
M Feb 1	Chapter 5	
W Feb 3	Chapter 24	
F Feb 5	Chapter 24	
M Feb 8	*In class activity*	
W Feb 10	Chapter 7	Chapter 5, 24 Homework Assignments Due by 8am
F Feb 12	Chapter 7	
M Feb 15	Chapter 8	
W Feb 17	Chapter 8	
F Feb 19	**Exam 2**	Chapters 7,8 Homework Assignments Due by 8am
M Feb 22	Chapter 9	
W Feb 24	Chapter 10	
F Feb 25	Chapters 10	
M Feb 29	Chapter 11.1-11.3	
W Mar 2	*In class activity*	Chapters 9,10, 11.1-11.3 Homework Assignments Due by 8am
F Mar 4	Chapter 12	
M-F Mar 6-11	Spring Break No Class	
M Mar 14	Chapter 12	
W Mar 16	**Exam 3**	Chapter 12 Homework Assignment Due by 8am

F Mar 18	Chapter 13	
M Mar 21	Chapter 13	
W Mar 23	Chapter 14	
F Mar 25	Chapter 15	
M Mar 28	Chapter 15	
W Mar 30	*In class activity*	Chapters 13,14,15 Homework Assignments Due by 8am
F April 1	Chapter 18	
M April 4	Chapter 18	
W April 6	Chapter 19	
F April 8	**Exam 4**	Chapters 18, 19 Homework Due by 8am
M April 11	Chapter 20	
W April 13	Chapter 21	
F April 15	Chapter 23	
M April 18	Chapter 23	
W April 20	*In class activity*	
R April 21	**Review**	Chapters 20, 21, 23 Homework Assignments Due by 8am
F April 29	**Final Exam 8am-11am**	