

GENETICS BIOL 305

Spring 2019

INSTRUCTOR: Agnes Ayme-Southgate

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Office hours: Tuesday and Thursday 9:30 to 10:30, Thursday 4-

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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 population genetics. Population and quantitative genetic approaches are applied to clarify the understanding of evolution

LEARNING OUTCOMES:

- Understand the interpretation of genetic information (genotype) into a phenotype
- Acquire mastery of the genetics concepts governing the transfer and changes of genetic information.
- Become familiar with genetics databases and analysis tools.
- Develop critical and analytical skills through problem solving.

TEXT BOOK

Custom book Biol 305: Genetics, from genes to phenotypes is required. I will post on OAKS supplemental information in the form of chapters, as well as useful websites and PDF of relevant research articles and Scitable notes. OAKS will also have problem sets and their keys for practice (Highly recommended).

EXPECTATIONS

Topics will follow the content Modules as posted on OAKS.

A file with class schedule and reading assignments is posted individually on OAKS.

You are expected to come prepared to class by reading the assigned chapter BEFORE class time.

I will follow a partial reverse teaching method, *i.e.* I will not teach all the material.

We will use about half of each class time for activities and problem solving.

Each module will have most of the following elements:

- Chapters (if not included in book), notes, and VoiceThread (VT) of some materials
- Problem sets and keys.
- Class activity materials and instructions

TESTING

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| 1. Quizzes in class through OAKS | 20% |
| I drop the lowest 2 grades. | |
| 2. TESTS: | 40% |
| There will be 4 tests during the semester. Make up for missed tests will only be given with an extremely valid excuse. The top three grades will be worth 11% each. The lowest fourth test grade will be worth 7%. Total for 4 tests 40% of grade | |
| 3. Class activities (team-based) | 20% |
| 4. Final exam: | 20% |

SCALE:

92 and above

90-91.9: A-

87-89.9: B+

83-86.9: B

80-82.9: B-

77-79.9: C+

74-76.9: C

70-73.9:

C-

67-69.9: D+

64-66.9: D

60-63.9: D-

Below 60: F

RESOURCES FOR SUCCESS

It is essential that you stay on top of the course assignments. I will post due dates and reminders, but it is on you to make sure that you don't get behind, especially in an online class this short. The material is quite difficult, and will take a lot of effort on your part to master. Summer class normally entails 3.5 hours of classroom time per day, plus reading and homework each night. You should plan to dedicate 4-5 hours/day every day (including weekends).

OAKS

I will be using OAKS to post information, announcements, as well as communicate, share ideas and questions. Make sure to check the site at least once every day. If you are not familiar with OAKS, please let me know.

Contact your instructor

If you do not understand a concept, experiment or how to solve a problem, do not give up. The materials build on itself, *i.e.* if you do not understand something at the beginning, it will haunt you for the rest of the course. The best approach is to reach to your instructor immediately by email (southgatea@cofc.edu). I check my email regularly including on weekend and you can expect a response within 2-3 hours.

COURSE POLICIES

 **Electronic devices:** you will need a working computer. All software needed for the class activities are either available on line or downloadable free of charge. We will use one of the department computer room for some activities.

 **Attendance policy:** you are expected to come to every class, unless you are sick or in case of emergency. **MISSING 3 CLASSES IN A ROW WILL RESULT IN A “WA” GRADE (WITHDRAWN EXCESSIVE ABSENCE) AT MIDTERM AND/OR FINAL GRADE. A FINAL “WA” GRADE IS CALCULATED AS AN “F” IN YOUR GPA.**

Disability Services

The College will make reasonable accommodations for persons with documented disabilities. Students should apply at the Center for Disability Services / SNAP, located on the first floor of the Lightsey Center, Suite 104. 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 let me know as soon as possible as I can adjust time allowed on quizzes and tests.

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 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 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.

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.

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>