

GENETICS: PCB 3063
SECTIONS 75BG, 75B1, & 75B0

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Office hours: These will be held online using the conference tool. These will be recorded so everyone can view the questions and answers to the questions. This way if you are unable to attend, you can email questions in advance and view answers at your convenience. For conversations that need to remain private, a private chat/video window will be opened.

Course Description: PCB 3063 is a challenging and stimulating course covering genetics from Mendel to the present. The class provides a solid foundation in genetics as a stand-alone course as well as a prerequisite to other genetics classes offered on campus. Topics to be covered include transmission, molecular, and population genetics. The course emphasis is on problem solving and conceptual synthesis.

Class: meets on-line. For each chapter in the text, there will be a chapter quiz and problem set. The chapter quiz ensures that you know terms and facts associated with the information in the chapter. The problem set questions are generally harder than test questions and may require you to interact with others in the class to find the answers. The collaborative quizzes are difficult questions, but you can interact with peers to obtain insights into how to answer the questions. For each chapter, there will be Chapter Notes that describe important concepts to learn and suggest problems to solve—hopefully this guide on how to use your time most effectively.

Textbook: *Essentials of Genetics* by Klug, which is published by Pearson-Benjamin Cummings. This class also requires access to MasteringGenetics for the Chapter quizzes. In order to assist synchronization of MG and allow you online access to the text, the text and MG is bundled and is to be purchased as a UF All Access package. Read this link for more details: <http://news.hr.ufl.edu/2017/02/uf-all-access-textbook-program-an-effective-way-to-save-students-money/>. Instructions to purchase the text are found in Canvas. Access to the solutions manual that accompanies this text is helpful when you get stuck working problems.

The text is bundled with MG. This text is online, however, if you want loose leaf pages, this can be purchased from the UF bookstore separately.

Class Participation: Learning in online classes is significantly harder than face-to-face classes. In traditional classrooms, students ask questions before, after or during classes so they can understand the material. In online classes, students spend hours searching for answers in the text and google searches. This wastes a great deal of time. Instead: Meet with teachers during office hours or interact with peers in discussion groups. Class participation in discussions, Piazza and during office hours will be recorded. You are expected to contribute intellectually in these groups a minimum of five times during the semester. Solving a problem always counts, but also asking a good question does as well. Participation scores will be updated after each exam.

Grading	Points
Exam I	120 (26%)
Exam II	100 (22%)
Exam III	100 (22%)
Class Participation	20 (4%)
17 Chapter Quizzes (lowest one dropped)	40 (9%)
17 Problem Sets (lowest one dropped)	<u>80 (17%)</u>
Total	460

One of the best ways to learn genetics is to work in study groups—I encourage you to study for exams together and work together on genetics problems. The Piazza tool is designed to facilitate interactions among students, including a tool to find study partners. Be sure to attempt to solve the problems at the end of each chapter. These are harder than test questions, but excellent preparation for the exams. I encourage you to solve all of these problems. If you get stuck and need a hint ask your study partner, TA, instructor, or check the solutions manual. Don't wait until it is too late to ask for help—work the problems at the end of each week

For quizzes and problem sets, the following grading scale will be used:

91-100 A	88-90.9 A-	
85-87.9 B+	81-84.9 B	78-80.9 B-
75-77.9 C+	68-74.9 C	
65-67.9 D+	61-64.9 D	

Below 60 is failing.

Exam scores rarely conform to this scale. To circumvent this problem, a grade rubric will be distributed in class when each exam is returned.

General Policies

- *☐ Makeup exams will not be given. There is a two-day window to take the exams. Please plan ahead. All exams will be administered by ProctorU. To avoid additional fees, it is important to schedule the 2-hour exams a week in advance.
- *Bring a calculator to exams—Graphing calculators CANNOT be used unless the student demonstrates to the proctor that the memory has been cleared.
- *☐ Academic dishonesty will not be tolerated. If cheating or plagiarism is suspected, all persons involved will receive a zero on the affected problem set or exam, and will be reported to the Dean of Students Office.

University Support Services

Resources are available on campus to help students meet academic goals and solve personal problems, which interfere with their academic performance. Resources include:

1. University Counseling Center, 301 Peabody Hall, 392-1575, personal and career counseling.
2. Student Mental Health, Student Health Care Center, 392-1171, personal counseling.
3. Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling.

Disability Notice: Students with disabilities enrolled in this course and who may need disability-related classroom accommodations are encouraged to make an appointment to see me before the end of the second week of the term. All discussions will remain confidential, although the Student Accessibility Services office may be consulted to discuss appropriate implementation of any accommodation requested.

TOPICS COVERED AND EXAM SCHEDULE

(CHECK THE COURSE CALENDAR FOR UPDATES)

Topic	Reading	Date
Course policies and Introduction	CH 1	Week1
Mitosis and Meiosis	CH 2	Week1
Probability	CH 3	Week2
Mendelian Genetics	CH 3	Week2
Mendelian Extensions	CH 4	Week3
Linkage and Mapping in Eukaryotes	CH 5	Week4
Sex Determination	CH 7	Week5
Extranuclear Inheritance	CH 9	Week5
Exam1		June 11-13
DNA: the genetic material	CH 10	Week6
DNA Replication	CH 11	Week6
Transcription	CH 13	Week7
Translation	CH 14	Week7
Regulation of gene expression:	CH 17	Week7
Mutations	CH 15	Week8
Chromosomal Changes	CH 8	Week8
Exam 2		July 9-11
Quantitative Genetics	CH 23	Week10
Population and Evolutionary Genetics	CH 25	Week11
Conservation Genetics	PDF	Week12
Exam 3		Aug. 2-4