

GENETICS: PCB 3063
SECTION 14236

Contact information:

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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 meeting times: Tuesday and Thursday, Periods 5-6 (2:00-4:15 pm) in 1001 NPB.

Textbook: *Concepts of Genetics* by Klug, 12th edition, which is published by Pearson-Benjamin Cummings. This class also requires access to MasteringGenetics (MG) for the problem sets. 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. This saves money on the text: <http://news.hr.ufl.edu/2017/02/uf-all-access-textbook-program-an-effective-way-to-save-students-money/>. Instructions to purchase the text: look in the top folder of the Canvas Modules tab. Access to the solutions manual that accompanies this text is helpful when you get stuck working problems or you can ask for help during office hours.

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. Some supplemental PDFs will be added to enrich your learning experience and increase your knowledge of important genetics concepts.

Grading	Points
Exam I	120 (22.6%)
Exam II	100 (18.9%)
Exam III	100 (18.9%)

13 Collaborative Quizzes (drop one)	90 (17.0%)
17 Problem Sets (drop one)	<u>120 (22.6%)</u>
Total	530

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. Chat and discussion functions are available online to facilitate this. Be sure to attempt to solve the problems at the end of each chapter. These are 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.

For quizzes and PS, 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	

Exams require analytical thinking, which is a difficult skill to exhibit during a two-hour exam. I understand this and have adjusted the exam grade scale:

88+ A	82-87 A-	
76-81 B+	70-75 B	65-69 B-
60-64 C+	51-59 C	

General Policies

- *You are responsible what is covered in class even if you cannot attend! Check the course calendar frequently for updates to test and assignment dates.
- *Makeup exams will only be given to those with an excused absence with written verification.
- * Bring a calculator to exams—Graphing calculators CANNOT be used unless students demonstrate that the memory is cleared prior to the exam.
- *On exams, a formula sheet is allowed (front side of an 8.5” X 11” sheet of paper)
- *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.

Collaborative Quizzes

- * These quizzes permit discussion among group members, but each student will submit their own answers. In fact, discussion among students is encouraged to students to solve problems. The expectation is that the problems are sufficiently difficult to encourage peer learning. You can also use class notes, but not the textbook or internet searches are not allowed.
- *These quizzes will be given at the end of class on Thursdays.

University Support Services

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

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

1. UF Counseling and Wellness Center, 3190 Radio Road, 352 392-1575, personal and career counseling.
2. Student Mental Health, Student Health Care Center, 392-1171.
3. Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling. <https://www.crc.ufl.edu/>

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
Course policies and Introduction	CH 1
Mitosis, Meiosis, and Recombination	CH 2, 11.8
Probability	CH 3
Mendelian Genetics	CH 3
Mendelian Extensions	CH 4
Sex Determination	CH 5
Linkage and Mapping in Eukaryotes	CH 7
Sex determination	CH 9
Exam 1	June 11
DNA: the genetic material	CH 10
DNA Replication	CH 11
Transcription	CH 13
Translation	CH 14
Mutation and DNA repair	CH 15
Chromosomal Changes	CH 8
Exam 2	July 16
Regulation of gene expression:	CH 17, 18.1
Epigenetic regulation	CH 19
Quantitative Genetics	CH 25
Population and Evolutionary Genetics	CH 26
Cancer Genetics	CH 24
Exam 3	Aug. 8