

Genetics

PCB 3063 section 4462—Spring 2017

Instructor 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.

Textbook:

Concepts of Genetics by Klug et al. 11th Edition, Pearson with online access. You will have access to problems via Canvas.

Course Assignments and Grading:

Details about these assignments and due dates will be provided on Canvas.

Grading	Points
Exam I	100 (20%)
Exam II	100 (20%)
Exam III	100 (20%)
Assignments (online)	100 (20%)
<u>In class problems/participation/quizzes</u>	<u>100 (20%)</u>
Total	500

Class participation

We will sometimes ask you to break into groups to discuss specific issues. At the end of the discussion one or more group members will then report to the class as a whole. Please refrain from side discussions and distracting behavior during the discussion and respect each other's viewpoints. You are also encouraged to ask questions during class. Remember that other students may have similar questions so asking your question may prove to be very useful.

Grading scale

The following grading scale will be used (values are percentages):

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 C-
62-64.9 D+	58-61.9 D	

Below 58 is failing (E).

Raw exam scores may for individual exams may be "curved." A curve will be applied to tests (and other assignments) by adding a specific number of points to each test. The number of points added will be at my discretion, but I will typically add the number of points necessary to increase tests by an amount necessary to increase the maximum score to 100 (if it is not already 100). However, I reserve the right to use other schemes to choose the value of the curve and I will provide a brief explanation of any decisions regarding curves to the class. I reserve the right to be flexible since this "standard method" may not be as fair as an alternative for all students. **Grades will only be increased by curving;** they will never be decreased.

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. Consequently, two people that work together on a problem set can submit a single set of answers.

Course policies

* 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.

* If you notice another student engaging in activities to you believe to constitute academic dishonesty please report the potential violation to me or Akanksha. We take all allegations seriously. However, remember that you are bound by the UF honor code, which states that *“In reporting an alleged Student Honor Code violation, a student shall not intentionally or in bad faith make a false or misleading statement.”* In other words, I view intentional false allegations as a type of academic dishonesty.

* Attendance in class is not absolutely required. However, there ARE class participation activities that count for credit so I strongly advise you to attend. Also, the exams are based on material covered in class. Thus, you are responsible the information covered in class even if you do not attend!

-- If you need to skip class for a valid reason simply let Akanksha and me know via email in Canvas. Use the subject line “UNABLE TO ATTEND CLASS ON <DATE>” and provide a brief explanation.

* To be considered on time (no late penalty) any take home assignments are due **in class no later than the first break in the lecture** on the due date.

* Bring a calculator to exams—Graphing calculators **CANNOT** be used.

* The format of any makeup exams will be at my discretion. I will ask for documentation of the reason for missing the test.

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. [UF Counseling and Wellness Center](#), 301 Peabody Hall and Radio Rd Facility, 392-1575, personal and career counseling.
2. [Career Resource Center](#), Reitz Union, 392-1601, career development assistance and counseling.
3. [CLAS Academic Advising Center](#), Farrison Hall, 100 Fletcher Drive, 392-1521, provides advise on course selection and course planning to meet graduation requirements

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.

Tentative Schedule

(This is likely to change – check for updates on eLearning)

Note: tests will always be on Tuesdays in class.

Topic	Reading & Assignments
<i>Course philosophy & policies</i> <i>(read CH 1 before the first lecture)</i>	
<i>Mendelian Genetics</i>	<i>CH 3</i>
<i>(also review Mitosis and Meiosis in CH 2)</i>	
<i>Extensions to Mendelian Genetics</i>	<i>CH 4</i>
<i>Mapping in Prokaryotes and Phages</i>	<i>CH 6</i>
<i>Linkage and Mapping in Eukaryotes</i>	<i>CH 5</i>
<i>Sex Determination</i>	<i>CH 7</i>
<i>Extranuclear Inheritance</i>	<i>CH 9</i>
<i>Exam1 (Tues 7 Feb)</i>	
<i>DNA: the genetic material</i>	<i>CH 10</i>
<i>DNA Replication</i>	<i>CH 11</i>
<i>Translation</i>	<i>CH 14</i>
<i>Transcription</i>	<i>CH 13</i>
<i>Regulation of gene expression:</i>	<i>CH 16 and CH 17</i>
<i>Chromosomal organization</i>	<i>CH 8 and CH12</i>
<i>Mutations</i>	<i>CH 15</i>
<i>Exam 2 (Tues 14 Mar)</i>	

Note: spring break is the week of 6 March through 10 March

<i>Quantitative Genetics</i>	<i>CH 23</i>
<i>Population Genetics</i>	<i>CH 25</i>
<i>Evolutionary Genetics</i>	<i>CH 25</i>
<i>Developmental Genetics</i>	<i>CH 18</i>

Presentations

Exam 3 (Tues 18 Apr)