

PCB 3063, GENETICS, Summer 2024

Instructor: Dr. Scott Taylor, Department of Biology

Office Hours: Virtual Meetings using Zoom Conferences, by appointment only

- Wednesday 1-4 pm
- I can also meet at other times if requested through email:

sm.taylor@ufl.edu

Graduate TAs: TBA

Course website: UF e-learning

Text: Klug et al. 2018 Concepts of Genetics, 12th ed. Pearson, New York.

Schedule: T,R, periods 5 and 6 (2:00 – 4:45), LIT 0109

Course Description:

PCB 3063 is an introduction to genetics course covering topics from Mendelian genetics to molecular biology and genomics. The class will provide students with a solid foundation in genetics either as a stand-alone course or as a prerequisite to other life sciences courses offered on campus. The course emphasis is on problem solving and conceptual synthesis. Course performance will be measured by four exams and two written assignments (details in class).

Course Objectives:

Upon completion of this course students will have built core knowledge of the field of genetics, including both mendelian and molecular genetics. Students will be able to use this core knowledge to analyze scientific literature and make connections within and between other life-sciences coursework.

Email Policy:

All email correspondence must be from your ufl.edu account, have your full name in the body of the email, and contain your course and section number in the subject line. Emails not meeting these requirements may not be recognized by my email filters, and thus may not be answered.

Grading:

20% Exam I
20% Exam II
20% Exam III
20% Exam IV
20% Written Paper Review (10%) and PCR Primer Design Assignment (10%)

Grades are based on the average of 4 stand-alone exams (each examining ~1/4 of the material) + 2 assignments.

• **No make-up exams will be given without prior permission or documentation of illness.** In case of illness, a letter from your primary care provider is required. A personal matter requires a note from the Dean of Students (P202 Peabody Hall). **Make up exams may be given in a different format than the original (e.g. short answer or essay).**

• Attendance in class is not required, but material covered only in lecture may appear on exams.

• Grading will be on a percent scale.

93 – 100%	A
90 – 92.9%	A-
87 - 89.9%	B+
83 – 86.9%	B
80 – 82.9%	B-
77 – 79.9%	C+
70 – 76.9%	C
67 – 69.9%	D+
63 – 66.9%	D
60 – 62.9%	D-
<60	E

A curve **may** be applied at the instructor's discretion. The curve can only raise your grade, not decrease it. Please see <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> for UF's policy for assigning grade points.

Academic Honesty:

All students registered at the University of Florida have agreed to comply with the following statement:

"I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University."

In addition, on all work submitted for credit the following pledge is either required or implied:

“On my honor I have neither given nor received unauthorized aid in doing this assignment.”

If you witness any instances of academic dishonesty in this class, please notify the instructor or contact the Student Honor Court (392-1631) or Cheating Hotline (392-6999). For additional information on Academic Honesty, please refer to the University of Florida Academic Honesty Guidelines at:

<http://www.dso.ufl.edu/judicial/procedures/academicguide.html>.

Accommodations for Students with Disabilities:

Students with disabilities who require accommodations should first seek assistance at the Dean of Students Office of Disability Resources, in Peabody 202 (phone: 352-392-1261). The Dean of Students Office of Disability Resources will work with the instructor to accommodate the student. Please see the University of Florida Disability Resources website for more information at: <http://www.dso.ufl.edu/drp/services/>.

Counseling Center:

Many students experience test anxiety and other stress related problems. “A Self Help Guide for Students” is available through the Counseling Center (301 Peabody Hall, 392-1575) and at their website: <http://www.counsel.ufl.edu/>

Other Information:

Please do not request individual special treatment at the end of the semester; we do not adjust grades for individuals for any reason. Plan to do well on all exams from the beginning of the semester.

CONTAGEOUS ILLNESSES

In response to highly contagious respiratory illnesses including COVID-19 and influenza, the following recommendations are in place to maintain your learning environment, to enhance the safety of our in-classroom interactions, and to further the health and safety of ourselves, our neighbors, and our loved ones.

- If you are not vaccinated, get vaccinated. Vaccines are readily available and are effective for both COVID-19 and influenza. Visit one.ufl.edu for screening / testing and vaccination opportunities.
- If you are sick, stay home. Please call your primary care provider if you are ill and need immediate care or the UF Student Health Care Center at 352-392-1161 to be evaluated.
- Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work.

In-Class Recording:

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited.

Specifically, students may not publish recorded lectures without the written consent of the instructor. A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session. Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

Syllabus is subject to change. While it is very likely that the posted exam and assignment due dates will be adhered to, sometimes unavoidable circumstances arise that require date changes (such as a hurricane). Date changes will be announced with as much advance notice as possible.

Genetics Syllabus, Summer 2024

Week	Topic	Read:
1		
5/14	Introduction, Mitosis and Meiosis	CH 1,2
5/16	Mitosis and Meiosis, Mendelian Genetics	CH 3
2		
5/21	Mendelian Genetics	CH 3,4
5/23	Chromosome Mapping	CH 5
3		
5/28	Chromosome Mapping/Review	CH 5
5/30	<u>Exam I</u>	
4		
6/4	Microbial Genetics/Sex Determination	CH 6,7
6/6	Mutations	CH 8
5		
6/11	DNA, Replication, Recombination	CH 10-12
6/13	Transcription	CH 13
6		
6/18	Transposable Elements/Review (Written Paper Review Due)	Supplement
6/20	<u>Exam II</u>	
7		
6/25	SUMMER BREAK	
6/27	SUMMER BREAK	
8		
7/2	Translation	CH 14
7/4	HOLIDAY	
9		
7/9	Mutations and DNA Repair	CH 15
7/11	Regulation of Gene Expression	CH 16,17

10		
7/16	Post Transcriptional Regulation/Epigenetics	CH 18,19
7/18	Epigenetics/Review	
<hr/>		
11		
7/23	<u>Exam III</u>	
7/25	Biotechnology/Genomics	CH 20-22
<hr/>		
12		
7/30	Developmental Genetics/Cancer Genetics	CH 23,24
8/1	Quantitative Genetics/Population Genetics (PCR Primer Assignment Due)	CH 25,26
<hr/>		
13		
8/6	Population Genetics/Review	CH 26
8/8	<u>Exam IV</u>	
<hr/>		