

PCB3063 Genetics

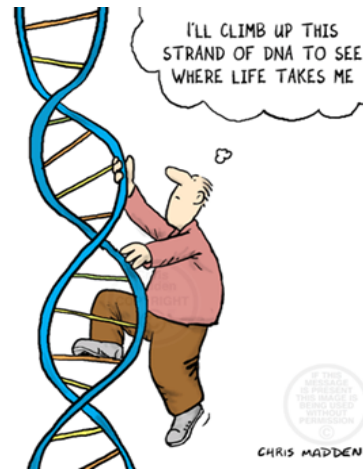
I. Class Meetings T & Th 2-4 pm in G186 McCarty A

II. Instructors:

Bernard Hauser, Department of Biology
Office: 516A Bartram Hall E-mail: bahauser@ufl.edu
Office Hours: After class and Fridays 11-noon

Wesley Dillard, 509 Carr Hall
E-mail: wdillard@ufl.edu
Office Hours: Wednesdays and Thursdays 11-noon

Vraj Parikh, 510 Bartram Hall
Email: vparikh@ufl.edu
Office hours: Mondays 12-2PM



III. Course Description

PCB3063 is a challenging and stimulating course covering genetics from Mendel to the present. The class provides a solid foundation in genetics. Topics to be covered include transmission, molecular, and population genetics. The course emphasis will be on problem solving, exploration & discovery, skill development, and conceptual synthesis.

Genetics is an **assignment-heavy** course with many highly interconnected concepts. Keeping up with textbook & other reading assignments will assist students in learning the material, attaining greater understanding and higher grades. Each module has 4-6 associated graded assignments, intentionally designed to promote hands-on learning, allow for multiple assessment methods, and accommodate different learning styles. My recommended strategy for success is: 1) Skim the textbook chapter (30-45 minutes), 2) Do the Dynamic Study Modules, 3) Attend lecture 4) Work through homework assignments, 5) Take Mastering Genetics Quiz, and 6) Work end-of-chapter problems in the textbook.

Each student is solely responsible for reading and following the instructions, guidelines and schedules in this syllabus. Not having read the information in this syllabus or in instructor announcements will not constitute an excuse for missing an assignment, exam, or other assessment.

IV. E-mail Communication

All e-mail correspondence to course instructors **must originate from your ufl.edu account and have your full name in the body of the e-mail.** E-mails not meeting these requirements may not be recognized by our e-mail filters, and thus may not be answered.

V. Course Resources

A. Textbook – *Concepts of Genetics*, 12th Edition, William S. Klug, Pearson Education, Inc. (publisher), with *MasteringGenetics* online learning system.

B. Online Resources and Electronic Textbook - This course will be participating in the UF All Access program. Login at the following website and Opt-In to receive your required Pearson access code, which will be used to register from within Canvas - <https://www.bsd.ufl.edu/G1CO/IPay1f/start.aspx?> Follow the UF All Access Student Instructions. Any code obtained outside of UF All Access will not work for the course. When setting up your account, **you must use your Gatorlink (@ufl.edu) e-mail address.** There

will be loose-leaf texts available at the bookstore for those who prefer a print textbook, but only the access code & e-text is required.

Next, register for Mastering Genetics using your access code.

1. Sign in to Canvas and enter your Canvas course.
2. Do one of the following: Select any Pearson link from any module.
OR Select a MyLab and Mastering link in the Course Navigation.
3. Next, select OpenMyLab and Mastering or a content link.

Next, get access to your Pearson course content:

1. Enter your Pearson account username and password to Link Accounts.
You have an account if you have ever used a MyLab or Mastering product.
If you don't have a Pearson account, select Create and follow instructions.
2. Select an access option: Enter the access code that came with your textbook or that you purchased separately from the bookstore.

If available for your course,

- Buy access using a credit card or PayPal.
- Never use temporary access because all work will be lost when you purchase MasteringGenetics.

From the You're Done page, select Go to My Courses.

Note: We recommend you **always enter Mastering Genetics through Canvas**. Also, it is recommended that you use **Google Chrome** as your browser and **turn off pop-up blockers** when doing assignments in Mastering to avoid issues.

For help with All Access registration, email: allaccess@bsd.ufl.edu

For help with the Pearson site, contact their Technical Support. Contact information and support hours will be posted on the Canvas webpage for the course.

https://help.pearsoncmg.com/integration/cg/canvas/student/en/content/get_started.htm

C. Course Website (e-Learning) - Class material including the syllabus, problem sets, exam results, lecture slides and other assignments and information related to the course will be posted on the course e-Learning site <http://elearning.ufl.edu/> The course is found under "e-Learning in Canvas". You are responsible for **all** announcements whether made by email or Canvas inbox and/or posted on the course website for this class. So, please be sure to check into the online course often.

For help with e-Learning, call the UF Computing Help Desk at 352-392-4357, or visit the e-Learning support website: <http://helpdesk.ufl.edu/>

V. Online Assignment Information - As part of PCB 3063, you are required to complete weekly online assignments. Due dates are posted within the individual Modules on Canvas. All assignments must be completed by the stated due date and time for credit. A 25%/day late penalty will be assessed on assignments. Make sure you have time to devote to assignments before you begin them—webpages that are left inactive for a long period of time can result in submissions, even if the assignment is not complete. You will have only one attempt on Mastering Genetics Quizzes, so it is best to complete them in a single sitting.

Any questions regarding the lecture material or the assignments should be asked in class or during online office hours. Don't be shy about asking questions; after all, if you are confused about the material, there almost certainly are other students with the same question.

Grading of Online Exercises:

There are several different types of assignments that students will complete. Once assigned, online assignments are available at all times up until the deadlines. Because they are assigned well ahead of time, documentation of illness or a personal matter must be provided for at least **three days** of the week before the assignment's deadline **by the Dean of Student's Office** for accommodations to be made.

When it is possible, a late penalty of 25% per day applies.

VI. Assessments and Grading

A. Exams – 300 points - There will be three "unit" exams, but no cumulative "final" exam. Each exam will cover material from powerpoint lectures, chapter quizzes, learning activities, scientific papers, and the

assigned reading in the textbook. Exam questions include: multiple-choice, numerical answer, and free response questions. Because exams contain extra credit questions, they are generally not curved. You may use a calculator during exams – graphing calculators can be used, if the student demonstrates to the proctor that the memory has been cleared. Expect exams to require the full 2 hours allotted.

B. Mastering Genetics Quizzes – 127.5 points – There are 17 quizzes (7.5 points each). One for each chapter that is covered in the online textbook. They are graded based on the number of questions answered correctly out of the total number of questions on the quiz, with one attempt per question for full points (using hints reduces score). Some quizzes include extra credit, usually particularly difficult questions or those that are time-consuming.

C. Mastering Genetics Dynamic Study Modules – 42.5 points – The DSM quizzes are worth 2.5 points each. One for most of the chapter in the textbook. DSMs are overall reviews of each chapter’s material. Full points are awarded upon completion before the due date. There is no penalty for using hints or for multiple attempts before the due date. Because of the way these are graded, late assignments do not earn credit.

D. Other Learning Assignments – 60 points - Many modules contain learning activities. Some of these activities may require a file upload of some sort and will be turned in as an assignment in Canvas.

E. Grading Summary*

Assignment	Points	Point Totals	% of total
10 in-class quizzes	5 each	50	8.6
17 DSM Quizzes	2.5 each	42.5	7.3
17 MasteringGenetics Quizzes	7.5 each	127.5	22.
8 Learning Activities	7.5 each	60	10.3
Exams	100	300	51.7
Course total		580	

***May be subject to minor changes at the discretion of the instructor**

All grades will be posted on e-Learning, and it is the responsibility of the student to check their grades on e-Learning to make sure they are accurate. (Please note that Mastering grades can take up to a day to transfer to Canvas, so don’t panic if you don’t see them right away.)

Minimum grade cutoffs are listed below. Because each exam has extra credit and/or may be curved individually & many assignments & quizzes have built-in extra credit, the scores for the course as a whole **will not be curved or rounded up.**

Point Range	Letter Grade	Point Range	Letter Grade
≥ 522	A	≥ 386	C
≥ 503	A–	≥ 385	C–
≥ 483	B+	≥ 367	D+
≥ 464	B	≥ 348	D
≥ 445	B–	≥ 329	D–
≥ 425	C+	< 329	E

Note that the current UF policy for assigning grade points is available at the following undergraduate catalog web page: <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>.

E. Computing Requirements - It is the sole responsibility of the student to maintain a functioning and compatible computing system, proper software and a reliable internet connection. Computing/internet connectivity issues will NOT be acceptable excuses for missed deadlines, unless they are brought to the attention of the instructor **at least 48 hours prior to the deadline** and accompanied by the ticket number from technical support. See Resources for Technical Support contact information. Microsoft Office programs are required for many of the assignments; it can be accessed by current UF students through [GatorCloud](#).

VII. Academic Honesty

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.”

Note: I hope you work in study groups on assignments; explaining concepts in this group setting is expected, however, when you solve questions, you will learn the material best if you do all of the calculations on your own. It is not unusual for me to take a quiz or assignment question, replace the numbers and place it on an exam. Be prepared, not sorry!

VIII. Attendance

Students are expected to check the course website daily for announcements, assignment due dates, and other course related information. Lectures are not a simple recapitulation of the textbook; they are designed to synthesize and embellish important concepts, to reinforce and provide a logical structure to the material. Students are strongly encouraged to read the assigned textbook chapters and watch lectures before attempting any of the assignments, as this will make it easier to comprehend the material.

IX. Time Commitment

The UF College of Liberal Arts and Sciences assumes that each student will devote 3-4 hours per week per credit-hour to each course, including time in lectures and labs. Because PCB 3063 is 4 credits, each student should therefore expect to devote 12-16 hours per week to this course during a regular semester, or 16-21 hours per week during Summer C. A recommended time allocation is below.

Activity	Hours per Week
Lectures/Videos	2-3
Online Exercises & Assignments	6-8
Textbook Readings	2-3
Review and Study	2-3

If you find yourself spending more than the recommended number of hours per week on average on these activities, discuss this with your course instructor to see if you can refine your study habits. If you find yourself spending less than the recommended number of hours per week on average, you should recognize that you may have difficulty learning and comprehending the material in this time, and this probably will be reflected in assessment performance.

X. Accommodations for Students with Disabilities

Students who will require an accommodation for a disability must contact the Dean of Students Office of Disability Resources, in Peabody 202 (phone: 352-392-1261). Please see the University of Florida Disability Resources website for more information at: <https://disability.ufl.edu/students/accommodations/>. Note that the student should provide documentation of a requirement for accommodation **by the second week of classes**.. It is the policy of the University of Florida that the student, not the instructor, is responsible for arranging accommodations when needed. Once notification is complete, the Dean of Students Office of Disability Resources will work with the instructor to accommodate the student.

XI. Counseling Center

Many students experience test anxiety and other stress related problems. Go to “[A Self Help Guide for Students](#)” to view CWC suggestions. In addition, a number of support systems are available through the UF Counseling and Wellness Center (3190 Radio Road, 392 1575, <https://counseling.ufl.edu/>).

XII. Tentative Course Schedule

This is a tentative schedule; the dates and coverage of topics are subject to change. To allow more flexibility in student schedules, all assignments for each week are due at 11:59 PM. I urge you to start the assignments early to avoid technical problems and/or rushing through them without learning the material.

Module	Lecture Topics	Chap	Assignments Due for this Module	Due Date
M0	Introduction, Syllabus	1	Assignment: Biography	05/18
M1	Mitosis Meiosis	2	MG DSM Chap 2 MG Quiz Chap 2	06/08 05/23
M2	Mendelian Monohybrid Mendelian Dihybrid	3	MG DSM Chap 3 MG Quiz Chap 3 (2) Chi-squared Practice Problems	06/08 05/23 05/25
M3	Extensions to Mendel Extranuclear Inheritance	4 9	MG DSM Chap 4 & 9 MG Quiz Chap 4 & 9 Extensions to Genetics Problems	06/08 05/30 06/01
M4	Gene Mapping Sex Determination	5 7	MG DSM Chap 5 & 7 MG Quiz Chaps 5 & 7 Mapping Problems in MG	06/08 06/06 06/01
	Exam I (M0-4)		Chaps 1-5, 7 & 9	06/08
M5	DNA Structure & Replication	10 11	MG DSM Chap 10 & 11 MG Quiz Chap 10 & 11 Replication Fork Worksheet	07/13 06/20 06/15
	Break		June 20 – June 26	
M6	Transcription & Translation	13 14	MG DSM Chap 13 & 14 MG Quiz Chap 13&14 Assignment: Explore PubMed & OMIM	07/13 07/05* 07/06
M7	DNA Mutation & Repair	8 15	MG DSM Chap 8 & 15 MG Quiz Chaps 8 & 15	07/13 07/10
	Exam 2 (M5-7)		Chaps 8, 10, 11, and 13-15	07/13
M8	Regulation of Gene Expression	18 19	MG Quiz Chaps 18 & 19 MG DSM Chap 18 & 19	07/25 08/09
M9	Quantitative Genetics	25	QT Homework MG Quiz Chap 25 MG DSM Chap 25	07/27 08/01 08/09
M10	Population Genetics	26	Hardy-Weinberg Problems MG Quiz Chap 26 MG DSM Chap 26	08/03 08/08 08/09
M11	Cancer Genetics	24	MG DSM Chap 24 MG Quiz Chap 24	08/09 08/08
	Exam 3 (M8-11)		Chaps 18, 19, and 24-26	08/10

*Usually, assignments are due on Thursdays, and quizzes are due on Tuesdays. Dates with asterisk are meant to highlight unusual deadlines to accommodate exams or holidays. The DSM assignments are due before the respective exams, but I hope you do them much sooner.