

## PCB3063 Genetics

**I. Class Meetings** 1001 Physics Bldg. T&Th 2-4 pm

### II. Instructors:

Bernard Hauser, Department of Biology  
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Office Hours: Mondays & Fridays 11-noon

Moein Rajaei, Department of Biology  
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Office Hours: Tuesdays 1-2 pm

### 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 a **reading-intensive, 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) Read the textbook chapter, 2) Do the Dynamic Study Modules, 3) Watch the lectures for synthesis of module concepts 4) Work through other homework assignments, 5) Post Discussion Assignments, 6) Take Mastering Genetics Quiz.

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, have your full name in the body of the e-mail, and contain your course number or name in the subject line.** E-mails not meeting these requirements may not be recognized by our e-mail filters, and thus may not be answered.

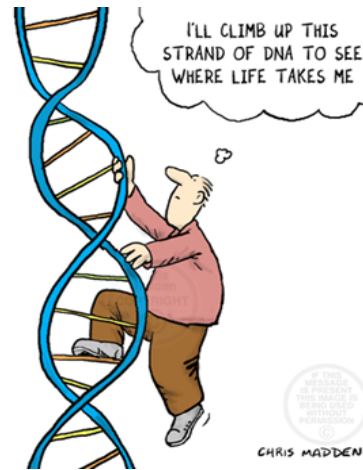
### V. Course Resources

**A. Textbook** – *Concepts of Genetics*, 12<sup>th</sup> 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](mailto: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](https://help.pearsoncmg.com/integration/cg/canvas/student/en/content/get_started.htm)

**C. Course Website (e-Learning)** - Class material including the syllabus, discussions, 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/>

**D. HonorLock** – Students will take exams electronically using the course Canvas website. Exams will be proctored using HonorLock. For more information, go to <https://dce.ufl.edu/services/online-proctoring/>. You **NEED** a webcam, speakers, microphone and a **fast, reliable internet connection** to take your exams. Expect to interact with proctors for 10-15 minutes before you can start your exam. **Honorlock** support is available 24/7/365. If you encounter any issues, you may contact them by live chat or phone (855-828-4004).

**VI. Online Assignment Information** - As part of PCB 3063, you are required to complete weekly online assignments. If at any time you have questions about these assignments, please post your question on **Prulu**. Due dates are posted within the individual Modules on Canvas. All assignments must be completed by the stated due date and time for credit. **Extensions will NOT be given because of technical or personal issues that occur within 24 hours of the assignment deadline**, so be sure to complete assignments early. Deadlines are final times to hit the submit button and submission problems occur when too many students are trying to access the course site at the same time. Make sure you have time to devote to assignments before you begin them. Even when assignments do not have stated time limits, Mastering or Canvas may time them out after several hours. Students will have only one attempt on Mastering Quizzes, so it is best to complete them in a single sitting. If the program closes, the grade will be recorded and you will not be able to go back in to finish it.

To broaden your understanding of ethical, technological, & societal issues in genetics, discussion topic assignments will be posted within each module in **Canvas**. Each week there will be a discussion assignment due. Please remember that some issues may be difficult or emotionally-charged, so be courteous, respectful, and considerate of others cultures & opinions. Bullying, harassment, and uncivil behavior will not be tolerated and will result in a 0% for the discussion assignment. Repeat offenders may be expelled from the class.

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

### **Communication with Your Instructor**

When you have a question about the assignments, check the following sources **first** to see if it is already answered, **before** e-mailing your Instructor:

- Course Syllabus
- Start here
- Prulu

If you still cannot find the answer to your questions:

- If it is a question that others might find useful to know the answer to as well, post it in **Prulu**.
- If it is a question specific to you (e.g. account or grade specific), e-mail your instructor. Barring unusual circumstances, expect a reply with 24 hours. E-mails and Prulu posts are checked at least once per day, except on weekends, but sometimes not more than that.
- If it is a question about the scoring of a specific assignment, please contact the instructor/TA who did the scoring of that assignment.

### **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 **five of the seven days** of the week of the assignment's deadline **by the Dean of Student's Office or DRC** for accommodations to be made.

It is in your best interest to plan to submit all online assignments well ahead of the posted deadlines, so that you have time to deal with technical problems should they arise. If there is a technical problem with website access or a particular assignment within *CANVAS*, you must contact **eLearning technical support and the instructor at least 48 hours prior to the deadline**, so appropriate steps can be taken to fix the issue and appropriate extensions can be given, if necessary. Thus, check early that you can access the assignments. **You will not be granted an extension for technical problems, if you do not contact the instructor well before the deadline.** When it is possible, a late penalty of 25% per day applies.

## **VII. 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, discussions, and the assigned reading in the textbook. Exams 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** – 180 points – There are 18 quizzes (10 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** – 60 points – The DSM quizzes are worth 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 Assignments** – 75 points - Each module will contain learning activities, usually one exploration/discovery discussion post and one other assignment from Mastering or on Canvas. Some of these activities may require a file upload of some sort and will be turned in as an assignment in Canvas.

Discussion assignments will require a prompted post on the Discussion forum in Canvas to get credit for the assignment. Please take care to avoid plagiarism in your posts, and, as always, maintain a collegial and courteous tone.

### E. Grading Summary\*

Assignment	Points	Point Totals	% of total
12 in-class problems	5 each	60	8.5
12 DSM Quizzes	5 each	60	10.6
18 Mastering Quizzes	10 each	180	25.6
10 Assignments	7.5 each	75	12.8
Exams	100	300	42.6
<b>Course total</b>		<b>675</b>	<b>100</b>

**\*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 (see section VII-A, above) & many assignments & quizzes have built-in extra credit, the scores for the course as a whole **will not be curved**.

Point Range	Letter Grade	Point Range	Letter Grade
≥ 608	A	≥ 449	C
≥ 684	A-	≥ 448	C-
≥ 564	B+	≥ 428	D+
≥ 540	B	≥ 405	D
≥ 516	B-	≥ 380	D-
≥ 496	C+	< 380	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](#).

### VIII. 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!

### IX. 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.

## **X. 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.

<b>Activity</b>	<b>Hours per Week</b>
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 will probably be reflected in poor performance on the various assessments

## **XI. 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**. No accommodations are available to students who lack this documentation. 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.

## **XII. 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/>).

### XIII. 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. This is NOT an invitation to wait until the last minute to do all the assignments. Get them done early and avoid technical problems or rushing through them without learning the material.

Module	Lecture Topics	Chap	Assignments Due for this Module	Due Date
M0	Introduction, Syllabus	1	<b>Assignment: Biography</b>	05/18
M1	Mitosis Meiosis	2	MG DSM Chap 2 MG Quiz Chap 2	06/08 05/15
M2	Mendelian Monohybrid Mendelian Dihybrid	3	MG DSM Chap 3 MG Quiz Chap 3 <b>Mendelian Genetics Problems</b> Chi-squared Practice Problems	06/08 05/22 05/18 05/18
M3	Extensions to Mendel Extranuclear Inheritance	4 9	MG DSM Chap 4 MG Quiz Chap 4 & 9 <b>Extensions to Genetics Problems</b>	06/08 05/29 05/25
M4	Gene Mapping Sex Determination	5 7	MG DSM Chap 5 & 7 MG Quiz Chaps 5 & 7 <b>Mapping Problems in MG</b>	06/08 06/05 06/01
	<b>Exam I (M0-4)</b>		<b>Chaps 1-5, 7 &amp; 9</b>	<b>06/09</b>
M5	DNA Structure & Replication	10 11	MG DSM Chap 10 & 11 <b>MG Quiz Chap 10 &amp; 11</b> Replication Fork Worksheet	07/13 06/12 06/12*
M6	Transcription & Translation	13 14	MG DSM Chap 13 & 14 <b>Central Dogma Work Sheet</b> MG Quiz Chap 13&14 <b>Assignment: Explore PubMed</b>	07/13 06/15 06/26 06/15
	Break		June 20 – June 26	
M7	DNA Mutation & Repair	8 15	MG DSM Chap 8 & 15 <b>MG Quiz Chaps 8 &amp; 15</b> <b>Assignment: Explore OMIM</b>	07/13 07/06* 07/06
	<b>Exam 2 (M5-7)</b>		<b>Chaps 8, 10, 11, and 13-15</b>	<b>07/14</b>
M8	Regulation of Gene Expression	18 19	MG DSM Chaps 18 MG Quiz Chaps 18 & 19	08/04 07/24
M9	Quantitative Genetics	25	<b>QT Homework</b> MG Quiz Chap 25	07/21 07/31
M10	Population Genetics	26	Hardy-Weinberg Problems <b>MG Quiz Chap 26</b>	07/28 07/31
M11	Cancer Genetics	24	MG DSM Chap 24 MG Quiz Chap 24	08/04 08/04*
	<b>Exam 3 (M8-11)</b>		<b>Chaps 18, 19, and 24-26</b>	<b>08/05</b>

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