

PCB3063 Genetics Online 19210 (15FE) & 19211 (15FF)

I. Class Meetings Online

II. Instructors:

Dr. Cherie Bond

CLAS Department of Biology

Office: 522B Carr Hall E-mail: bondc@ufl.edu

Office Hours: Walk-In: Tuesday 8:00 AM –12:00 PM

By Appointment: Tuesday 1:00 - 5:00 PM

Online Office: Tuesday 6:00 – 8:00 PM

TA: Tania Pineda Enriquez

E-mail: pinedae@ufl.edu

Online Office Hours: TBD

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 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 evolutionary 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) Watch lectures for synthesis of module concepts, 3) Do the Dynamic Study Modules, if assigned, 4) Take Mastering Genetics Quiz, 5) Work through other homework assignments, 6) Post Discussion Assignments.

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.

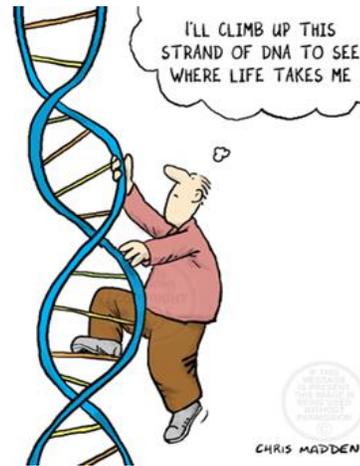
IV. E-mail Communication

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 and section number 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*, 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?TASK=INCLUDED> (Links to an external site.)[Links to an external site.](#) Follow the UF All Access Student Instructions. Codes can also be purchased at the bookstore, but at a higher cost. 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.
- Get temporary access.

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, 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/> ([Links to an external site.](#)) 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/> ([Links to an external site.](#))

D. ProctorU – Students will take exams electronically using the course Canvas website, but will register with ProctorU for their exam appointments. You need a webcam, speakers, microphone and a reliable Internet connection to take your exams. ProctorU help is available at [:www.ProctorU.com](http://www.ProctorU.com) or email contact@proctoru.com

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. There are no make-ups and no partial credit for late assignments. 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.**

VII. Assessments and Grading

A. Exams – 300 points - There will be three "unit" exams (100 points each), 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 may include: multiple-choice, matching, identify, and/or free response questions and problems. Because exams contain extra credit questions, they are generally not curved. Should the instructor choose to apply a curve to an exam, it will be based on the average of the top 3% of grades on that exam. 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. Exams will be available for review by appointment for one week after the exam date. Exams will **not** be available for review after the semester has ended.

***Academic dishonesty** will not be tolerated. If cheating or plagiarism is suspected, all persons involved will receive a zero on the affected problem set, assignment, or exam and will be reported to the Dean of Students Office (refer to **section VIII**).

B. Mastering Genetics Quizzes – 150 points – There are 15 weekly online textbook reading comprehension quizzes in Mastering Genetics (10 points each). 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 – 150 points – There are 15 weekly online Dynamic Study Modules in Mastering Genetics, each worth 10 points. DSMs are overall reviews of each chapter’s material. Students have reported that these exercises are extremely helpful in learning the information. 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.

D. Other Learning Activities – 300 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. Special Topics Project – 100 points- Working in groups, students will perform independent research on a special topic in genetics and present their findings as a poster. Students may choose to investigate one of the 6 special topics in the text, or other aspects of modern genetics that spark their interests, such as: designer babies, “RePet” services that clone family pets, ancestry tracing through mitochondrial, Y chromosome, or nuclear DNA, tracking human evolution, bioethics issues, specific genetic diseases, clinical trials for pharmacogenomics treatments, *etc.* The group must reach a consensus on a single cohesive topic, though individuals may work on different parts of the project independently. This is meant to be a collaborative exercise, with all members of the group contributing their skills and knowledge gained throughout the course. Students will self-assess their contributions, as well as their peer contributions, to their group’s effort. A grading rubric will be available with detailed instructions and scaffolding assignments will be interspersed throughout the semester to ensure success.

E. Grading Summary*

Assignment	Points	Point Totals	% of Grade	% Totals
Discussions	10 each	150	~1% each	15%
Dynamic Study Mods	10 each	150	~1% each	15%
Mastering Quizzes	10 each	150	~1% each	15%
Other Assignments	10 each	150	~1% each	15%
Special Topics	100	100	10%	10%
Exam I	100	100	10%	10%
Exam II	100	100	10%	10%
Exam III	100	100	10%	10%
Course total		1000		100%

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. If there is a discrepancy you must let us know within ONE week of the grade being posted on eLearning. (Please note that Mastering grades can take several hours 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** (i.e. these grade cutoffs will not be lowered). However, these cutoffs will not be raised; in other words, **if you earn 900 of the 1000+ possible points, you are guaranteed to earn an A grade**. Final scores will NOT be rounded (i.e., 899.99 is not 900). Please do not ask for individual grade adjustments at the end of the semester

Point Range	Letter Grade	Point Range	Letter Grade
≥ 900.00	A	≥ 700	C
≥ 866.67	A–	≥ 666.67	C–
≥ 833.33	B+	≥ 633.33	D+
≥ 800.00	B	≥ 600	D
≥ 766.67	B–	≥ 566.67	D–
≥ 733.33	C+	< 566.67	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> (Links to an external site.)
[Links to an external site.](#)

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](#). (Links to an external site.)
[Links to an external site.](#)

F. Special Treatment - Please do not request individual special treatment regarding grading at the end of the semester; **we do not adjust grades for individuals for any reason**. Additionally, there are extra assignments throughout the semester that bring the total possible points to over 1000, so missing a couple does not affect the final grade. Plan to do well on all exams and other assessments from the beginning of the semester; if you are having difficulty in the class, please let your instructors know *before* the exams rather than after.

VIII. 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). You are expected to review and abide by the University of Florida Academic Honesty Guidelines at: <https://catalog.ufl.edu/ugrad/current/advising/info/student-honor-code.aspx#honesty> (Links to an external site.)
[Links to an external site.](#)

Cheating, including plagiarism will result in consequences which many range from a 0 on the assignment to a failing grade for the entire course.

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 the most 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.

Activity	Hours per Week
Lectures/Videos	2-3
Online Exercises & Assignments	5-6
Textbook Readings	2-3
Review and Study	3-4

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. Conduct in Class - Online – See guidelines for Discussion & Prulu Posts, Contacting Instructors..

XII. 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: <http://www.dso.ufl.edu/drc/> ([Links to an external site.](#))[Links to an external site.](#). 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.

XIII. Counseling Center

Many students experience test anxiety and other stress related problems. “[A Self Help Guide for Students \(Links to an external site.\)Links to an external site.](#)” as well as a diverse array of support systems are available through the UF Counseling and Wellness Center (3190 Radio Road, 392-1575, <http://www.counsel.ufl.edu/> ([Links to an external site.](#))[Links to an external site.](#)).

XIV. Course Evaluation

To improve the teaching and learning of this important course, students are required to submit a teaching evaluation for each instructor electronically. Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.ua.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.ua.ufl.edu/public-results/>. Evaluations are stored and reported in a completely anonymous manner. Authentication for evaluation submission is only to ensure that only one evaluation is submitted per student per instructor.

XV. 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 on Saturday of that week at 11:59 PM, with a few exceptions to accommodate holidays, semester start, etc. This is NOT an invitation to wait until Saturday to do all the assignments. Get them done early and avoid technical problems. No extensions or make-ups will be given for last minute technical problems.

Module	Lecture Topics	Text Chap	Assignments Due for this Module	Assignment Due Date
M0	Introduction, Syllabus Biology Review Review Cell Structure	1	Intro Dynamic Study Modules (DSM) Intro to Mastering Genetics (MG) Cell Structure Worksheet (WS) Discussion: Biography	08/31 Semester Start
M1	Mitosis Meiosis	2	MG DSM Chap 2 MG Quiz Chap 2 Draw It to Know it Activity WS Discussion: Explore PubMed	08/31
M2	Mendelian Monohybrid Mendelian Dihybrid	3	MG DSM Chap 3 MG Quiz Chap 3 Mendelian Genetics Problems Chi-squared Practice Problems Discussion: Explore OMIM	09/07
M3	Extensions to Mendel 1 Extensions to Mendel 2 Extensions to Mendel 3	4	MG DSM Chap 4 MG Quiz Chap 4 Extensions Genetics Problems Discussion: Hemophilia Case Study	09/14
M4	Chromosome Mapping Sex Determination	5 7	MG DSM Chap 5 MG Quiz Chaps 5&7 Discussion: Ethics – Sex selection	09/21
	Exam I (Mods 0-4)		Chaps 1,2,3,4,5,7	09/23-09/24
M5	Chromosome Mutations Numerical/Structural	8	MG DSM Chap 8 MG Quiz Chap 8 Poster: Pinned Discussion Topic Ideas Discussion: Explore Chromo Database	09/28
M6	Extranuclear Inheritance DNA Structure/Analysis	9 10	MG DSM Chap 10 MG Quiz Chap 10 Critical Reading: Franklin/Watson MG Chap 9 Homework-Extranuclear Discussion: Tech-mtDNA&Romanovs	10/06 Sunday Homecoming
M7	DNA Replication <i>In vitro</i> DNA Replication DNA Organization	11 12	MG DSM Chap 11 MG DSM Chap 12 MG Quiz Chaps 11&12 Replication Fork Worksheet Critical Reading: Meselson & Stahl Discussion: Tech-Telomeres&Aging	10/12

M8	Transcription Translation & Proteins	13 14	MG DSM Chap 13 MG DSM Chap 14 MG Quiz Chaps 13&14 Central Dogma Worksheet Poster: Tentative Title & Group Names Discussion: Tech – ASOs & DMD	10/19
M9	DNA Mutation DNA Repair	15	MG DSM Chap 15 MG Quiz Chap 15 Critical Reading: Bundo et al 2014 Discussion: Create a Mutant Activity	10/26
	Exam 2 (Mods 5-9)		Chaps 8-15	10/28-10/29
M10	Prokaryotic Expression Eukaryotic Expression	16 17	MG DSM Chap 16 MG DSM Chap 17 MG Quiz Chaps16&17 Lac Operon Worksheet Discussion: Tech Quorum Sensing	11/03 Sunday Exam Week
M11	Epigenetic Regulation Cancer Genetics	19 24	MG DSM Chap 24 MG Quiz Chap 24 MG Chap 19 Homework Poster: Annotated Bibliography	11/09
M12	Quantitative & Multifactorial Genetics	25	MG Chap 25 Homework MG Quiz Chap 25 Discussion: Genetics & Society – Human Skin Color	11/16
M13	Population Genetics Evolutionary Genetics	26	MG Chap 26 Homework MG Quiz Chap 26 Hardy-Weinberg Worksheet Discussion: Genetics & Society - Human Origins	11/23
M14	Developmental Genetics Human Disorders of Neurodevelopment	23	MG Chap 23 Homework MG Quiz Chap 23 Discussion: Ethics & Society Stem Cell Wars	12/01 Sunday Thanksgiving
	Exam 3 (Mods 10-14)		Chaps 16,17,19,23,24,25,26	12/03-12/04
M15	Special Project Poster		Peer & Self Evaluation Poster pdf uploaded Course Evaluations – Extra Credit	12/07 12/07