

PCB3063 Genetics

I. Class Meetings T & Th 9:35 am in 170 Pugh Hall

II. Instructors: Bernard Hauser, Department of Biology

Office: 516A Bartram Hall, bahauser@ufl.edu

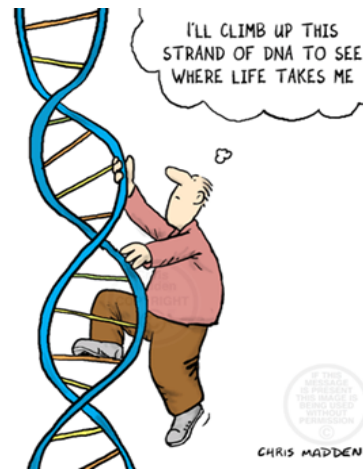
Office Hours: After class and Tuesdays 1-2

Anna Mohr, 517A Bartram Hall, amohr@ufl.edu

Office Hours: Wednesdays and Fridays 11-noon

Bigyan KC, 516 Bartram Hall, kcbigyan@ufl.edu

Office Hours: Mondays and Thursdays 3-4



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 requiring critical analysis. Keeping up with assignments and problems 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 Chap.ter (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-Chap.ter 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 account and have your 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.

Never use temporary access because all work will be lost when you purchase MasteringGenetics.

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 from their website.

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

VI. Online Assignment Information - As part of PCB 3063, you are required to complete weekly online assignments in Mastering Genetics. Due dates are posted within the individual Modules on Canvas. All assignments must be completed by the stated due date and time for credit. 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.

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 – 85 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 each 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 – 27.5 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.

E. Grading Summary*

Assignment	Points	Point Totals
10 in-class quizzes	5 each	50
17 DSM quizzes	2.5 each	42.5
17 MasteringGenetics quizzes	5 each	85
5 Learning Assignments	5.5 each	27.5
3 Exams	100 each	300
Course total		505

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

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
≥ 455	A	≥ 336	C
≥ 437	A-	≥ 335	C-
≥ 421	B+	≥ 320	D+
≥ 404	B	≥ 303	D
≥ 387	B-	≥ 269	D-
≥ 371	C+	< 269	E

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.

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 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	Date
M0	Introduction, Syllabus	1	Assignment: Biography	Jan 21
M1	Mitosis Meiosis	2	MG DSM Chap. 2 MG Quiz Chap. 2	Feb 11 Jan 19
M2	Mendelian Monohybrid Mendelian Dihybrid	3	MG DSM Chap. 3 MG Quiz Chap. 3 Chi-squared Practice Problems	Feb 11 Jan 26 Jan 28
M3	Extensions to Mendel Gene Mapping	4 9	MG DSM Chap. 4 & 5 MG Quiz Chap. 4 & 5	Feb 11 Feb 2
M4	Extranuclear Inheritance Sex Determination	5 7	MG DSM Chap. 7 & 9 MG Quiz Chap. 7 & 9	Feb 11 Feb 9
	Exam I (M0-4)		Chap. 1-5, 7 & 9	Feb 12
M5	DNA Structure & Replication	10 11	MG DSM Chap. 10 & 11 MG Quiz Chap. 10 MG Quiz Chap. 11 Replication Fork Worksheet	Mar 11 Feb 16 Feb 23 Feb 18
M6	Transcription & Translation	13 14	MG DSM Chap. 13 & 14 MG Quiz Chap. 13 MG Quiz Chap. 14	Mar 11 Feb 23 Mar 2
M7	DNA Mutation & Repair	8 15	MG DSM Chap. 8 & 15 MG Quiz Chap. 15 MG Quiz Chap. 8	Mar 11 Mar 2 Mar 9
	Exam 2 (M5-7)		Chap. 8, 10, 11, and 13-15	Mar 12
M8	Gene Expression	17 18 19	MG DSM Chap. 18, 19 MG Quiz Chap. 18, 19 PubMed & OMIM Assignment	Apr 20 Mar 30 Mar 25
M9	Quantitative Genetics	25	MG DSM Chap. 25 QT Homework MG Quiz Chap. 25	Apr 20 Apr 8 Apr 6
M10	Population Genetics	26	Hardy-Weinberg Problems MG Quiz Chap. 26 MG DSM Chap. 26	Apr 15 Apr 13 Apr 20
M11	Cancer Genetics	24	MG DSM Chap. 24 MG Quiz Chap. 24	Apr 20 Apr 20
	Exam 3 (M8-11)		Chap. 17-19, 24-26	Apr 21

*Quizzes are due on Mondays and assignments are due on Wednesdays. The DSM assignments are due the day before the exams, but I hope you do them much sooner.