

# Genetics: PCB 3063

## Sections 15FE & 15FF

Instructor: Dr. Thomas Niehaus

Office: 2318 Fifield Hall (Mon, Wed); 2316 Fifield Hall (Thurs)

Office Hours: 2:00-3:00 pm (Mon); 9:00-10:00 am (Wed); 3:00-4:00 pm (Thurs)

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## Course Description

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PCB 3063 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 population genetics. The course emphasis is on problem solving and conceptual synthesis.

## Office Hours

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These will be held online using the Canvas conference tool. These will be recorded so everyone can view the questions and answers to the questions. This way if you are unable to attend, you can email questions in advance and view answers at your convenience. For conversations that need to remain private, a private chat/video window will be opened.

## Course Logistics

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This course is fully online. For each chapter in the text, there will be a chapter quiz and problem set. The chapter quiz ensures that you know terms and facts associated with the information in the chapter.

The problem set questions are generally harder than test questions and may require you to interact with others in the class to find the answers. We'll use the Delphi Method (an asynchronous collaborative problem-solving technique) to help you solve the problems. See the details on this in the Canvas Start Here section.

For each chapter, there will be Chapter Notes that describe important concepts to learn and suggest problems to solve—hopefully this guide on how to use your time most effectively.

## Required Textbook

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*Essentials of Genetics* 9<sup>th</sup> edition by Klug, which is published by Pearson-Benjamin Cummings. This class also requires access to MasteringGenetics (MG) for the Chapter quizzes. In order to assist synchronization of MG and allow you online access to the text, the text and MG is bundled and is to be purchased as a UF All Access package. Read this link for more details: <http://news.hr.ufl.edu/2017/02/uf-all-access-textbook-program-an-effective-way-to-save-students-money/>.

Instructions to purchase the text are found in Canvas Start Here section. Access to the solutions manual that accompanies this text is helpful when you get stuck working problems.

The text is bundled with MG. This text is online, however, if you want loose leaf pages, this can be purchased from the UF bookstore separately. There are links to purchase these materials in the Canvas Start Here section.

## Required Equipment

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A webcam, microphone and speakers or headphones is required for this course. You will need these both for the online proctored exams and for the office hour sessions. These tools may also be useful for partner study sessions. Visit UF's [ProctorU technical specifications](#) for details.

## Class Participation

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Online learning requires good time management skills. You can expect to spend a **minimum** of nine hours a week on this course. Class participation during office hours will be recorded so other students can gain insights from questions. You are expected to contribute intellectually to the Delphi Discussions weekly. Solving a problem always counts, but also asking a good question does as well. Participation scores will be updated after each exam.

<b>Grading</b>	<b>Points</b>
Exam I	100 (20%)
Exam II	100 (20%)
Exam III	90 (18%)
16 Chapter Quizzes (lowest one dropped)	90 (18%)
16 Problem Sets/ Delphi Discussion (lowest one dropped)	<u>120 (24%)</u>
Total	500

## Grading

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<b>91-100% = A</b>
<b>88-90.9% A-</b>
<b>85-87.9% B+</b>
<b>81-84.9% B</b>
<b>78-80.9% B-</b>

<b>75-77.9% C+</b>
<b>68-74.9% C</b>
<b>65-67.9% D+</b>
<b>61-64.9% D</b>
<b>Below 60 is failing.</b>

## Proctored Exams

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To ensure the academic integrity of the degrees awarded by the University of Florida, all three exams in this course will be proctored. UF Online students are proctored through ProctorU. For details on how this works, visit the [Proctored Exams Student Guide](#). In order to use this service, you **MUST** have a webcam, headset or working speakers and a microphone. See the [ProctorU Technical Specifications](#). Follow these steps for a trouble-free exam:

- Sign up early!
  - Set up your account during the first week of classes
  - Schedule your exam appointments as early as you can
- Test your equipment well before your exam (that means do it as soon as you receive your camera!)
  - Make certain that your webcam and microphone function properly
  - [Go to the ProctorU Testpage](#)
  - You are strongly urged to take the extra step to connect to a live person
  - Test your equipment again the day before your exam
- Download and install Google Chrome on your computer
  - Chrome is the only supported browser for ProctorU exams
- Use a wired connection
  - **This is the number one cause of problems with online exams!**
  - The extra load of the proctoring software can cause even the best wireless connection to fail—don't take that chance!
- Find a quiet and private location
  - You will not be able to take your exam in a coffee house or other public location

If you have not followed the steps listed above, any request for a makeup exam will not be granted.

## General Policies

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1. **BRING A CALCULATOR TO EXAMS**—Graphing calculators CANNOT be used unless the student demonstrates to the proctor that the memory has been cleared.
2. **GRADING POLICY:** If you have questions about your grade on an assignment, please make an appointment to talk with your instructor within a week after the assignment has been returned.
3. **COURSE EVALUATION:** Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at [evaluations.ufl.edu](http://evaluations.ufl.edu).
  - a. The completion of additional surveys will earn extra credit.
4. **NETIQUETTE: COMMUNICATION COURTESY:** All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats. It is the goal of this course to provide a safe place to discuss personal issues in a constructive manner. View the course netiquette guide in the Canvas Syllabus tool for details.

## Getting Help

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For issues with technical difficulties for e-Learning in Canvas, please contact the UF Help Desk at:

- [helpdesk@ufl.edu](mailto:helpdesk@ufl.edu)
- (352) 392-HELP
- <http://helpdesk.ufl.edu>

Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor or TA within 24 hours of the technical difficulty if you wish to request a make-up.

Other resources are available at <http://www.distance.ufl.edu/getting-help> for:

- Counseling and Wellness resources, 392-1575
- Disability resources
- Resources for handling student concerns and complaints
- Library Help Desk support
- Career Resource Center, 352-392-1601 <https://www.crc.ufl.edu/>

Should you have any complaints with your experience in this course please visit <http://www.distance.ufl.edu/student-complaints> to submit a complaint.

## Tips for Success!

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### Create a work plan

Schedule a block of time every day to do the work for this class.

### Work in study groups

I encourage you to study for exams together and work together on genetics problems. The Canvas discussion tool is designed to facilitate interactions among students. Post to the FAQ Discussion Board if you are looking for a study group by listing the days/times you want to meet. Meet via Skype or the Canvas Conferences tool (you can also create a free 45 minute [Zoom meeting](#))

### Attempt to solve the problems

Be sure to make a good attempt to solve the problems at the end of each chapter. These are harder than test questions, but excellent preparation for the exams. I encourage you to solve all of these problems. If you get stuck and need a hint ask your study partner, instructor, or check the solutions manual. Don't wait until it is too late to ask for help—work the problems each week.

## Students with Disabilities

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Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

Your instructor is happy to assist you with any accommodation needs. Please do not delay in requesting assistance.

## Academic Honesty

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UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

The [Honor Code](#) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates

academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor in this class.

## Topics Covered and Exam Schedule

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### Check the Course Calendar for Updates

<b>Topic</b>	<b>Reading</b>	<b>Date</b>
Course policies and Introduction	CH 1	Week 1
Mitosis and Meiosis	CH 2	Week 2
Mendelian Genetics	CH 3	Week 3
Mendelian Extensions	CH 4	Week 4
Sex Determination	CH 5	Week 5
Linkage and Mapping in Eukaryotes	CH 7	Week 6
Exam1		Oct 2-3
DNA: the genetic material	CH 9	Week 7
DNA Replication	CH 10	Week 8
Chromosome Structure and Organization	CH 11	Week 9
Transcription	CH 12	Week 10
Translation	CH 13	Week 11
Mutation and DNA Repair	CH 14	Week 12
Regulation of gene expression:	CH 15	Week 13
Exam 2		Nov 20-21
Quantitative Genetics	CH 21	Week 14
Population and Evolutionary Genetics	CH 22	Week 15
Omics technologies	CH 18	Week 16
Exam 3		Dec 11-12

This syllabus is subject to change. Any changes will be announced well in advance of deadlines.