PCB 3063 -- Genetics

Spring 2017, 4 credits

Schedule

Section 6130	Tuesday, Thursday	Period 5 – 6	11:45 AM – 1:40 PM	McCartyA G186
Section 2C92	Tuesday, Thursday	Period 9 – 10	4:05 PM – 6:00 PM	Rogers 106

Course Description

PCB 3063 is an introduction to genetics course covering topics from molecular biology, genetics of inheritance, population genetics, and evolution. The class will provide students with a solid foundation in genetics either as a stand-alone course or as a prerequisite to other life sciences courses offered on campus. The course emphasis is on problem solving and conceptual synthesis.

Instructor

Dr. Kin-Lan Han, PhD
Department of Biology
Office: 522A Carr Hall
Office Hours: Wednesday Periods 6-7 12:50 PM – 2:45 PM, or by appointment
E-mail: hankin@ufl.edu

Teaching Assistant

Mr. George Tiley
Graduate Teaching Assistant
Department of Biology
Office: 217 Carr Hall
Office Hours: Wednesday Periods 3-5 9:35 AM – 12:35 PM
Email: gtiley@ufl.edu

Course Resources

- **Course Website**
  Course materials and related information will be posted on the Canvas website at (http://lss.at.ufl.edu). The course is found under "e-Learning in Canvas". You are responsible for **all** announcements made in lecture and/or posted on the course website for this class. For help with e-Learning, call the UF Computing Help Desk at 352-392-4357, or visit the e-Learning support website: https://lss.at.ufl.edu/help.shtml.

  A discussion forum will also be set up on Canvas. Questions regarding the course mechanics, lecture material, or assignments should be posted there so that the instructor, TA, or your fellow students will be able to provide answers. Don't be shy about asking questions; after all, if you are confused about the material, there almost certainly will be other students with the same questions. *Please reserve emails for issues of a more personal nature.* Also, make sure you check the discussion forum to make sure your question hasn't already been asked and answered.

- **Textbook**
  Klug, Cummings, Spencer, & Palladino. 2015. *Concepts of Genetics*, 11th Edition. Pearson, New York.

- **Online Resources and Electronic Textbook**
  Mastering Genetics is an online assignment and tutorial system from the textbook publisher. It is required for this course and includes an e-book with purchase. A copy of the textbook should come packaged with *Mastering Genetics*. Alternatively, you may purchase *Mastering Genetics* and the e-book as a standalone purchase. If you purchase a used textbook, you will still need to purchase access to *Mastering Genetics*.

  To set up your *Mastering Genetics* account, follow the instructions provided. Make sure you sign up through the Canvas course page to ensure you sign up for the correct course.

  If you have any questions or problems logging in, please contact Technical Support. Technical support will need a support incident ID if you continue to have trouble, so be sure to save that ID when you report your issue.

- **Classroom Response System**
  We will use Learning Catalytics for in class questions. This requires a smartphone, tablet, or laptop to participate in class. Learning Catalytics is included with your *Mastering Genetics* with e-book purchase.

Attendance

Attendance is not mandatory, but students are expected to attend all classes and are responsible for all material covered during lecture, including announcements. Material may be covered during the lecture that may appear on exams, so it is in your best interests to come to class. Additionally, attendance is necessary to earn points from in class questions (Learning Catalytics).

Students are strongly encouraged to read the assigned chapters before coming to class as this will make it easier to comprehend the lecture material.

Assessments and Grading

- **Exams**
  - There will be three "midterm" exams, but no cumulative "final" exam. The midterm exams will be administered during the normal semester and during the normal class meeting time.
  - Attendance during scheduled exams is mandatory.
  - Some exams may require a calculator. You are responsible for providing your own calculator. NO GRAPHING CALCULATORS OR CELL PHONE CALCULATORS WILL BE ALLOWED.
  - Exams will cover material from lectures, readings or other assignments.

- You must bring your Gator1 ID to exams.
- No student will be allowed to start an exam after the first student to complete an exam leaves the classroom.
- No additional time will be given to complete an exam. If you are late, you will have less time to complete an exam.
- Academic dishonesty will not be tolerated. If cheating or plagiarism is suspected, all persons involved will receive a zero on that assignment and be reported to the Dean of Students Office. If you see or suspect someone of cheating, it is your responsibility to report that person. See Academic Honesty Policy below.
- Specific dates and times will be posted to review your exams. Exams will not be available for review after the semester has ended.
- Regrade requests must be submitted in writing within two weeks after exams are available for review. The request MUST include a cited explanation of why you believe your answer was correct. No regrade requests will be entertained after the time limit.

- **Make-up Exams**
  - NO make-up exams will be given without prior permission or documentation of illness. Students that will be missing an exam due to a pre-arranged university-approved excused absence (sports, etc.) should let the instructor know **a minimum of two weeks in advance**. These students may be required to take the make-up exam *before* the scheduled in-class exam.
  - In case of illness on exam day, a letter from the student's primary care provider is required. This letter must state that the student was unable to complete the exam on the scheduled date (i.e., a letter stating only that the student was seen in the clinic is not sufficient). A personal matter requires a note from the Dean of Students Office.
  - Make-up exams MUST be taken within one week of the in-class exam. NO make-up exams will be offered after exam grades have been posted.

- **Learning Catalytics**
  - A total of 30 points will be awarded for Learning Catalytics quizzes. Each question posed in class will be scored as 0.5 points for participation and 0.5 points for a correct answer. Students who achieve 75% of all points possible for Learning Catalytics will receive full course points; those achieving less will receive course points in proportion to their achieved points.
  - It is the student's responsibility to regularly check (i.e., weekly) their Learning Catalytics points to ensure that their submissions were correctly received. Contact Pearson support to resolve any submission issues.

- **Grading**

Assessment	Points
Exam 1	100
Exam 2	100
Exam 3	100
Assignments	70

Learning Catalytics	30
Group Project	100
Total	500

Grading will be on a percent scale as follows:

Percent	Letter Grade	Minimum Points
≥ 93.50	A	467.5
90.00 – 93.49	A-	450
86.50 – 89.99	B+	432.5
83.50 – 86.49	B	417.5
80.00 – 83.49	B–	400
76.50 – 79.99	C+	382.5
73.50 – 76.49	C	367.5
70.00 – 73.49	C–	350
66.50 – 69.99	D+	332.5
63.50 – 66.49	D	317.5
60.00 – 63.49	D–	300
<59.99	E	<299.95

- **Extra Credit**
  No mechanisms for extra credit are available. Please do not ask.

- **Special Treatment**
  Please do not request individual special treatment regarding grading at the end of the semester; **I do not adjust grades for individuals for any reason**. Plan to do well on all exams and other assessments from the beginning of the semester. If you are having difficulty in class, please let your instructors know *before* the exams rather than after.

UF POLICIES

- **Academic Honesty**
  - All students 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."

  - Additionally, 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 me immediately. For additional information on Academic Honesty, please refer to the

University of Florida Academic Honesty Guidelines at:
http://www.dso.ufl.edu/judicial/procedures/academicguide.html

- **Accommodations For Students With Disabilities**
  - Students who will require a classroom 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/drp/services/.
  - 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.

- **UF Counseling Services**
  Resources are available on campus to help students meet academic goals and solve personal problems, which interfere with their academic performance. Resources include:
  - University Counseling Center, 301 Peabody Hall, 392-1575, personal and career counseling.
  - Student Mental Health, Student Health Care Center, 392-1171, personal counseling.
  - Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling.
  - Office of Academic Support, http://oas.aa.ufl.edu, tips for academic success, tutoring
  - UF Teaching Center, http://teachingcenter.ufl.edu, tutoring, study skills

Tips for Success

- Keep up with textbook readings
- Keep up with assignments
- Work as many problems at end of chapter as possible
- Review lecture notes as soon as possible after class so that you can get clarification on any material while it is still fresh in your mind
- Join a study group

Course Outline

DISCLAIMER: The schedule below may be subject to change as we go through the semester. Schedule adjustments to the course topics are a normal event, and should be expected. Any changes that occur will be announced in class and posted on Canvas. Changes to exam dates are unlikely, however, if they should change, it will be announced at least one week prior to that date.

Week	Date	Topic	Readings
UNIT I: Molecular Genetics			
1	5 Jan	Introduction DNA	Chapters 1 and 10
2	10 Jan	Chromosome Organization	Chapter 12

Week	Date	Topic	Readings
	12 Jan	DNA Replication and Recombination	Chapter 11
3	17 Jan	Transcription	Chapter 13
	19 Jan	Translation	Chapter 14
4	24 Jan	Gene Expression: Prokaryotes	Chapter 16
	26 Jan	Gene Expression: Eukaryotes	Chapter 17
5	31 Jan	Mutations	Chapter 15
	2 Feb	Cancer Genetics	Chapter 19
6	7 Feb	Review Exam I	
	9 Feb	**EXAM I**	
	UNIT II: Mendelian Genetics		
7	14 Feb	Mendelian Genetics	Chapter 3
	16 Feb	Meiosis and Mitosis	Chapter 2
8	21 Feb	Extensions of Mendelian Genetics	Chapter 4
	23 Feb	Linkage and Mapping	Chapters 5 and 6
9	28 Feb	Mapping cont'd	Chapters 5 and 6
	2 Mar	Sex Determination and Sex Chromosomes	Chapter 7
10	**No classes – Spring Break**		
11	14 Mar	Chromosome Mutations	Chapter 8
	16 Mar	Extranuclear inheritance	Chapter 9
12	21 Mar	Review Exam II	
	23 Mar	**EXAM II**	
UNIT III: Evolutionary Genetics			
13	28 Mar	Quantitative Genetics	Chapter 23
	30 Mar	Evolutionary Genetics	Chapter 25, additional reading TBA
14	4 Apr	Population Genetics	Chapter 25
	6 Apr	Conservation Genetics	TBA
15	11 Apr	Biotechnology	Chapters 20, 21, 22
	13 Apr	Review Exam III	
16	18 Apr	**EXAM III**	