

PCB 3063, GENETICS
SECTION 6130, SPRING, 2016, 4 CREDITS

COURSE INSTRUCTOR

Dr. Michael M. Miyamoto, Professor, Department of Biology, miyamoto@ufl.edu, Office: Bartram 328, Phone: 392-3275, Office hours: MT, period 2 (8:30-9:20 am)

LIBRARIAN INSTRUCTOR

Dr. Michele R. Tennant, University Librarian, Health Science Center Libraries (HSCL), tennantm@ufl.edu

TEACHING ASSISTANTS

George Tiley, Graduate TA, gtiley@ufl.edu, Office: Carr 218, Office hours: TBA

Mahmoud Aryan, Alyssa Dayton, Benjamin Judkins, Jacklyn Locklear, Nina Prieto, and Nicholas Toselli, Undergraduate Student TAs, Office: Bartram 311, Office hours: Available on course website

- All email correspondences must be from your “.ufl” account and have your full name in the body of the email. Otherwise, your message may not be recognized by our email filters, and thus, may not be answered.

CLASS MEETINGS

TR, periods 5 (11:45 am-12:35 pm) and 6 (12:50-1:40 pm); McCarty Hall A, Room G186

REQUIRED TEXTBOOKS

Klug, WS, MR Cummings, CA Spencer, and MA Palladino. 2015. Concepts of Genetics, 11th ed. Pearson, New York.

Nickla, H. 2015. Student Handbook and Solutions Manual, 11th ed. Pearson, New York.

COURSE WEBSITE:

Course website: E-Learning in Canvas website, <http://lss.at.ufl.edu>

The E-Learning in Canvas website is where the class syllabus, handouts and notes, and practice exams will be posted, along with any announcements. This site is also where you will find basic information such as contact information and office hours for the instructors and teaching assistants and about the textbooks. Please remember that you are responsible for all announcements made in lecture and/or posted on the course website for this class.

You will also use the E-Learning in Canvas website to complete your three web-based assessments (i.e., web-based Parts A, B, and C) for our term poster project on human hereditary diseases.

LECTURES AND DISCUSSIONS

<i>Week</i>	<i>General Topics</i>	<i>Chapters</i>
January 4	Introduction to course and to genetics	1
	Mitosis and meiosis	2
	Mendelian inheritance	3
January 11	Statistics and probabilities	3
	Allele and gene interactions	4
	Sex, extranuclear, and autosomal linkage	7, 9
January 18	Problem-solving session I	
	Crossover, recombination, and mapping	5
January 25	Required PubMed sessions at Health Science Center Libraries (HSCL)	
	Quantitative inheritance	23, 24
	January 28 (R), no class in lieu of required PubMed sessions at HSCL	

February 1	Problem-solving session II Exam I, February 4 (R)	
February 8	Nucleic acids, proteins, and chromosomes Bacterial and viral genetics	10, 12, 14 6
February 15	Replication, transcription, and translation Point mutations	11, 13, 14 15
February 22	Required NCBI sessions at HSCL Chromosomal mutations February 25 (R), no class in lieu of required NCBI sessions at HSCL	8
February 29	Spring Break (no classes)	
March 7	DNA repair and recombination “Prokaryotic” gene expression	11, 15 16
March 14	Eukaryotic gene expression Exam II, March 17 (R)	17, ST 1, ST 2*
March 21	Developmental genetics Genetic engineering and biotechnology	18 20, 22, ST 3, ST 5*
March 28	Genomics Transposable elements Medical genetics	21 15 19, ST 4, ST 6*
April 4	Population genetics	25
April 11	Evolutionary genetics Poster presentations, April 14 (R)	25
April 18	Final Exam, April 19 (T)	

*”ST” refers to the six chapters on “Special Topics” in your textbook

EXAMS AND GRADING

<i>Assignment</i>	<i>Points</i>	<i>Dates</i>
Exam I	150	February 4 (R)
Exam II	150	March 17 (R)
Final exam	150	April 19 (T)
Research project	150	PubMed sessions: Week of January 25 NCBI sessions: Week of February 22 Part A: Due February 9 (T) Part B: Due February 18 (R) Part C: Due March 10 (R) Poster presentations: April 14 (R)
Total	600	

ATTENDANCE

Attendance during the scheduled exams is mandatory, except in the case of a documented medical and/or family emergency as detailed below. Furthermore, attendance at the two computer workshops and the final poster presentation is also mandatory. Please note that the computer workshops and poster presentation cannot be “made up” or rescheduled, because they involve the use of specific facilities and resources at the Health Science Center Libraries.

MINIMUM GRADE CUTOFFS

Minimum grade cutoffs are listed below. Importantly, final grades will be curved at the end of the semester.

<i>Point Range (%)</i>	<i>Letter Grade</i>
≥90%	A
≥87%	A-
≥83%	B+
≥80%	B
≥77%	B-
≥73%	C+
≥70%	C
≥65%	C-
≥55%	D
<55%	E

- In order to graduate, students must have an overall GPA and an upper-division GPA of 2.0 or better (C or better). A C- average is equivalent to a GPA of 1.67, and therefore, it does not satisfy this graduation requirement. For more information on grades and grading policies, please visit: <http://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>.

EXAMS

Exam I, Exam II, and the Final Exam will each consist of multiple choice questions, essay questions, and problems. None of these three will be cumulative.

- *Makeup exams:* Make-up exams will only be considered in cases of medical and/or family emergencies as documented by an accompanying letter. The student is responsible for scheduling any make-ups with the Professor. Make-ups will be given only within one week after the regularly scheduled time and they will consist of essay questions and problems (no multiple choice questions).
- You will be responsible for bringing a “simple” hand calculator to use during Exam I and the Final Exam. By “simple,” we mean a hand calculator that is capable of basic math (i.e., addition, subtraction, multiplication, division, logs, and exponents/square roots). Graphing and/or analytical calculators, cell phones, laptops, and other such devices will not be allowed during the Exams.

RESEARCH PROJECT

Research project refers to your term poster project that you will conduct first by yourself and then collectively with three other students in the class. Each student will initially be assigned a different human genetic disease to complete Parts A, B, and C (see above). Then, students will be randomly organized into groups of four to research together the genetic, molecular, biochemical, and physiological bases of a specific human genetic disease. This collaborative research will be presented by the group as a professional scientific poster. The scientific posters will be displayed on Thursday, April 14 in the Health Science Center Libraries for review by the entire class and by faculty and student visitors to the Library. More information will be provided about this project, as well as about the three exams, in future lectures.

- *Late Part A, B, and/or C assignments:* Late assignments related to Parts A, B, and C will carry up to a 25% per day (including weekends) penalty. In many cases, we will not be able to accept such work after 3 working days beyond the due date.

Parts A, B, and C each consist of both an online assessment and paper (written) assessment. The online assessments are timed such that you have a set number of minutes to enter your answers. Thereafter, your online assessment will close and we will not be able to reset it. Thus, as will be emphasized in your computer workshops, it is strongly recommended that you first complete these online assessments on paper so that you only need to transfer answers when your assessment starts. Furthermore, you should work on a computer with a reliable internet connection as we will not be able to reset your assessment due to a “glitch” once you start or after the due date.

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). For additional information on Academic Honesty, please refer to the University of Florida Academic Honesty Guidelines at:

<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>.

- Academic dishonesty cannot be tolerated. All persons involved in cheating or plagiarism will receive a zero on the affected assignment or exam, and will be reported to the Dean of Students Office.

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Students who require a classroom accommodation for a disability must contact the Disability Resource Center in 0020 Reid Hall (phone: 352-392-8565). Please see the University of Florida Disability Resource Center website for more information at: <https://www.dso.ufl.edu/drc>. Please note that the student must provide documentation of a requirement for accommodation by the second week of class. No accommodations are available to students who lack this documentation. If this documentation is provided later than the end of the second week, then we cannot guarantee that these accommodations will be provided. 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.