

last updated on January 25, 2017

HLSC322: Principles of Genetics and Genomics Spring 2017

Objectives:

1. To learn the basic principles, concepts, theories, and language that constitutes the discipline of genetics.
2. To learn how genetic information is organized, changes, and influences biological processes and the world we live in.
3. To learn how genetics is used as a tool for addressing biological questions and problems.

Lectures: TuTh 11:00 – 12:15 Cambridge Community Center 1205

PreExam Review Sessions: Times and locations to be announced

Professor: Dr. David O'Brochta
Department of Entomology
Institute for Bioscience and Biotechnology Research
Email: dobrocht@umd.edu; Phone: 240-314-6343
Office: 3111 IBBR
9600 Gudelsky Drive
Rockville, Maryland (*Note that this is on the Shady Grove campus*)
Campus Office Hours:
1) Before and after class
2) Friday 10:30am-11:45am. *LaPlata –room to be determined*
3) By appointment – I am very happy to meet with you at a prearranged time. Just speak with me before or after class or email me (dobrocht@umd.edu) and we will find one that works for us.

Textbook: B.A.Pierce, Genetics: A Conceptual Approach (5th Edition), W. H. Freeman.
ISBN-13: 978-1-4641-0946-1
ISBN-10: 1-4641-0946-X
Packaged with Student Solutions.

Prerequisites: All students enrolled in this class should have a working knowledge of basic cell division (meiosis, mitosis), basic knowledge of transmission genetics, and molecular genetics (replication, translation and transcription) as discussed in BSCI105 or its equivalent. **I expect you to have actually learned that basic material.**

Web-based Resources: <http://elms.umd.edu>

The course will use ELMS (*Canvas*). Students log in using their directory ID and password. You must register in the course for it to appear. Lecture handouts, slides etc will be available on *Canvas*.

How the Class will work: The material in the text will be important and your reading of the assigned sections of the text will be taken for granted. “Pre-lecture” quizzes provide you with an opportunity to earn some points for reading the text. I will not cover in class

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everything that I want you to know – material in the assigned readings, video tutorials, assigned problems and discussion will complement class material. This will provide more opportunities to explore aspects of the material with contemporary examples and situations.

Examinations – In Class:

There will be three in-class examinations and a final, and each will be a combination of multiple-choice and short-answer type questions. Only exams completed in ink can be considered for re-grading. Examples of old examples of old exams on *Canvas*

All exams will count toward your final grade. **You need to plan on taking all exams at the scheduled time as there are no planned makeup opportunities.**

The final exam will have the same format as the first three exams and will focus on the material since Exam 3 although about 40% of the material will be from earlier class material. There is no make-up planned for the final so you will need to be very attentive to the exam schedule.

Exam 1 – Chemical Basis of Heredity & Its Processes	Tuesday Feb 21, 2017
Exam 2 – Gene Expression, Function & Genomics	Tuesday March 28, 2017
Exam 3 – Transmission of Genes – Genotype/Phenotype	Thursday April 20, 2017
Exam 4 – Genes in Populations Over Time	Saturday May 13, 2017

Clickers and In-Class Participation: In class response devices facilitate interaction between students and instructor and provide everyone with interesting real-time feedback that will facilitate our learning. We will also have other in-class participation activities. NOTE: These activities are unannounced. From these in class activities (graded by participation only) you can earn 80 points

Enrichment Activities. Each student is required to attend at least TWO academic enrichment programs; these are lectures or seminars occurring outside of your normal class period. 10 pts each. Please upload a 1-page double-spaced reflection for your first enrichment activity by 5:00 pm Friday March 17th (the Friday before spring break) Your reflection should include:

- The title of the lecture/seminar
- Who was speaking and where they were from
- Why it was of interest to you
- What you felt you gained from the lecture
- Anything else you found interesting or if it opened you up to new ideas or ways of thinking

Discussion: Details provided by Discussion leaders. 25% of your grad will be earned from activities and assignments in discussion sessions.

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Grades

Category	Points Available	
Exams 1-3	450	60%
Exam 4	250	
Discussion	250	25%
Pre-Lecture Quizzes	50	5%
In-Class Participation	80	10%
Outside Enrichment Activities (2)	20	
TOTAL	1000	

Final Grade Assignments

A plus/minus grade will be assigned as follows

Your final cumulative point total will be converted to a percent by dividing your score by 1000. **I will round up to the nearest percentage point e.g. 89.1 → 90.** I will assign your grade based on the following scale:

≥100 = A+; 89.9-87.0 = B+ 79.9-77.0 = C+ 69.9-67.0 = D+ <60 = F
99.9-93.0 = A 86.9-83.0 = B 76.9-73.0 = C 66.9-63.0 = D
92.9-90.0 = A- 82.9-80.0 = B- 72.9-70.0 = C- 62.9-60.0 = D-

The final grade will not be negotiated; you either have the points or you don't and, to be fair, the grading rubric described above will be applied uniformly. You should know that it is possible to miss a higher grade by 1 percentage point (10 points/1000 point); with a high resolution +/- scale the problem is more acute. Overall the grading scheme is very student-friendly.

You need to understand that fairness dictates that this rubric and all other class policies be applied consistently and uniformly. Personal requests to be considered outside of these parameters for any reason will not be considered for reasons of fairness to the rest of the class.

Grading (and re-grading) Policies:

There will be no "curve" of grades. It is possible and hoped that all students will get an "A."

You will have 3 weeks after exam grades are posted to make any claims of errors or oversights. You should know that if your claim does not concern an addition error or a gross oversight then your grade will very likely remain unchanged.

All requests for re-grading will be made in writing and you will indicate where the addition error or gross oversight has been made. You will provide your written request and your exam and they will be considered in its entirety.

Your TA is able to provide you with a record of your current grades. Make sure they are correct before the final exam.

Having three finals on the same day does not exempt you from the final nor is it sufficient reason to take the HLSC322 final at other than the scheduled time. Sorry.

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You need to plan on taking all exams at the scheduled time as there are no makeup opportunities scheduled.

It is your responsibility to communicate with the instructor and your TA promptly regarding emergencies that potentially impact your ability to take the exams at the scheduled time. You should know that strong evidence of your emergency are required for any serious consideration of accommodating your needs.

Any correspondences sent to me about grade changes that DO NOT involve computational errors or gross oversights will not be answered.

IF CLASS IS CANCELLED DUE TO CLOSURE OF THE UNIVERSITY ON A SCHEDULED EXAM DAY, THE EXAM WILL BE GIVEN AT THE NEXT CLASS.

YOU MUST MAKE ANY ARRANGEMENTS FOR **RELIGIOUS HOLIDAYS** AND **DISABILITY SUPPORT SERVICES (DSS)** IN THE FIRST WEEK OF CLASS (INCLUDING LECTURES, DISCUSSION SECTIONS AND EXAMS)

General Recommendation:

There is a lot of material in this course and the pace is such that we do not linger long on concepts and ideas. Keep up with the reading and material covered in class – the pre-lecture quizzes are meant to help you keep up with the reading – a small incentive. Ask questions. Spend quality time with the material on your own. Not doing so is a mistake. Talk about the material with the instructor and TAs.

Honor Code:

Academic dishonesty will not be tolerated. The University has a nationally recognized Code of Academic Integrity available on the web at <http://www.inform.umd.edu/CampusInfo/Departments/JPO/>. The code prohibits students from cheating on exams, plagiarizing papers, submitting the same paper for credit in two courses without authorization, buying papers, submitting fraudulent documents, and forging signatures. To further exhibit your commitment to academic integrity, remember to sign the Honor Pledge on all examinations and assignments : “I pledge on my honor that I have not given or received any unauthorized assistance on this examination (or assignment)”.

Compliance with the code is administered by a Student Honor Council, which strives to promote a “community of trust” on the Campus. Allegations of academic dishonesty can be reported directly to the Honors Council (314-9154) by any member of the campus community.

Note that logging clicker responses for another student is a breach of the honor code and will be dealt with as any other cheating incident.