

BIOL 2416: GENETICS

CRN 20694

Fall 2016

CREDIT: 4 semester hours

Friday 8:30 AM - 12 PM in SBC 511 (lecture)

Friday 12:30 PM – 5:00 PM in SBC 529 (lab)

Dr. P. Sen

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COURSE DESCRIPTION: Study of the principles of molecular and classical genetics and the function and transmission of hereditary material (DNA). Will include genetic engineering (manipulation of DNA in the lab to produce a useful product). May include population genetics (study of genetic variation within populations)

PREREQUISITE: BIOL 1406 (General Biology I)

REQUIRED TEXT:

Genetics, A conceptual Approach (Fifth Edition) by Benjamin A. Pierce
ISBN-13: 978-1-4641-0946-1

OFFICE HOURS: By appointment and as announced.

ATTENDANCE is MANDATORY. Roll will be taken. Always assume we will have class unless officially notified by the college that class has been cancelled. To encourage timely attendance, in-class “warm up” exercises will be **randomly** administered. Students earn full points on warm up exercises as long as they participate. Warm up exercises will total 5% of the course grade. If you must miss a class, you are responsible for everything covered in your absence.

WITHDRAWAL POLICY: Students wishing to withdraw from the class **MUST DO SO BY 11/07/2016.** You are responsible for withdrawing yourself from the class. **I DO NOT WITHDRAW STUDENTS, EVEN IF STUDENTS HAVE STOPPED COMING TO CLASS. DO NOT ASSUME THAT YOU WILL BE AUTOMATICALLY WITHDRAWN FROM THE CLASS JUST BECAUSE YOU HAVE STOPPED COMING TO CLASS.** Unless withdrawn, grades are calculated as stipulated in this syllabus. Missed exams, assignments etc. will result in a grade of ZERO. Beware that, as mandated by the Texas State Legislature, students who repeat a course for a third or more times may soon face significant tuition and fee increases at HCC and other Texas public colleges and universities. Please ask your Professor or Counselor about opportunities for tutoring or other possible assistance prior to considering course withdrawal or if you are not receiving passing grades.

LAB NOTEBOOK: You must maintain your own bound lab notebook in accordance with industry rules. The notebook **MUST** be brought to every lab session.

LAB REPORTS: You will have to write a formal lab report for most lab exercises based on the raw data recorded in your lab notebook. Lab reports are due as shown on

the tentative schedule). Beware lab exercises may take more than one lab session to complete. We will go over the lab report format in class. Although you may discuss data with your lab partner, each lab report must be an individual effort (NO copying) and must be turned in separately when due (NOT in the lab notebook). The lab reports plus other assignments will total 5% of the course grade.

LAB SAFETY: All lab safety rules must be followed (we will go over them). Absolutely no kids, smoking, eating, or **drinking (including water!)** in the classroom or lab. **Cell phones/pagers must remain turned off while you are in class. No texting and browsing. You will be penalized for not following these rules.**

GENETIC DISORDER SEMINAR: Students will be required to present a 10 minute presentation on a genetic disorder of their choice on December 2, 2016. To avoid duplication of topics, or topics that are too broad, you must submit two potential seminar topics for review by 10/7/2016. For full credit, you **must** include a minimum of five references from at least three different types of resources (book, popular magazine, scientific publication, newspaper, personal communication with an established scientist, or (reliable!) web source). The seminar will total 20% of the course grade.

EXAMS: The use of cell phones in any way is prohibited. All materials other than a **SMALL GREEN SCANTRON**, pencil, eraser, the exam, and – if permitted – a calculator must be out of sight. Scratch paper is allowed after examination by the instructor. Students coming late will NOT be given extra time to complete the exam. NO bathroom breaks during the exam – use the bathroom BEFORE you start. Students may earn up to 9 additional points per exam for “evidence of meaningful studying” (flashcards, vocabulary lists, concept maps etc.) **THESE ITEMS ARE DUE 8AM SHARP ON EXAM DAY. NO EXCEPTIONS.** Exams will total 60% of the course grade.

MAKEUP EXAMS are up to the discretion of the instructor. There will be NO makeup exams for missed exams involving **AN UNEXCUSED ABSENCE (NO-SHOWS WITHOUT PRIOR NOTIFICATION AND WITHOUT DOCUMENTED EXCUSE)**. Makeup exams will likely take place in TCSC’s testing center in room 118. I will notify you by email as soon as your makeup exam has been dropped off at the center. You must call the center at 713-718-5670 to make an appointment. You will need to present a valid picture ID.

STUDENT CONDUCT: Appropriate student conduct is expected at all times (see student handbook). Students caught cheating will receive a grade of ZERO for the exam. Repeat cheaters will receive a letter grade of F for the course. Papers may be checked electronically for plagiarism. Plagiarized papers will be awarded a grade of ZERO.

ADA: Students who require reasonable accommodations for disabilities must contact the ADA Counseling office at (713) 718-5422 at least two weeks before the first scheduled exam. Faculty are not authorized to make necessary arrangements without prior official recommendations from the ADA office.

GRADE CALCULATION:

3 Lecture Exams: 75%
 Lab reports & warm up excercises: 5%
 Genetic Disorder Seminar: 20%

Total: 100%

GRADING SCALE:

A=90% and up
 B=80-89%
 C=70-79%
 D=60-69%
 F=59% and below

IMPORTANT DATES:

11/07: LAST DAY FOR ADMINISTRATIVE/STUDENT WITHDRAWAL
12/02: GENETIC DISORDER SEMINAR
12/09: NON COMPREHENSIVE FINAL (8:30AM sharp)

TENTATIVE COURSE SCHEDULE:

Date	
09/23	Chapters 1, 2
09/30	Chapters 3, 4, 5
10/07	Chapters 6, 7, 8
10/14	Chapters 9, 10; TEST 1
10/21	Chapters 11, 12, 13
10/28	Chapters 14, 15, 16
11/04	Chapters 17, 18, 19
11/11	Chapters 20, 21; TEST 2
11/18	Chapters 22, 23, 26
11/25	THANKSGIVING
12/02	Seminar Presentation
12/09	Final Exam

THE INSTRUTOR RESERVES THE RIGHT TO CHANGE INFORMATION IN THIS SYLLABUS.