

THE UNIVERSITY OF TEXAS AT EL PASO
COLLEGE OF SCIENCE
Department of Biological Sciences

Course #: BIOL 3320 CRN#14894
Course Title: Genetics
Credit Hrs: 3
Term: Fall 2015
Course Meetings & Location: College of Business Administration #323, Mondays & Wednesdays 4:30–5:50 PM
Prerequisite Courses: BIOL 1305-1107; BIOL 1306-1108
Instructor: Eli Greenbaum, Ph.D.
Office Location: Biology 301 (between Classroom & Biosciences Buildings)
Contact Info: Phone # 747-5553; Fax # 747-5808
E-mail address: egreenbaum2@utep.edu
NOTE: **please do NOT email me on Blackboard**
Emergency Contact: (Cell) 785-393-3583 *emergencies only please*
Office Hrs: Tuesdays & Wednesdays 1:00-3:00 PM email for other appointment times
Textbook(s), Materials: Required: Russell, Peter J. 2009. iGenetics: A Molecular Approach. 3rd Edition, **with online resources**. (I highly recommend you buy this book from Amazon). **Make sure that if you buy a used book that it has an unused code for website access, or you will have to pay about \$30 for a new one.**

Sapling Learning Online Resource: <http://bit.ly/saplinginstructions>

Course Objectives (Learning Outcomes): At the end of this course, students will understand the nature and functions of hereditary material, with emphasis on the experimental procedures and data that have led to the current concepts in genetics.

Course Activities/Assignments: We will occasionally work on problems during classtime in groups for about 10–15 minutes. Otherwise students are expected to read assigned chapters **before** class, and to practice with problems at the end of the chapters and Sapling Learning on their own or in study groups outside of class to ensure adequate understanding of the material. Students are expected to bring a calculator to every class, including exams, and for calculation-based problems, work must be shown for full credit.

Assessment of Course Objectives: Students will be assessed on the course objectives from four exams, attendance/punctuality, participation in group problems during classtime, and Sapling Learning Online homework problems. Dates of exams are provided in advance (see course schedule below). Classtime group problems will occur without prior warning.

Grading Policy: Each of 4 exams will include multiple choice and matching questions, and short written responses to genetics problems. All four exams will: (1) include two or three bonus questions such that it will be possible to receive a grade of 103%; (2) not be cumulative; and (3) not be curved. **The lowest of the first THREE exams will be dropped; note that the final cannot be dropped, and failure to take the final exam will result in a grade of F.** Each of the three counted exams will be worth 30% of the final grade; failure to bring a undamaged, unfolded green SCANTRON to class on the day of exams will result in a penalty of 5 points to the exam grade. **Ten percent** of the final grade will be assessed from group problems during classtime, attendance/punctuality, participation in Sapling Learning online homework problems, and adherence to the civility and academic integrity statements below. To receive full credit for group problems, **students must show all work**. Final grades for the course will be as follows: 90–103: A; 80–89: B; 70–79: C; 60–69: D; < 60: F. **Please note that I do not provide grades of any kind via email OR phone; students must come to office hours to receive grades if they are not present to get them in class.**

- Make-up Policy: Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, **but written documentation must be provided within 2 weeks of the missed exam.** Makeup exams will not conform to the scheduled exam format, and often consist of several essays worth 10–25 points each. There will be no makeup group problems, but with excused absences, missed group problems will be dropped from the final grade calculation. **NOTE: Final grades will be submitted within 24 hours after the final exam;** thus, final exam makeups must be completed within 24 hours of the scheduled final exam.
- Extra Credit: Note that with the exception of bonus questions on exams, no extra credit will be given for any assignment at any time during the entire duration of this course. Requests for extra credit assignments will be denied—no exceptions.
- Attendance Policy: **Attendance and punctuality are a significant portion of your grade in this course.** Valid excuses for tardiness/missing class include illness, vehicle breakdown, death in the family, or university-sponsored activity, but **all valid excuses must be accompanied by written documentation** to receive credit. Students who miss group problems or exams without written documentation will receive a grade of zero. I will monitor attendance/punctuality on a regular basis throughout the semester.
- Assigned Videos: Occasionally I will assign videos for you to watch from websites including CBS News, BBC News, Youtube, New York Times and other sites with stories relevant to class. If videos don't load for you on the first attempt, it is the student's responsibility to try different web browsers to view the videos. I will monitor these websites prior to class, but if for any reason the website is not working, it is the student's responsibility to bring this to my attention at least 2 days before a given exam so that I can omit any questions that are related to these videos.
- Honors Credit: Students interested in Honors credit for the course must obtain an Honors Contract from the UTEP Honors Program and request a meeting with me. In general, students must receive a final grade of A in the course and complete two drafts of a 10-page research paper.
- Academic Integrity Policy: Because of the opportunity for cheating, bathroom visits during exams are not permitted; students who must leave during the exam for any reason will have their exams graded whether completed or not. **Sharing of calculators or use of calculator features of cell phones during exams/group problems will not be permitted.** The UTEP policy on academic honesty can be found at: <http://academics.utep.edu/Default.aspx?tabid=23785>. All students will be expected to adhere to this policy.
- Civility Statement: I expect all students to be actively engaged in taking notes and class activities during the brief time we meet each week. This means that students should not: (1) converse with classmates during lectures; (2) use cell phones during class (including texting); (3) use laptop computers for any purpose other than note taking; or (4) otherwise disrupt your fellow students from learning and active participation.
- Disability Statement: If you have a disability and need classroom accommodations, please contact The Center for Accommodations and Support Services (CASS) at 747-5148, or by email to cass@utep.edu, or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at www.sa.utep.edu/cass. Requested accommodations must be made 5 working days before an examination. All students requesting disability accommodations must request a meeting with me in the first 2 weeks of classes.
- Military Statement: If you are a military student with the potential of being called to military service and/or training during the course of the semester, please contact me within the first two weeks of class to arrange in advance for makeup exams, etc.

Dropping the Course: Students are cautioned to consider dropping the course if they are performing poorly **BEFORE** the drop deadline (see below for date). You must drop this class yourself – I will not automatically drop you if you just stop attending. However, I reserve the right to drop you if you register for the course and never show up to class. Also remember that courses may only be repeated a total of 3 times, and a “W” counts as one. The College of Science will remain aligned with the University and not approve any drop requests after the drop date. Note that if a student has an advisor submit a drop request after the drop deadline without permission from the dean, I will be asked to assign a grade by the registrar, and that grade will be F.

Incomplete Grades: All grades of Incomplete must be accompanied by an Incomplete Contract that has been signed by the instructor of record, student, departmental chair, and the dean. Although UTEP will allow a maximum of one year to complete this contract, the College of Science requests it be limited to one month based upon completion data. A grade of Incomplete is only used in extraordinary circumstances confined to a limited event such as a missed exam, project, or lab. If the student has missed a significant amount of work (e.g. multiple assignments or tasks), a grade of Incomplete is not appropriate or warranted.

Course Schedule:

<u>Lecture</u>	<u>Schedule</u>	<u>Topic/Exam</u>	<u>Relevant Reading</u>
M	Aug 24	Objectives & Introduction	Chapter 1
W	Aug 26	DNA: basic genetic material	Chapter 2
M	Aug 31	DNA Replication	Chapter 3
W	Sep 2	Gene Function & Structure	Chapter 4
M	Sep 7	*****LABOR DAY UNIVERSITY CLOSED*****	
W	Sep 9	Transcription	Chapter 5
M	Sep 14	Translation	Chapter 6
W	Sep 16	EXAM 1	
M	Sep 21	Mutation & Repair	Chapter 7
W	Sep 23	Recombinant DNA I	pp. 170-182 & pp. 221-223
M	Sep 28	Recombinant DNA II	Chapter 10 & pp. 183-194
W	Sep 30	Mendel and Genetics	Chapter 11
M	Oct 5	Allelism, gene expression, etc.	Chapter 13
W	Oct 7	Chromosomes & Inheritance	Chapter 12
M	Oct 12	EXAM 2	
W	Oct 14	Population Genetics I	Chapter 21
M	Oct 19	Population Genetics II	Chapter 21
W	Oct 21	Non-Mendelian Inheritance	Chapter 13
M	Oct 26	Evolutionary Genetics I	Chapter 23
W	Oct 28	Evolutionary Genetics II	Chapter 23
F	Oct 30	***** DROP DEADLINE *****	
M	Nov 2	Evolutionary Genetics III	None
W	Nov 4	EXAM 3	
M	Nov 9	Genomics	Chapter 9 & pp. 199-206
W	Nov 11	Quantitative Genetics	Chapter 22
M	Nov 16	Genetics of Development	Chapter 19
W	Nov 18	Cancer Genetics	Chapter 20
M	Nov 23	Eukaryote Gene Mapping	Chapter 14
W	Nov 25	Chromosome Mutation	Chapter 16
M	Nov 30	Bacteria Gene Expression	Chapter 17
W	Dec 2	Epigenetics	TBA
FINAL EXAM:		Monday, December 7, 2015 4:00PM–6:45PM regular meeting place	