

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

Course #: BIOL 3320 CRN# 27648
Course Title: Genetics
Credit Hrs: 3
Term: Spring 2025
Course Meetings & Location: Tuesday & Thursday 3:00–4:20 PM, CRBL #C205
Prerequisite Courses: BIOL 1305-1107; BIOL 1306-1108
Instructor: Dr. Enrique I. Ramos
Office Location: Bioscience Research Building 3.128
Contact Info: Phone # 747-5429
E-mail address: eiramos6@utep.edu

Office Hrs: Monday and Wednesdays 11:00 AM- 2:00 PM (subject to change based on weekly schedules)

Textbook(s), Materials: Required: Pierce, Benjamin A. 2020. *Genetics: A Conceptual Approach*. 7th Edition. Macmillan Learning, ISBN: 1319216803. Ebook comes with **required Achieve subscription** for about \$120 at: <https://achieve.macmillanlearning.com/start>

Course Objectives (Learning Outcomes): At the end of this course, students will understand the nature and functions of hereditary material, with emphasis on the historical, experimental procedures and data that led to current concepts in genetics. Students will also learn about recent developments in DNA technology, omics, and precision medicine.

Course Activities/Assignments: Students are expected to read assigned chapters before class, and to practice with problems at the end of the chapters and Achieve on their own, or in study groups outside of class, to ensure adequate understanding of the material. Exams (taken alone in the same manner as an exam with a SCANTRON) and group problem quizzes (can be taken with a maximum of 4 students per group) will occur during class time, usually via i-Clicker, for about 10–20 minutes, depending on the complexity of the question(s). If group problems are done with paper, work must be shown for full credit. These group problems will be based on previous Powerpoint lectures. Exams will occur for the entire class time, but **students will not be permitted to begin an exam if they are >30 minutes late**. Students are permitted to use a calculator for group problems and exams, but cell phones are not allowed. Some scheduled topics may not be covered due to unforeseen circumstances. Powerpoints will not be posted in advance because they usually contain solutions to group problems. See Course Calendar for additional details and Achieve deadlines. **The use of Artificial Intelligence (AI) models or generative LLMs is not permitted.**

Assessment of Course Objectives: Students will be assessed on the course objectives from four exams, 7 group problem quizzes during class time, attendance and participation in polls with i-Clicker, participation in Achieve surveys, and Achieve online reading quizzes and homework problems. Dates of exams, and group problems are provided in advance (see course schedule below and separate Course Calendar document), but are subject to change because of canceled classes, etc.

Grading Policy: Each of the 4 exams will include 34 multiple-choice questions worth 3 points each. All four exams, including the final exam, will: (1) include a maximum possible score of 102; (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 for the course.** Each of the three counted exams will be worth 25% of the final grade. The average group problem quizzes (7 per semester- see schedule below) are worth 15% of the final grade- **the lowest of the in-class group problem quizzes will be automatically dropped.** Polls from i-Clicker are not graded but participation is required. The remaining **ten percent** of the final grade will be assessed from Achieve reading quiz average (5%) and Achieve homework average (5%). Students **will incur a 0.5 point penalty** to their final grade for: (1) each missed in-class assessment (group problem or exam); (2) each missed Achieve survey (<90% complete); (3) each missed class (or leaving class early); (4) each missed i-Clicker poll; and (5) violations of the netiquette, civility or academic integrity statements below. At the end of the semester, if the final class average is <75 (before assessing 0.5 penalties), a 5-point curve will be applied to the final grade; if the final class average is <70 (before assessing 0.5 penalties), a 10-point curve will be applied to the final grade. Final grades for the course will be as follows: 90–102: A; 80–89: B; 70–79: C; 60–69: D; < 60: F. As per university policy, queries about grades via email must come from an official UTEP email on file for a student. At the discretion of the professor, students who are within 0.5 points of the next-highest letter grade (e.g., 89.5) may be assigned a better grade, depending on their overall performance in the course, class attendance and participation, homework, netiquette, and other considerations explained below. Failure to bring an undamaged, unfolded, standard 11-inch green SCANTRON to class on the day of exams result in a penalty of 5 points to the grade. Be sure to mark your SCANTRON after you have determined your final answer for a question—poorly erased bubbles in the SCANTRON will likely be marked wrong and no credit will be given. A 1-point penalty will be assessed to all written group problems (if any), or exams that fail to include each student’s name and UTEP ID number on the hard copy and SCANTRON, if applicable. The final exam is not cumulative and will not be returned to students because some questions might be used in multiple semesters; requests to review this exam in person with the professor will be considered within 24 hours of completion of the final. **Note that most grades will NOT be entered into Blackboard’s grade book function; the only exceptions are the final exam grade and the final grade in the course.**

Netiquette: It is the student’s responsibility to check their email several times a week to ensure they do not miss important emails and announcements from the professor via Blackboard. Students are expected to communicate with the professor and each other in a professional and respectful manner at all times—failure to do so can result in penalties to the final grade, or in extreme cases, reporting to the UTEP Office of Community Standards. Please consult this website for more information:

<https://www.utep.edu/extendeduniversity/utepconnect/blog/october-2017/10-rules-of-netiquette-for-students.html> Mass emails to other students in the course via Blackboard or other platforms are not permitted and can result in penalties to grades. **Avoid sending messages via Blackboard**, and instead email the professor directly with the email above.

i-Clicker: **A working i-Clicker app on a mobile device will be required for group problem quizzes and all polls during classtime.** We will not use i-Clicker remote devices in this class—you should download the app on your mobile device and ensure it is charged before coming to class. An uncharged mobile device will not be accepted as an excuse for missing polls or other assessments. If you have a technical problem connecting to the system, or your poll/quiz does not register, it is each student’s responsibility to check the accuracy of the app in each class and inform the professor **at the end of the class.** You must be present in the classroom to participate. Do not answer the quizzes with someone else’s i-Clicker app, or you will be reported for Academic Misconduct. Participation in 1-minute polls will ensure you get credit for attendance and class participation, and answers will not be graded. Quizzes will be timed (usually about 5–20 minutes or so) and graded.

- Achieve Online: **The online Achieve subscription is required** (students who do not register will automatically fail the course) and is meant to provide access to the etextbook, extra practice for genetics problems, reinforce concepts discussed in class, and provide additional enrichment and breadth of knowledge. Achieve reading quizzes and homework assignments are worth 10% of the final grade, four surveys are required (0.5 point penalty to final grade for each missed survey or <90% complete), but animations and tutorials are completely optional. Achieve access costs about \$120 (subject to change each semester), but includes an ebook version of the textbook—it is not possible to pay less if students do not wish to have access to the ebook (this is the policy of Achieve, not the professor!). Although Achieve grants a “grace period” for courses that are six weeks or longer, for ¼ of the course length, **students are required to pay for Achieve before the grace period ends**. Assignments that are not completed due to non-payment will receive a grade of zero. **It is the student’s responsibility to check deadlines for all assignments at the beginning of the semester and mark their calendars to ensure no deadlines are missed**—I highly recommend that you complete all assignments early and remember that forgetting a deadline or being busy with other classes will never be accepted as an excuse for missing any Achieve assignment. Check the Achieve website and Course Calendar for these deadlines, but all assignments are **ALWAYS due at Noon (12 PM MST) on the dates provided**. Extensions for Achieve assignments will be granted only if written documentation is provided for medical illness, death in the family, university-sponsored activity, or technical problem with the website if it can be documented with an Achieve case number **within 48 hours** of the missed deadline (professor will confirm with Achieve). Students are allowed only one guess per question before a penalty to the grade for each assignment will occur. Students are responsible for confirming that a grade appears in the gradebook after submitting work- if there is a technical problem you must contact Achieve to fix it **and let the professor know within 48 hours of missed deadlines**. If you have a technical problem with Achieve, contact them online or by phone:
<https://mhe.my.site.com/macmillanlearning/s/article/Contact-Customer-Support-online-or-by-phone>
- COVID-19 Policy: **Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms**. If you are feeling unwell, please provide documentation to the professor as soon as possible, so that we can work on appropriate accommodations. The best way that Miners can take care of Miners is to get the vaccine. If you still need the vaccine, it is widely available in the El Paso area. For more information about the current rates, testing, and vaccinations, please visit epstrong.org
- Make-up Policy: Makeups for assessments (i.e., in-class group problems and exams, but not polls or Achieve assignments) will be offered to students who miss a scheduled assessment because of illness, vehicle breakdown or accident, death in the family, or university-sponsored activity, **but written documentation must be provided within 1 week of the missed assessment via email to the professor**. Valid excuses do NOT include traffic-related delays, unavailability of transportation (including due to vehicle repairs), family obligations such as babysitting, problems associated with pets, or non-emergency dental/medical visits. Makeups are not an option for poor grades on completed assessments. **Approved makeup assignments will consist of a 2-page research paper for group quiz problems, and a 10-page research paper for exams**. General guidelines, a grading rubric, and an example of a model paper are provided on Blackboard in a dedicated folder entitled Makeup Papers; contact the professor for additional details. Students are allowed only one paper submission. ChatGPT and other AI programs are unacceptable for makeup papers, and the professor will confirm that these programs have not been utilized by students—see Academic Integrity section below. **NOTE: Final grades will be submitted within 48 hours after the final exam**; thus, final exam makeups must be completed within 48 hours of the scheduled final exam. Makeups will be offered only twice per semester per student.
- Extra Credit: Students have the exceptional opportunity for extra credit by having a maximum of 102 points on each exam, the ability to drop the lowest group problem quiz and non-final exam, and a generous curve at the end of the semester. No additional extra credit will be offered at any time during the entire duration of this course. Requests for extra credit assignments will be denied—no exceptions.

- Class Attendance: **Attendance of ALL classes is a significant portion of your grade in this course.** Valid excuses for missing class include illness, vehicle breakdown, death in the family, or university-sponsored activity, but **all valid excuses must be accompanied by written documentation (not just photos of a flat tire) and submitted as soon as possible (up to 1 week) after a missed assessment** to be acceptable for makeup research papers. Students who miss group problems, or exams without written documentation will receive a grade of zero. Students who are late, miss class entirely, leave class early, or spend the entire time on their computer or mobile devices will be penalized 0.5 points (for each instance) from the final grade in the course.
- Review Sessions: UTEP now has an outstanding resource to help tutor students: the Miner Learning Center (MLC) is on the 2nd floor of the library www.utep.edu/mlc. This is a free tutoring program that consists of student-led review sessions for historically *difficult courses*. Availability can vary each semester. The review sessions (schedule announced on the first day of class) are led by a student who has previously taken the course and performed very well. Because the TA only assists with grading, it is not possible to hold additional review sessions for assessments (i.e., group problems and exams). However, the majority of the exams are based on the Powerpoints and group problems, and students should focus on them for the majority of their studying. A small portion of exam questions will be based on the Achieve material and etextbook (especially boldfaced terms). Office hours are not for tutoring, but the professor will be happy to answer questions related to the course.
- Civility Statement: Students are expected to behave professionally and maintain respect at all times for the professor and classmates. Failure to follow this policy may result in penalties to the final grade, or reporting to the UTEP Office of Community Standards. See also the Netiquette section above.
- 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 <https://www.utep.edu/student-affairs/cass/>. Requested accommodations must be made 3 working days before an examination. **All students requesting disability accommodations must meet with the professor during office hours (or request an appointment via phone) to discuss the details before they will be implemented, preferably at the beginning of the semester.**
- 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 the professor within the first week of class to arrange in advance for makeup assignments, etc.
- Dropping the Course: Students are cautioned to consider dropping the course if they are performing poorly **BEFORE** the drop deadline (see below for the date). You must drop this class yourself with assistance from your academic advisor – the professor will not automatically drop you if you never show up to class or just stop attending, and you will receive a final grade of F. 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. Contrary to what the office of the Registrar might tell you, **professors in the Department of Biological Sciences are not authorized to drop students from their classes after the drop deadline.**
- 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 on 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.
- Academic Integrity: This course has a zero-tolerance policy for cheating. You must submit work that only you have completed—AI programs like ChatGPT are NOT allowed. Work you submit that was not directly written by you is considered cheating and will result in a zero for the assignment. Persistent submission of work performed by someone/something else, including ChatGPT and other AI programs, will be reported to the Office of Community Standards for evaluation. The UTEP policy on academic integrity and scholastic dishonesty can be found at: <https://www.utep.edu/student-affairs/standards/>.

Course Schedule:

Lecture Schedule		Topic/Exam	Relevant Reading
			P = Pierce
Tue	Jan 21	Objectives & Introduction	P Chapter 1
Th	Jan 23	DNA: basic genetic material	P Chapter 10
Tue	Jan 28	DNA Replication	P Chapter 12
Th	Jan 30	Transcription	P Chapter 13
		Group Problem Quiz 1	
Tue	Feb 4	RNA Molecules/Processing	P Chapter 14
Th	Feb 6	Translation	P Chapter 15
		Group Problem Quiz 2	
Tue	Feb 11	EXAM 1 at 3:00 PM	
Th	Feb 13	Mutation & Repair	P Chapter 18
Tue	Feb 18	PCR & DNA Technology	P Chapter 19
		Group Problem Quiz 3	
Th	Feb 20	Pedigree & Genetic Testing	P Chapter 6
Tue	Feb 25	Mendel and Genetics	P Chapter 3
Th	Feb 27	Chromosome/Sex-Linked Genetics	P Chapters 2 & 4
		Group Problem Quiz 4	
Tue	Mar 4	Allelism, gene expression, etc.	P Chapter 5
Th	Mar 6	EXAM 2 at 3:00 PM	
Tue	Mar 11	***** SPRING BREAK – NO CLASS *****	
Th	Mar 13	***** SPRING BREAK – NO CLASS *****	
Tue	Mar 18	Population Genetics I	P Chapter 25
Th	Mar 20	Population Genetics II	P Chapter 25
		Group Problem Quiz 5	
Tue	Mar 25	Non-Mendelian Inheritance	P Chapters 5 & 11
Th	Mar 27	Evolutionary Genetics	P Chapter 26
Tue	Apr 1	Multi-omics Intro	
Th	Apr 3	Multi-omics Intro II	
F	Apr 4	***** DROP DEADLINE *****	
Tue	Apr 8	EXAM 3 at 3:00 PM	
Th	Apr 10	Genomics/Proteomics	P Chapter 20
Tue	Apr 15	Quantitative Genetics	P Chapter 24
Th	Apr 17	Genetics of Development	P Chapter 22
Tue	Apr 22	Cancer Genetics	P Chapter 23
		Group Problem Quiz 6	
Th	Apr 24	Eukaryote Gene Mapping	P Chapter 7
Tue	Apr 29	Chromosome Variation	P Chapter 8
		Group Problem Quiz 7	
Th	May 1	Epigenetics	P Chapter 21
Tue	May 6	TBD	
Th	May 8	TBD	
Th	May 15	FINAL EXAM at 3:00 PM	