

Biology 3315, Spring 2018
Genetics
Section 001 TR 11:00-12:20
109 Social Work Complex- A

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Faculty Profile: <https://www.uta.edu/mentis/public/#profile/profile/edit/id/4019/>

Office Hours: Tues/Thurs 1:00-2:30 or by appointment

Description of Course Content: In this course, we will focus on understanding how biological information is store, expressed, changed, and transmitted covering the fundamentals of the structure and function of DNA, RNA, and the genome.

Student Learning Outcomes: At the end of the course, students should have a solid understanding of the foundations of genetics, including the topics mentioned above and be able to solve genetics problems.

Required Textbooks and Other Course Materials: The required textbook is *Genetic Analysis: An Integrated Approach* by Mark F. Sanders and John L. Bowman. Pearson. 2nd edition. (2015). ISBN: 9780321948908. There is ebook version of this book and options for rental or purchase.

Descriptions of major assignments and examinations: This course will consist of four exams (three midterms and a comprehensive final) and five online homework assignments, all of which will be multiple choice.

Attendance: At The University of Texas at Arlington, taking attendance is not required but attendance is a critical indicator in student success. Each faculty member is free to develop his or her own methods of evaluating students' academic performance, which includes establishing course-specific policies on attendance. As the instructor of this section, I strongly recommend attendance. However, while UT Arlington does not require instructors to take attendance in their courses, the U.S. Department of Education requires that the University have a mechanism in place to mark when Federal Student Aid recipients "begin attendance in a course." UT Arlington instructors will report when students begin attendance in a course as part of the final grading process. Specifically, when assigning a student a grade of F, faculty report the last date a student attended their class based on evidence such as a test, participation in a class project or presentation, or an engagement online via Blackboard. This date is reported to the Department of Education for federal financial aid recipients.

Prerequisites: BIOL 1441.

Grading: You will be graded based on five components, each of which has equal weight. Four components are your four exams and the fifth component is your overall quiz score. Your lowest lecture exam may be replaced with your final exam score if it benefits the student.

Grading scale

A = 90-100

B = 80-89

C = 70-79

D = 60-69

F < 60

Students are expected to keep track of their performance throughout the semester and seek guidance from available sources (including the instructor) if their performance drops below satisfactory levels; see "Student Support Services," below.

Exams: For all exams, you will need small green Scantron Form 882-E and your student ID or license.

Homework assignments: There are five homework assignments; each assignment is ten multiple-choice questions. You have three attempts for each assignment; your highest score will record. All assignments are available at the start of the course, you may work ahead, however late work will not be accepted. While you are free to use your notes and work together, every person must submit a quiz in order to get credit. The multiple-choice questions will resemble the type and difficulty of questions on the midterms. Each assignment is due on the date below at 11:59 pm.

Due Dates: 1/30, 2/20, 3/22, 4/10, 5/3

Make-up Exams: There will be no make-up exams. Instead, everyone may replace their lowest exam score with the final exam, including any missed exams that have *excused absences*. Only one exam will be replaced. If you anticipate missing more than one exam, or if you miss more than one exam, you should consider dropping the course.

Grade Grievances: Students have *one week* from the time a grade is provided to dispute the grade. Grades cannot be contested after this deadline has passed. Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current University Catalog.

Expectations for Out-of-Class Study: Beyond the time required to attend each class meeting, students enrolled in this course should expect to spend at least an additional 9 hours per week of their own time in course-related activities, including reading required materials, completing assignments, preparing for exams, etc.

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. Students will not be automatically dropped for non-attendance. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://wwwb.uta.edu/aao/fao>). **The drop date is March 30th by 4:00 pm.**

Disability Accommodations: UT Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including The Americans with Disabilities Act (ADA), The Americans with Disabilities Amendments Act (ADAAA), and Section 504 of the Rehabilitation Act. All instructors at UT Arlington are required by law to provide “reasonable accommodations” to students with disabilities, so as not to discriminate on the basis of disability. Students are responsible for providing the instructor with official notification in the form of a letter certified by the Office for Students with Disabilities (OSD). Only those students who have officially documented a need for an accommodation will have their request honored. Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting: The Office for Students with Disabilities, (OSD) www.uta.edu/disability or calling 817-272-3364. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability.

Counseling and Psychological Services, (CAPS) www.uta.edu/caps/ or calling 817-272-3671 is also available to all students to help increase their understanding of personal issues, address mental and behavioral health problems and make positive changes in their lives.

Non-Discrimination Policy: The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit uta.edu/eos.

Title IX Policy: The University of Texas at Arlington is committed to maintaining a learning and working environment that is free from discrimination based on sex in accordance with Title IX of the Higher Education Amendments of 1972 (Title IX), which prohibits discrimination on the basis of sex in educational programs or activities; Title VII of the Civil Rights Act of 1964 (Title VII), which prohibits sex discrimination in employment; and the Campus Sexual Violence Elimination Act (SaVE Act). Sexual misconduct is a form of sex discrimination and will not be tolerated. For information regarding Title IX, visit www.uta.edu/titleIX or contact Ms. Jean Hood, Vice President and Title IX Coordinator at (817) 272-7091 or jmhood@uta.edu.

Academic Integrity: Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

UT Arlington faculty members may employ the Honor Code in their courses by having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System Regents' Rule 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University. Additional information is available at <https://www.uta.edu/conduct/>.

Electronic Communication: UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

Campus Carry: Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. Under the new law, openly carrying handguns is not allowed on college campuses. For more information, visit <http://www.uta.edu/news/info/campus-carry/>.

Student Feedback Survey: At the end of each term, students enrolled in face-to-face and online classes categorized as "lecture," "seminar," or "laboratory" are directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback via the SFS database is aggregated with that of other students enrolled in the course. Students' anonymity will be protected to the extent that the law allows. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law and aggregate results are posted online. Data from SFS is also used for faculty and program evaluations. For more information, visit <http://www.uta.edu/sfs>.

Final Review Week: for semester-long courses, a period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week unless specified in the class syllabus. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

Emergency Exit Procedures: Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the exit in the back of the room. Students may proceed left or right to exit the building from there. When exiting the building during an emergency, never take an elevator, use the stairwells. Faculty members will assist students in selecting the safest route for evacuation and assist individuals with disabilities. Students are encouraged to subscribe to the MavAlert system that will send information in case of an emergency to their cell phones or email accounts. Anyone can subscribe at <https://mavalert.uta.edu/> or <https://mavalert.uta.edu/register.php>.

Student Support Services: UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or at <http://www.uta.edu/universitycollege/resources/index.php>.

The IDEAS Center (2nd Floor of Central Library) offers free tutoring to all students. To schedule an appointment with a peer tutor or mentor email IDEAS@uta.edu or call (817) 272-6593.

Course Schedule

Date	Day	Topic	Reading	HWs
Jan 16	Tuesday	Syllabus/Pearson set up	N/A	
Jan 18	Thursday	Introduction/Transmission Genetics	Ch. 1/2	
Jan 23	Tuesday	Transmission Genetics	Ch. 2	
Jan 25	Thursday	Cell Division and Chromosomal Heredity	Ch. 3	
Jan 30	Tuesday	Cell Division and Chromosomal Heredity	Ch. 3	HW 1
Feb 1	Thursday	Gene Interactions	Ch. 4	
Feb 6	Tuesday	Gene Interactions	Ch. 4	
Feb 8	Thursday	Genetic Linkage and Mapping in Eukaryotes	Ch. 5	
Feb 13	Tuesday	Exam 1 (Chapters 1-4)		
Feb 15	Thursday	Genetic Linkage and Mapping in Eukaryotes	Ch. 5	
Feb 20	Tuesday	Genetic Linkage and Mapping in Prokaryotes	Ch. 6	HW 2
Feb 22	Thursday	DNA Structure and Replication	Ch. 7	
Feb 27	Tuesday	DNA Structure and Replication	Ch. 7	
Mar 1	Thursday	Transcription and RNA processing	Ch. 8	
Mar 6	Tuesday	Transcription and RNA processing/Translation	Ch. 8/9	
Mar 8	Thursday	Exam 2 (Chapters 5-8)		
Mar 12-16		<i>Spring Break</i>		
Mar 20	Tuesday	Translation	Ch. 9	HW 3
Mar 22	Thursday	Mutation	Ch. 12	
Mar 27	Tuesday	Mutation	Ch. 12	
Mar 29	Thursday	Chromosomal Aberrations and Transposition	Ch. 13	
Apr 3	Tuesday	Chromosomal Aberrations and Transposition	Ch. 13	
Apr 5	Thursday	Gene regulation in prokaryotes	Ch. 14	
Apr 10	Tuesday	Gene regulation in prokaryotes	Ch. 14	HW 4
Apr 12	Thursday	Gene regulation in eukaryotes	Ch. 15	
Apr 17	Tuesday	Gene regulation in eukaryotes	Ch. 15	
Apr 19	Thursday	Exam 3 (Chapters 9 and 12-15)		
Apr 24	Tuesday	Recomb DNA Tech.: Forward/Reverse Genetics	Ch. 16	
Apr 26	Thursday	Recombinant DNA Tech.: Applications	Ch. 17	
May 1	Tuesday	Genomics/Molecular Evolution	Ch. 18	
May 3	Thursday	Genomics/Molecular Evolution	Ch. 18	HW 5
May 8	Tuesday	Comprehensive Final (11 - 1:30)		

“As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course.” – Dr. Frederick