

BIOL 3301-002: Cell Physiology

Fall 2018

Section Information: BIOL 3301-002

Time and Place of Class Meetings: Tuesday and Thursday 12:30 -2pm,
SEIR 298

Co-instructor: Professor Mark W. Pellegrino

Office Number: Engineering Research building 332

Email Address: Mark.pellegrino@uta.edu

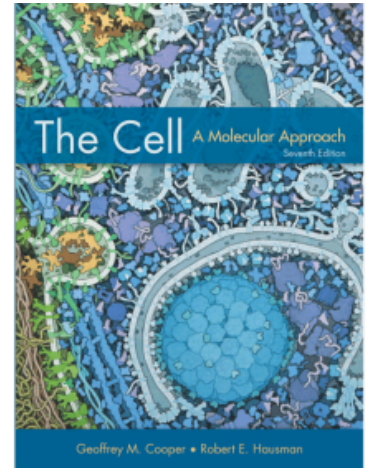
Dr. Pellegrino Office Hours: Tuesday 2-4, Thursday 2-3 in ERB 332

Co-Instructor: Professor Laura D. Mydlarz

Office Number: Life science 337

Email Address: Mydlarz@uta.edu

Dr. Mydlarz Office Hours: Tuesday 10-12, Thursday 10-11:30 in LS 337



Student Teaching assistants:

Student TA office hours: Wednesdays 1-3pm, Life Science Rm 458

Description of Course Content: This course is a detailed tour of the inner workings of the cell. From the structure and function of each organelle to how cells communicate. The material is linked to real world and current content whenever possible.

Student Learning Outcomes:

1. Identify the major parts of the cell and explain key functions of each part.
2. Build Structure to Function relationships.
3. Understand the fundamental physiological mechanisms of cell function.
4. Relate cell mechanisms to disease and dysfunction.

Team teaching

In order to provide you the student with expertise on all aspects of Cell Physiology, we have 2 instructors for this course. Dr. Mydlarz will teach the first 2 modules on Membranes and Ion Exchange and Protein Synthesis and Dr. Pellegrino will take over October 12th and teach the Cytoskeleton and Cell Signaling. Exams and quizzes are designed by both faculty and any issues with students will be discussed by both Dr. Mydlarz and Dr. Pellegrino.

Textbooks and Other Course Materials: **THE CELL: A Molecular Approach, 7th edition**, Cooper and Hausman. Please be aware that the lecture notes and figures do **NOT** match up with the book and many times we will lecture on topics that aren't covered on the text book. The lectures are designed so they stand alone, but we are giving you chapters that you can read to supplement the notes. Even though this book is provided as a guide the book website is great for chapter summaries, glossary, videos and animations
<https://cooper7e.sinauer.com/index.html> .

Grading and Descriptions of major assignments and examinations:

21% - 8 quizzes throughout the semester, lowest grade dropped (7 quizzes worth 3% each, extra point is bonus)

20% - Exam 1

20% - Exam 2

20% - Exam 3

20% - Exam 4

Comprehensive final – Optional - replaces 1 exam grade.

Quizzes will be taken online through blackboard. **Quizzes will open Friday at 12:30pm and close Monday at 12:30pm.** The answers will be released after the quiz closes. Each quiz will be worth 3% of your grade. Some questions from the exam will be taken from the quizzes, so take this seriously. There will be no practice questions or old exams given. The quizzes are the practice exams. There is no make up for missed quizzes, but we drop the lowest grade if you take all 7 quizzes.

Exams will have multiple choice questions. Look at the schedule now and mark the days down. There is no make up for missed semester exams, only the final can replace the lowest exam grade or a missed exam. Grade replacement will be determined after all the exams are taken, the calculations will be made and the best grade chosen for you by the program.

Exams will be returned on the Thursday or Tuesday after the exam. We will have the exams in class only once. The student TA will have them in his office hours on Wednesdays.

Attendance: Attendance is mandatory for success in this course.

Other Requirements for success in this course: Exercise critical thinking skills, do your own research, be in charge of your own learning, keep up with the reading and attend class without exception. You must keep up on reading the notes and material, studying before the exam is not a strategy successful students employ for this course. Highlighting the book will get you no where. Answer questions, draw out processes and test yourself and your friends (basically active learning) are habits you should get into immediately.

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, going over the material, doing your own research and taking quizzes, preparing for exams, etc.

Make-up Exams and Quizzes: As stated above, there will be no make up exams or quizzes. Although there are opportunities to drop an exam and a quiz.

Course Schedule. “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.”

Week		Date	Topic	Quiz opens FRIDAY	Lecture notes	Book chapter	Notes
1	Th	Aug. 23	Introduction and class policy		Lecture 1		
2	Tues	Aug. 28	Molecules of life - macromolecules		Lecture 2	1,2	
	Th	Aug. 30	Biomembrane structure and function	Quiz1- Aug.31st	Lecture 3	2,14	
3	Tues	Sep. 4	Membrane transport		Lecture 4	14	
	Th	Sep. 6	Glucose transport	Quiz2- Sep.7th	Lecture 5	14	
4	Tues	Sep. 11	That Sugar Film				Sept. 7th census date
	Th	Sep. 13	That Sugar Film -discussion		Lecture 6		
5	Tues	Sep. 18	Ion transport		Lecture 7	13	
	Th	Sep. 20	Mitochondria	Quiz3- Sep.21st	Lecture 8	12	
6	Tues	Sep. 25	Exam 1		Lecture 2-7		
	Th	Sep. 27	Protein synthesis and ER		Lecture 9 and 10	11	
7	Tues	Oct. 2	ER and Golgi apparatus		Lecture 11	11	
	Th	Oct. 4	Lysozomes	Quiz4- Oct.5th	Lecture 12	11	
8	Tues	Oct. 9	Endocytosis, synapse and atherosclerosis		Lecture 13	14	
	Th	Oct. 11	Protein transport into mitochondria, nucleus	Quiz5- Oct.12th	Lecture 14	13	
9	Tues	Oct. 16	Exam 2		Lecture 8-14		
	Th	Oct. 18	Cytoskeleton I: actin		Lecture 15	13	
10	Tues	Oct. 23	Cytoskeleton II: muscle, microtubules		Lecture 16	13	
	Th	Oct. 25	Cytoskeleton III: microtubules and IF	Quiz6- Oct.26th	Lecture 17	13	
11	Tues	Oct.30	How do cells detect signals		Lecture 18		Nov. 2nd - last day to drop
	Th	Nov. 1	Stress	Quiz7- Nov.2nd	Lecture 19	16	
12	Tues	Nov. 6	Exam 3		Lecture 15-19		
	Th	Nov. 8	Senses and addiction		Lecture 20	16	
13	Tues	Nov. 13	Cancer		Lecture 21	19	
	Th	Nov. 15	Mechanisms of cell death	Quiz8- Nov.16th	Lecture 22	18-19	
14	Tues	Nov.20	Thanksgiving Holiday		No class		
	Th	Nov.22	Thanksgiving Holiday		No class		
15	Tues	Nov.27	Collective cell migration		Lecture 23		
	Th	Nov.29	Exam 4		Lecture 20-23		
16	Tues	Dec.4	Review				last day of class
		Dec. 11th	OPTIONAL Final exam 11-1:30		If miss an exam or want to replace exam		

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://www.uta.edu/aao/fao/>).

Americans with Disabilities Act: The University of Texas at 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). 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 that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Title IX: The University of Texas at Arlington is committed to upholding U.S. Federal Law "Title IX" such that no member of the UT Arlington community shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. For more information, visit www.uta.edu/titleIX.

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 as they see fit in their courses, including (but not limited to) 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. Cheating or collusion that appears to be on the course level and involve many students will result in automatic failure of the course.

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 view the information at www.uta.edu/resources.

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>.

Student Feedback Survey: At the end of each term, students enrolled in classes categorized as “lecture,” “seminar,” or “laboratory” shall be 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 enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington’s effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit <http://www.uta.edu/sfs>.

Final Review Week: 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 nearest exit. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist handicapped individuals.
