



TEXAS A&M UNIVERSITY
SAN ANTONIO

Cellular Physiology
BIOL 3409 - 4 credits
Texas A&M University San Antonio, College of Arts and Sciences
Spring 2025 Syllabus

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Office hours: Monday and Wednesday 8:00 a.m.-10:00 a.m. and Tuesday and Thursday from 8:30 to 11:00 a.m. You may also email or call me to set up an appointment.

Class Meeting Times and Location(s):

Lecture: Tues./Thurs. 10:00 a.m. to 10:50 a.m. S&T 132

Textbook for Lectures:

Essential Cell Biology 6th edition; Alberts, Heald, et. al.

Other Required Materials:

- On-Line Components
 - Lectures will be posted on Blackboard
 - All Announcements will be posted on Blackboard (if classes/office hours changed or cancelled)
 - Grades for assessments/labs etc... will be posted on Blackboard as we go along.
 - Quizzes and other activities may be posted in Blackboard as well.

Catalog Description and Prerequisites:

Course Description: This course is the study of how different biochemical, metabolic, and molecular pathways of the cell work together to produce the many functions of cells such as movement, response to hormones, growth, protein synthesis, etc. Topics of signal transduction pathways, protein targeting, secretion and endocytosis, and cellular organization and motility are covered. Cell-cell interactions and tissue formation will be discussed, including the loss of cell division control leading to cancer. With laboratory section. Prerequisites: BIOL 2411, BIOL 2431, CHEM 2323

Learning Outcomes:

1. Students will be able to describe the function of cellular organelles and cell membranes.
2. The students will also be able interpret cell theory and the endosymbiotic theory.
3. The students will be able to discuss cell basic functions of the cell including cell to cell signaling, motility, protein synthesis, and biochemical processes.
4. Students will be able to describe different cell death pathways and basic responses to pathogens and infectious agents.

Course Content

LECTURE

5 Regular Exams – (100 points each; **each one is worth 10% of your overall final grade**; 5 tests = **50% of your overall grade**)

1 Final Exam – (The final is worth **15% of your final grade**). The final will be comprehensive.

- If you feel that your exam was graded incorrectly, I would be happy to discuss it with you.

Quizzes/Activities/Assignments – (Points will vary) - Activities may include computer-based activities, worksheets, small papers, quizzes, etc. These will account for the remaining **10% of your grade**.

The remaining **25% of your grade will come from the lab** portion of the course.

****The final will not replace any lower test grade in BIOL 3409 (Spring 2025).**

GENERAL POLICIES:

- Do come to class regularly and on time – it affects your grade, not because of points assessed, but because of understanding the material.
- Do take notes on the power point print outs of my lectures
- Do ask questions in class
- Do seek out help from me and your peers
- Do NOT have your cell phone out during class
- Do NOT check social media sites on your laptop during my lecture feigning that you are taking notes
- Do NOT come in late and ask to be caught up
- Do NOT leave early without talking to me prior to class beginning

Lecture Attendance:

Although points will not be assessed regularly for attendance during regular lectures, **I reserve the right to randomly take attendance and assess points or give a quiz on any day** (for example, I may assign an in-class discussion or assignment that can be used to assess points for attendance). If you must miss a class, **you** are responsible for obtaining what you missed (announcements, class notes, handouts, etc...) **from a fellow classmate**. Please feel free to come see me or make an appointment with me if you have any questions. It is **YOUR RESPONSIBILITY** to find out what you missed by asking a FELLOW CLASSMATE.

Exam and Quiz Day Attendance: Mandatory (see make-up policy)

MAKE UP POLICIES:

Exams:

- You may make up the exam_ only if
 - you contact me within **one** day of the scheduled exam and
 - your absence is one approved by TAMUSA policies (illness, death in the family, other immediate-family emergencies). Documentation will be required.

Quizzes:

- You may make up the quiz
 - You contact me within **one** day of the scheduled quiz and if
 - Your absence is one approved by TAMUSA policies (illness, death in the family, other immediate-family emergencies). Documentation will be required.

Activities/Assignments:

- It is your responsibility to find out if an assignment was assigned on a day you missed.
- You may make up an activity assigned if it is a take-home assignment.
- You may NOT make up an activity if it was an in-class activity – NO EXCEPTIONS.
- Due dates on any assigned work will be strictly enforced.

Grading

Grade Scheme:

90 – 100 = A
80 - 89 = B
70 - 79 = C
60 - 69 = D
≤ 59.5 = F

I would consider scaling up from a B to an A if you had earned an **89.5 and** you had great attendance.

I would **not** scale up from a B to an A (regardless of your attendance) if you have earned an **89.4%**.

IMPORTANT POLICIES AND RESOURCES

Academic Accommodations for Persons with Disabilities: The Americans with Disabilities Act Amendments Act (ADAAA) of 2008 and the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights protection for persons with disabilities. Title II of the ADAAA and Section 504 of the Rehabilitation Act require that students with disabilities be guaranteed equal access to the learning environment through the provision of reasonable and appropriate accommodation of their disability. If you have a diagnosed disability that may require an accommodation, please contact Disability Support Services (DSS) for the coordination of services. The phone number for DSS is (210) 784-1335 and email is dsupport@tamusa.edu.

Academic Learning Center: The Academic Learning Center provides free course-based tutoring to all currently enrolled students at Texas A&M University-San Antonio. Students wishing to work with a tutor can make appointments through the Brainfuse online tutoring platform. Brainfuse can be accessed in the *Tools* section of Blackboard. You can contact the Academic Learning Center by emailing tutoring@tamusa.edu, calling (210) 784-1307, or visiting the Central Academic Building, room 202.

Counseling/Mental Health Resources: As a college student, there may be times when personal stressors interfere with your academic performance and/or negatively impact your daily functioning. If you are experiencing emotional difficulties or mental health concerns, support is available to you through the Student Counseling Center (SCC). To schedule an appointment call 210-784-1331 or visit Modular C, Room 166 (Rear entrance).

All mental health services provided by the SCC are free and confidential (as the law allows). The Student Counseling Center provides brief individual and group therapy, crisis intervention, consultation, case management, and prevention services.

Crisis support is available 24/7 by calling the SCC at 210-784-1331 (after-hours select option '2'). For more information and self-help resources, please visit

www.tamusa.edu/studentcounseling

Emergency Preparedness: JagE Alert is Texas A&M University-San Antonio's mass notification. In the event of an emergency, such as inclement weather, students, staff and faculty, who are registered, will have the option to receive a text message, email with instructions and updates. To register or update your information visit: <https://tamusa.bbcportal.com/>.

More information about Emergency Preparedness and the Emergency Response Guide can be found here:

<https://www.tamusa.edu/uploadfile/folders/sdbowen23/pdf/pdf-635073426137928167-10.100.20.116.pdf>

Financial Aid and Verification of Attendance: According to the following federal regulation, 34 CFR 668.21: U.S. Department of Education (DoE) Title IV regulation, a student can only receive Title IV funds based on Title IV eligibility criteria which include class attendance. If Title IV funds are disbursed to ineligible students (including students who fail to begin attendance), the institution must return these funds to the U.S. DoE within 30 days of becoming aware that the student will not or has not begun attendance. Faculty will provide the Office of Financial Aid with an electronic notification if a student has not attended the first week of class. Any student receiving federal financial aid who does not attend the first week of class will have their aid terminated and returned to the DoE. Please note that any student who stops attending at any time during the semester may also need to return a portion of their federal aid.

Meeting Basic Needs: Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Dean of Students (DOS@tamusa.edu) for support. Furthermore, please notify the professor if you are comfortable in doing so. This will enable them to provide any resources they may possess.

Military Affairs: Veterans and active-duty military personnel are welcomed and encouraged to communicate, in advance if possible, and special circumstances (e.g., upcoming deployment, drill requirements, disability accommodations). You are also encouraged to visit the Patriots' Casa in-person room 202, or to contact the Office of Military Affairs with any questions at military@tamusa.edu or (210)784-1397.

Religious Observances: Texas A&M University-San Antonio recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to a religious observance provided they notify their instructors before the end of the second week of classes for regular session classes.

The Six-Drop Rule: Students are subject to the requirements of Senate Bill (SB) 1231 passed by the Texas Legislature in 2007. SB 1231 limits students to a maximum of six (6) non-punitive course drops (i.e., courses a student chooses to drop) during their undergraduate careers. A non-punitive drop does not affect the student's GPA. However, course drops that exceed the maximum allowed by SB 1231 will be treated as "F" grades and will impact the student's GPA.

Statement of Harassment and Discrimination: Texas A&M University-San Antonio is committed to the fundamental principles of academic freedom, equality of opportunity and human dignity. To fulfill its multiple missions as an institution of higher learning, A&M-San Antonio encourages a climate that values and nurtures collegiality, diversity, pluralism and the uniqueness of the individual within our state, nation, and world. All decisions and actions involving students and employees should be based on applicable law and individual merit. Texas A&M University-San Antonio, in accordance with applicable federal and state law, prohibits discrimination, including harassment, on the basis of race, color, sex, religion, national origin, age, disability, genetic information, veteran status, sexual orientation, gender identity, or gender expression. Individuals who believe they have experienced harassment or discrimination prohibited by this statement are encouraged to contact the appropriate offices within their respective units.

Texas A&M University-San Antonio faculty are committed to providing a safe learning environment for all students and for the university as a whole. If you have experienced any form of sex- or gender-based discrimination or harassment, including sexual assault, sexual harassment, domestic or dating violence, or stalking, know that help and support are available. A&M-San Antonio's Title IX Coordinator can support those impacted by such conduct in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, and more. The university strongly encourages all students to report any such incidents to the Title IX Coordinator. Please be aware that all A&M-San Antonio employees (other than those designated as confidential resources such as counselors and trained victims advocates) are required to report information about such discrimination and harassment to the university. This means that if you tell a faculty member about a situation of sexual harassment or sexual violence, or other related misconduct, the faculty member must share that information with the university's Title IX Coordinator (titleix@tamusa.edu, 210-784-2061, CAB 439K). If you wish to speak to a confidential employee who does not have this reporting responsibility, you can contact the Student Counseling Center at (210) 784-1331, Modular C.

Students' Rights and Responsibilities: The following statement of students' rights and responsibilities is intended to reflect the philosophical base upon which University Student Rules are built. This philosophy acknowledges the existence of both rights and responsibilities, which is inherent to an individual not only as a student at Texas A&M University-San Antonio but also as a citizen of this country.

Students' Rights

1. A student shall have the right to participate in a free exchange of ideas, and there shall be no University rule or administrative rule that in any way abridges the rights of freedom of speech, expression, petition and peaceful assembly as set forth in the U.S. Constitution.
2. Each student shall have the right to participate in all areas and activities of the University, free from any form of discrimination, including harassment, on the basis of race, color, national or ethnic origin, religion, sex, disability, age, sexual orientation, or veteran status in accordance with applicable federal and state laws.
3. A student has the right to personal privacy except as otherwise provided by law, and this will be observed by students and University authorities alike.
4. Each student subject to disciplinary action arising from violations of university student rules shall be assured a fundamentally fair process.

Students' Responsibilities

1. A student has the responsibility to respect the rights and property of others, including other students, the faculty and administration.
2. A student has the responsibility to be fully acquainted with the published University Student Rules found in the Student Handbook, [Student Code of Conduct](#), on our website, University Catalog and to comply with them, as well as federal, state, and local laws.
3. A student has the responsibility to recognize that student actions reflect upon the individuals involved and upon the entire University community.
4. A student has the responsibility to recognize the University's obligation to provide an environment for learning.
5. A student has the responsibility to check their university email for any updates or official university notification.

We expect that students will behave in a manner that is dignified, respectful, and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated. Students are expected to exhibit a high level of honesty and integrity in their pursuit of higher education. Students engaging in an act that violates the standards of academic integrity will find themselves facing academic and/or disciplinary sanctions. Academic misconduct is any act, or attempt, which gives an unfair advantage to the student. Additionally, any behavior specifically prohibited by a faculty member in the course syllabus or class discussion may be considered as academic misconduct. For more information on academic misconduct policies and procedures please review the [Student Code of Conduct](#).

Option 1 - No Use of Generative AI Permitted

BIOL 4408 assumes that all work submitted by students will be generated by the students themselves, working individually or in groups. Students should not have another person/entity do the writing of any portion of an assignment for them, which includes hiring a person or a company to write assignments and/or using artificial intelligence (AI) tools like ChatGPT. Use of

any AI-generated content in this course qualifies as academic dishonesty and violates Texas A&M-San Antonio's standards of academic integrity.

Writing, Language, and Digital Composing Center: The Writing, Language, and Digital Composing Center supports graduate and undergraduate students in all three colleges as well as faculty and staff. Tutors work with students to develop reading skills, prepare oral presentations, and plan, draft, and revise their written assignments. Our language tutors support students enrolled in Spanish courses and students composing in Spanish for any assignment. Our digital studio tutors support students working on digital projects such as eportfolios, class presentations, or other digital multimedia projects. Students can schedule appointments through JagWire under the Student Services tab. Click on “Writing, Language, and Digital Composing Center” to make your appointment. The Center offers face-to-face, synchronous online, and asynchronous digital appointments. More information about what services we offer, how to make an appointment, and how to access your appointment can be found on our website at <https://bit.ly/WLDCCenter>.

Important Dates:

January 21	First day of class
April 21	Last day to drop with an automatic “W”
April 28	Last day to drop a course or withdraw from the University
May 5	Last day of classes
May 6	Reading Days
May 9	Final exam

The complete academic calendar is available online: <https://www.tamusa.edu/provost/academiccalendar.html>

***** The following pages contain a tentative schedule for the cell physiology course. Please be advised that topics and the date they are covered WILL likely fluctuate.**

***** The calendar is a tentative schedule for the cellular physiology course. Please be advised that topics and the date they are covered may change during the course.**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
JAN	<u>20</u>	21	22 Intro/pre-test	23	24 Chapter 11
JAN	27 Chapter 11	<u>28</u>	29 Chapter 11	30	31 Chapter 12
FEB	3 Chapter 12	4	5 Chapter 12	6	7 Exam 1
FEB	10 C13	11	12 Chapter 13	13	14 Chapter 13
FEB	17 Chapter 13	<u>18</u>	19 Chapter 14	20	21 Chapter 14
FEB	24 Chapter 14	25	26 Exam 2	27	28 C15
MAR	3 Chapter 15	4	5 Chapter 15	6	7 Chapter 15
MAR	10	11 Spring Break	12	13 Spring Break	14
MAR	17 <u>Chapter 16</u>	18	19 Chapter 16	20	21 Chapter 16
MAR	24 Exam 3	25	26 C17	27	28 Chapter 17
MAR/APR	31 Chapter 17	1	2 Chapter 17	3	4 Chapter 18
APR	7 Chapter 18	8	9 Chapter 18	10	11 Exam 4
APR	14 C19	15	16 Chapter 19	17	18 Study Day
APR	21 Chapter 19	22	23 Chapter 19	24	25 Chapter 20
APR/MAY	28 Chapter 20	29	30 Chapter 20	1	2 Exam 5
MAY	5 C20	6	7	8	9 Final Exam 8:00-9:50