

Undergraduate Research in Biology
BIOL 4304 - 3 credit **cannot repeat for credit
Texas A&M University San Antonio, College of Arts and Sciences
Fall 2025 Syllabus

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Office hours: Monday 9 am-10:30 am; Tuesday and Wednesday 9 am-1 pm; Thursday 11-1 pm. and by appointment

Class Meeting Times and Location(s):

S&T 352, 342 or CAB 302

Required Materials:

- Lab Coats – may be purchased through bookstore.

Catalog Description and Prerequisites:

BIOL 4304. Undergraduate Research in Biology. Undergraduate Research in Biology is an advanced course aimed at providing professional working experience in the field of biology. Students will observe and learn how to perform basic tasks in the laboratory and may be expected to learn multiple techniques. Students are expected to be in the lab for at least 12 to 20 hours per week. Students will be evaluated based on their attendance, work performance, and a reflection paper describing their experience. The experience may also culminate in a presentation at a local, regional, or national scientific meeting.

Learning objectives

1. This course will provide an introductory experience working in a biomedical research laboratory setting with an emphasis on microbiology and immunology.
2. Students will also learn how to function in a laboratory setting.
3. Students will learn a few basic techniques and will learn how to record their observations.

Grading

Attendance:	40% (12-20 hours per week in lab or other acceptable research)
Reflection paper or presentation:	60% (2 to 4 page reflection piece on lab work/conclusion; poster/oral presentation)

Disability Services and The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disability. If you believe you have a disability that may require accommodations, please contact *Disability Support Services (DSS)* for the coordination of services. DSS is located at the Main Campus on the 2nd floor of the Central Academic Building in room 210. The phone number for DSS is (210) 784-1335 and email is dsupport@tamusa.edu.

Academic Dishonesty is any act, or attempt, which gives an unfair advantage to the student. Academic dishonesty includes, but is not limited to –Plagiarism-Cheating-Lying-Bribery
As a member in an academic community, students at Texas A&M University - San Antonio are expected to exhibit a high level of honesty and integrity in their pursuit of higher education, be mature, be self-directed and

be able to manage their own affairs. Students who are unwilling to abide by these basic expectations will find themselves facing academic and/or disciplinary sanctions. Students are expected to share in the responsibility and authority with faculty and staff to challenge and make known acts that violate the Texas A&M University - San Antonio Code of Conduct. Texas A&M University - San Antonio faculty have the discretion to impose grade penalties as deemed necessary and are **obliged to and will report** any form of academic dishonesty. For more information on the process of reported academic misconduct, please refer to

<http://www.tamusa.edu/studentengagementsuccess/StudentRightsAndResponsibilities/Academic-Misconduct/index.html>

Academic Dishonesty falls under Acts of Dishonesty in the Student Handbook's Code of Conduct. University policy prescribes serious consequences for acts of academic misconduct including, but not limited to, a grade of 'F' on the particular paper or assignment or a failing grade in the course. Also, a referral may be issued to the Office of Student Rights and Responsibilities where the sanctions can vary up to possible expulsion from the University. Considering the potential consequences of academic misconduct, it is obviously in students' best interests to avoid even the appearance of such behavior. If you are ever unclear whether a specific act might constitute academic misconduct, please contact your instructor for an assessment of the situation. All student term papers and other written assignments are subject to analysis by anti-plagiarism software.

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

University Email Policy and Course Communications: All correspondence between professors and students must occur via University email accounts. You must have your Jaguar email account ready and working. If it is not working, contact the help desk at sahelp@tamus.edu or at 210-784-HELP (4357). If you don't hear back within 48 hours, contact them again. They have a lot of requests during the first part of the semester, so you may need to follow up with them.

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.

The Jaguar Writing Center provides writing assistance to graduate and undergraduate students in all three colleges. Writing tutors work with students to develop reading skills, prepare oral presentations, and plan, draft, and revise their written assignments. Students can make individual or group appointments with a writing tutor. The Writing Center has two locations: Central Academic Building, Suite 208. The writing center can be reached by emailing writingcenter@tamusa.edu or calling (210)-784-1222. Appointments can also be made through JagWire using under the student services tab.

The Academic Learning Center offers free, appointment-based tutoring to Texas A&M University-San Antonio students. The Learning Center is made up of subject-area tutoring for Math and Sciences (including Statistics for most majors). Please call us at **210-784-1332** to see if the ALC offers tutoring for your course. Also, please come visit us in Modular C, Room 140 to learn more about our subject specific hours

Counseling Resources As a college student, there may be time when personal stressors interfere with your academic performance and/or negatively impact your daily functioning. If you or someone you know is experience life stressors, emotional difficulties, or mental health concerns at A&M-SA, please contact the Office of Student Counseling & Wellness Services (SC & WS) located in Modular C Room 166 (Rear entrance)

or call 210-784-1331 between the hours of 8:00AM and 5:00PM. All mental health services provided by SC & WS are free, confidential (as the law allows), and are not part of a student's academic or university record.

SC&WS provides brief individual, couples, and group therapy, crisis intervention, consultation, case management, and prevention services. For more information, please visit www.tamusa.edu/studentcounseling.

In a crisis situation, please walk-in to the SC & WS services between 8:00AM and 5:00PM to be seen by a licensed clinician. After hours, please contact UPD at 911 or text "HOME" to 741-741 24/7/365 to connect with a trained crisis counselor. The National Suicide Prevention hotline also offers a 24/7/365 hotline at 1-800-273-8255

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 includes 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 his/her 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 his/her federal aid.

The complete academic calendar is available online:

<http://www.tamusa.edu/provost/academicresources/academiccalendar.html>

Content Advisory – Throughout this course we will discuss topics and/or potentially disturbing issues. We may watch films or read articles that represent beliefs and life experiences that are different from your own. You will encounter facts, ideas, claims, images, stories, hypotheses, theories or perspectives that may upset or trouble you. Every effort will be made to provide advance notice.