BIOL 3415, Statistics in Biology & Medicine (3.0 Credits)

BIOL 3415, Statistics in Biology & Medicine Lab (1.0 Credit)
Texas A&M University—San Antonio
Spring 2026

Contact Information

Instructor: Dr. Ashley Teufel
Office: SciTech 311C
E-mail: ateufel@tamusa.edu
Preferred Contact Method: e-mail ateufel@tamusa.edu
Do not use "blackboard messenger"
Office Hours: Thursday 12:00-2:00pm and 3:30-5:00pm
         or by appointment

General Information on Lecture Section

Prerequisites: BIOL 1106, BIOL 1107, BIOL 1306, BIOL1307, MATH 2312
Lecture Location: T/Th 9:30am-10:45am, STEM 269

General Information on Lab Sections

Section 1: 11:00am-1:45PM T Senator Frank L. Madla 253
Section 2: 11:00am-1:45PM Th Senator Frank L. Madla 253

Section 2 Lab Instructor: Sarah Palmeri
Email: spalm06@tamusa.edu

Optional Lecture Textbook

Whitlock MC, Schluter D. 2020. *The Analysis of Biological Data*, 3rd ed. Macmillan.

Course Description

This course is designed to help students develop a basic understanding of biostatistics. By the end of this course, you will have a good working knowledge of statistical data analysis and interpretation, be able to determine the best analysis plan for a specific scientific question or experiment, choose and carry out the most appropriate statistical analyses, and identify potential flaws with either the set-up of an experiment or the analysis of its data. By the end of the course, you will also be familiar with conducting analyses using the statistical software R.

Course Objectives

The assessments in this course are designed to help students meet three course objectives:
     1. Learn the basics of data analysis, specifically the statistical methods commonly used in application to biological, medical and health sciences research.
     2. Learn how to interpret the findings of data analysis and report the findings in scientific language and figures.
     3. Learn how to analyze and model real-world data using the software R.

Evaluation & Course Structure

Grade Components from Lecture

Assignment	Points	Total
Exams	200 pts × 3 Exams	600 pts
Final Exam	400 pts × 1 Exam	400 pts
Total:		1000 pts

Grades will be assigned at the end of the term based on the percentage of points earned, where 90% = A, 80% = B, 70% = C, and 60% = D.

In-class Bonus Points

There will be in-class questions across the course, where you have the opportunity to earn bonus points that will be added to your grade at the end of the semester. The maximum number of in-class question bonus points you can accumulate is 20.

Exam Bonus Points

Each exam has a take home portion, due the night before the exam. You can earn additional points on your exam by completing these exam bonus points.

Homework

There are optional homework assignments, these are worth zero points towards your final grade. It is highly recommended that you complete these assignments as they are designed to help you practice the material that appears on the exam.

Grade Components for Lab

Assignment	Points	Total
Lab Test	25 pts × 7 Labs	175 pts
Lab Handout	5 pts × 7 Labs	35 pts
Total:		210 pts

Lab grades are credit/no credit. To receive credit for the lab you must have a lab score of 60% or higher.

Course Policies

Attendance Policy

Attendance and participation are compulsory.

Learning Environment

Please be punctual. Late entry into lecture and lab is disruptive to your fellow students and me. I will do my best to facilitate learning by being respectful of you and your time. I expect for you to return the favor. Talking, texting, e-mailing, preparing for other courses, etc. during class is not appropriate. I understand that emergencies occur, so if you are in the midst of a situation that may require your attention during class, please let me know ahead of time and set your phone to vibrate, so that you will cause a minimal disturbance.

If I am confusing or unclear, let me know. You should not hesitate to ask questions. If a concept is unclear to you, odds are other students in the class are struggling with the concept as well.

Broader Use of Generative AI Permitted Within Guidelines

Use of artificial intelligence (AI) tools, including ChatGPT, is permitted in this course for students who wish to use them. To adhere to our scholarly values, students must cite any AI-generated material that informed their work (this includes in-text citations and/or use of quotations, and in your reference list). Using an AI tool to generate content without proper attribution qualifies as academic dishonesty and violates Texas A&M-San Antonio's standards of academic integrity.

University Policies

FOR UNIVERSITY POLICIES SEE ADDITIONAL DOCUMENT ON BLACKBOARD