



CHEM 335: THEORY OF BIOCHEMICAL TECHNIQUES
COURSE SYLLABUS
FALL 2026

INSTRUCTOR INFORMATION

Instructor: Dr. Olamide Ishola
Office: STC 334
E-mail: olamide.ishola@etamuc.edu
Phone: 903-886-5392
Office Hours: 9:00am-10:30am or by appointment
Class Meetings: TR 12:30pm-1:45pm **Location:** STC 107

COURSE MATERIALS

Textbook: *Techniques for Biochemical Analysis*; Authors: Khursheed Hussain, Sameena Maqbool Lone, Khalid Z. Masoodi, 2024; Academic Press; ISBN: 9780443159145

COURSE DESCRIPTION

This course explores the study of the principles and applications of analytical techniques used in biochemical research. The underlying concepts behind such analytical techniques as protein analysis, enzyme assays, nucleic acid quantification, chromatography, electrophoresis and spectroscopy will be studied. The interpretation of data generated from these methods will also be studied.

CREDITS: 3 Course Credits

PREREQUISITES: CHEM 2325 Organic Chemistry II; MATH 2414, Calculus II

Student Learning Outcomes

At the end of the course, students will be able to:

- Importance of biochemical analysis in research and clinical diagnostics
- Key concepts in analytical chemistry relevant to biochemistry.
- Sample preparation techniques
- Understanding techniques such protein analysis, enzyme assays, nucleic acid analysis, chromatographic techniques and spectroscopic analysis.
- Comprehending data analysis and interpretation including statistical analysis of experimental data, quality control in biochemical analysis and interpretation of results.

COURSE REQUIREMENTS

Class meetings will combine lectures, worked calculations, biochemical-data interpretation, short problem-solving activities, discussion of experimental results, and application of analytical principles. Students are expected to participate actively in interpreting data and applying analytical concepts

GRADING

Final grades in this course will be based on the following scale:

A = 90%-100%

B = 80%-89%

C = 70%-79%

D = 60%-69%

F = 59% or below

A = 90-100 points

B = 80-89 points

C = 70-79 points

D = 60-69 points

F = 59 points or below

Assessment	Points	Percentage
Exam 1	20	20%
Exam 2	20	20%
Exam 3	20	20%
Data Analysis Exercise	10	10%
Cumulative Final Exam	30	30%
Total	100	100%

COURSE CALENDAR FOR CHEM 334

August

20-Course Introduction; Biochemical Analysis

25-Laboratory Calculations, Solutions & Buffers

27-Analytical Chemistry Concepts: Accuracy, Precision & Sensitivity

September

1-Sample Preparation

3-Centrifugation Techniques

8-Centrifugation Techniques

10-Dialysis & Ultrafiltration

15-Dialysis & Ultrafiltration

17-Electrophoresis I: Principles

22-Electrophoresis II: Applications

24-EXAM 1 (Thursday)

29-Spectrophotometry I: Principles

October

1-Spectrophotometry I: Principles

6-Spectrophotometry II: Applications

8-Spectrophotometry II: Applications

13-Protein Assays

15-Protein Assays

20-Protein Assays

22-Protein Assays

27-Nucleic Acid Analysis

29-EXAM 2 (Thursday)

November

3-Nucleic Acid Analysis

5-Nucleic Acid Analysis

10-Chromatographic Analysis I

12-EXAM 3 (Thursday)

17-Chromatographic Analysis II

19-Data Management, Statistics & Quality Control

24-Data Management, Statistics & Quality Control

26-28-NO CLASS – Thanksgiving Holiday

December

1-Data Interpretation & Comprehensive Review

3- Course Review / Final Exam Preparation

9-FINAL EXAM

All dates and assignments of syllabus schedule for CHEM 335 are tentative and subject to change.

TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by East Texas A&M University have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

Zoom Video Conferencing Tool

https://inside.tamuc.edu/campuslife/CampusServices/CITESupportCenter/Zoom_Account.aspx?source=universalmenu

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@etamu.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a ETAMU campus open computer lab, etc.

COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your Instructor.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

STUDENT RESPONSIBILITIES FOR COURSE

CWID and Password

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@etamu.edu.

Technology-Related Issues

Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a ETAMU campus open computer lab, etc.

TECHNOLOGY REQUIREMENTS AND SUPPORT

Minimal Technical Skills Needed

Students will need reliable computer and internet access for this course. Students must be able to effectively use myLeo email, myLeo Online D2L, and Microsoft Office.

Learning Management System (LMS) – D2L

All course sections offered by East Texas A&M University have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are the technical requirements:

- View the [Learning Management System Requirements Webpage](#).
- Learn more on the [LMS Browser Support Webpage](#).

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found on the [Brightspace Support Webpage](#).

COMMUNICATION AND SUPPORT

Interaction with Instructor Statement

If you have any questions or are having difficulties with the course material, please contact your instructor. Correspondence will always be through university email (your “myLeo” mail) and announcements in myLeo online (D2L). You will not RECEIVE email through D2L, so be sure to check your ETAMU email for communication. Students are encouraged to check university email daily.

Include the Following in Emails with Instructor:

- Course name and subject in the subject line
- Salutation (Good afternoon, Dr. Jackson)
- Proper email etiquette (no “text” emails – use proper grammar and punctuation)
- Student name and CWID after the body of the email (possibly add to student signature on email)

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The [Code of Student Conduct](#) is described in detail online in the [Student Guidebook](#).

Students should also consult the [Rules of Netiquette Webpage](#) for more information regarding how to interact with students in an online forum.

ETAMU Attendance

For more information about the attendance policy, please view the Attendance Webpage and the Class Attendance Policy. <https://www.etamu.edu/attendance/> https://coursecatalog.tamuc.edu/undergrad/academic-procedures/#class_attendance_rule

Academic Integrity

Students at East Texas A&M University are expected to maintain high standards of integrity and honesty in all their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty University Procedure 13.99.99.R0.03](#)

[Undergraduate Student Academic Dishonesty Form](#)

[Graduate Student Academic Dishonesty University Procedure 13.99.99.R0.10](#)

[Graduate Student Academic Dishonesty Form](#)

Use of Artificial Intelligence

East Texas A&M University acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources

Students with Disabilities-- ADA Statement

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 disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

East Texas A&M University

Velma K. Waters Library Rm 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: studentdisabilityservices@etamu.edu

Website: [Office of Student Disability Services](#)

Nondiscrimination Notice

East Texas A&M University will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information, or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in East Texas A&M University buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and ETAMU Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all East Texas A&M University campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

East Texas A&M Supports Students' Mental Health – Counseling Services

The Counseling Center at East Texas A&M University, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit www.tamuc.edu/counsel

Mental Health and Well-Being

The university aims to provide students with essential knowledge and tools to understand and support mental health. As part of our commitment to your well-being, we offer access to Telus Health, a service available 24/7/365 via chat, phone, or webinar. Scan the QR code to download the app and explore the resources available to you for guidance and support whenever you need it.



<http://telusproduction.com/app/5108.html>