



# COURSE CHEM 1107-01L & -02L SURVEY OF ORGANIC AND BIOCHEMISTRY LABORATORY

COURSE SYLLABUS: SPRING 2025

## INSTRUCTOR INFORMATION

Instructor: Ashley Gusukuma

Office Location: Caddo Mills High School, Room 206

Office Hours: T, F 3:00- 4:15 pm; MTWF: 7:45 am-8:15 am or by appointment

Office Phone: (903) 527-3164; (903) 527-3164 ext 6206

Office Fax: (903) 527-4772

University Email Address: [agusukuma@leomail.tamuc.edu](mailto:agusukuma@leomail.tamuc.edu)

Preferred Form of Communication: email

Communication Response Time: < 24 weekday hours

## COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings

- **Lab Manual:** Laboratory Manual for Survey of Organic and Biochemistry Laboratory, Cengage Learning; by Bettelheim, Brown, Campbell, Farrell.
- **Safety Goggles** (available for purchase in the chemistry office)
- **Padlock** (must be brought the first day of class)
- **Scientific Calculator**
- **Appropriate Lab Attire** (long pants-no holes, no open-toed shoes, long hair tied back, no sleeveless or cold shoulder shirts)
- **Lab Coat** (optional)

## Course Description

A one semester experimental survey of organic chemistry and biochemistry. The

course explores the principles, nomenclature, reactions, and synthesis of organic compounds and the chemistry of biological processes. This course is not suitable for biological science majors or minors. (Students planning to enter professional and/or graduate schools should elect Chemistry 2123 – 2125.)

Prerequisites: CHEM 1305 or CHEM 1311 or CHEM 1312. Co-requisites: CHEM 1307.

## **Student Learning Outcomes**

1. Identify equipment (including glassware) commonly used in chemistry laboratories and demonstrate their proper use.
2. Be familiar with and abide by safety equipment and procedures necessary to work safely in the organic chemistry laboratory.
3. Demonstrate basic organic chemistry techniques:
  - Setting up reaction apparatus
  - Monitoring the progress of reactions
  - Stoichiometry of reactions, including percent yield
4. Characterize organic compounds using appropriate techniques, such as melting point determination, boiling point determination, and retention factor.
5. Perform techniques for the isolation and purification of organic molecules:
  - Distillation
  - Recrystallization
  - Chromatography (column and TLC)
  - Extraction
6. Develop the ability to follow procedures to perform chemical experiments and communicate the details and results effectively.

## **COURSE REQUIREMENTS**

### **Minimal Technical Skills Needed**

1. Students should be familiar with the use of their own particular scientific calculator.
2. Students should be able to use the communication tools in the D2L Brightspace LMS.

### **Instructional Methods**

This is a laboratory-based course. Students will prepare for each laboratory assignment by completing a pre-lab assignment and reading the laboratory procedure in detail. Laboratory techniques will be taught by a combination of lecture, video, demonstration, and the performance of the techniques within a laboratory procedure supervised by the instructor and graduate teaching assistants. A post-lab report will then be completed.

### **Student Responsibilities or Tips for Success in the Course**

In order to be successful, the student must:

- Read the complete laboratory ahead of time, paying attention to the laboratory procedure.
- Attend the laboratory regularly.
- Complete the pre-lab assignment and hand it in at the beginning of the laboratory period.
- Attending the pre-lab lecture is mandatory on time. Note-taking during the lecture portion is highly recommended.
- Write in full sentences.
- Hand in assignments on time.

## **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

## **Assessments**

The lab report with the lowest score will be dropped. The average of the remaining ten laboratory exercises will be averaged to determine the final grade. Each laboratory exercise will be evaluated as follows:

Individual Pre-Lab	25%
Individual Post-Lab	75%
Total	100%

Incomplete grades will be considered only if the student has completed 70% of the coursework and cannot complete the remainder because of a documented medical or legal excuse or family crisis.

## **TECHNOLOGY REQUIREMENTS**

### **LMS**

All course sections offered by Texas A&M University-Commerce 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](https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm)

YouSeeU Virtual Classroom Requirements:

<https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements>

## **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@tamuc.edu](mailto:helpdesk@tamuc.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 TAMUC 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>

### **Interaction with Instructor Statement**

## **COURSE AND UNIVERSITY PROCEDURES/POLICIES**

### **Course Specific 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.

## **University Specific Procedures**

### **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 in the [Student Guidebook](#).

<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: <https://www.britannica.com/topic/netiquette>

### **TAMUC Attendance**

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedure 13.99.99.R0.01](#).

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

### **Academic Integrity**

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

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

[Undergraduate Student Academic Dishonesty Form](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/documents/13.99.99.R0.03UndergraduateStudentAcademicDishonestyForm.pdf>

[Graduate Student Academic Dishonesty Form](#)

<http://www.tamuc.edu/academics/graduateschool/faculty/GraduateStudentAcademicDishonestyFormold.pdf>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

### **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**

Texas A&M University-Commerce

Velma K. Waters Library Rm 162

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

Fax (903) 468-8148

Email: [studentdisabilityservices@tamuc.edu](mailto:studentdisabilityservices@tamuc.edu)

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

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

### **Nondiscrimination Notice**

Texas A&M University-Commerce 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 Texas A&M University-Commerce 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 A&M-Commerce 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.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

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

### **A&M-Commerce Supports Students' Mental Health**

The Counseling Center at A&M-Commerce, 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](http://www.tamuc.edu/counsel)

## **AI Use Policy**

Texas A&M University-Commerce 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.

13.99.99.R0.03 Undergraduate Academic Dishonesty

13.99.99.R0.10 Graduate Student Academic Dishonesty

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

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Texas A&M University-Commerce

Gee Library- Room 162

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## COURSE OUTLINE / CALENDAR

<u>Week:</u>	<u>Date:</u>	<u>Experiment:</u>
1	1/13	Check in, Safety lecture & quiz
2	1/20	21. Structure of Organic Compounds: Models
3	1/27	24. Classification and Identification of Hydrocarbons
4	2/3	23. Column & Paper Chromatography: Part A
5	2/10	23. Column & Paper Chromatography: Part B
6	2/17	29. Polymerization Reactions
7	2/24	30. Aspirin
8	3/3	25. Alcohols & Phenols
9	3/10	31. Isolation of Caffeine
N/A	3/17	SPRING BREAK
10	3/24	26. Aldehydes & Ketones Part I
12	3/31	26. Aldehydes & Ketones Part II
13	4/7	27. Carboxylic Acids and Esters
14	4/14	34. Preparation and Properties of Soap
15	4/21	32. Carbohydrates
16	4/28	Check out

\*The safety quiz online must be passed with a score of a 90% before you are allowed to participate in a lab. Any lab missed because you have not passed the safety exam in time will receive a score of a zero.