



TEXAS A&M UNIVERSITY

COMMERCE

CHEM 1107: SURVEY OF ORGANIC AND BIOCHEMISTRY LABORATORY

Summer II 2022

Instructor: Dr. Bukuo Ni
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Course Information

Web Based Laboratory: Meets 7/11/2022 through 8/11/2022

Textbook: Lab Experiments - Survey of Organic & Biochemistry; Bettelheim; 9781337907347; textbook only available in our bookstores.

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

By the end of the semester I intend my students to have realized a number of objectives.

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.

Methods of Student Evaluation and Grading Scale

Individual Pre-laboratory Report (Pre-Lab Questions) – 40 points

Individual Post-lab Report (Report Sheet and Post-Lab Questions) – 60 points

Total – 100 points

There will be twelve labs assigned with written lab reports. The lab report with the lowest score will be dropped. Your final grade will be the arithmetic average of the remaining eleven lab reports. Grading will be based on a standard percentage scale: 100-90 = A; 89-80 = B; 79-70 = C; 69-60 = D; 59-below = F. Dishonest scholarship will earn an automatic zero (0) and initiate prosecution to the fullest extent. Incomplete grades may be given only if the student has a current average above 70% and is precluded from completion of the course by a documented illness or family crisis.

Student Conduct Policy:

In order to create a “learning environment” free of disruption, you **MUST TURN OFF** your cell phones, MP3 players, PDA’s, Pagers, and any other electronic devices before entering the class. Students are expected to comply with the student code of conduct as stated Student’s Guidebook, Policies and Procedures, Conduct. If the student is failed to comply with the code of conduct and being disrespectful, disruptive to the instructor or the students of the class, the instructor reserves the right to dismiss the student from the class on the first offense. A second offense may constitute dismissal from the course with a failing grade. A and M-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 expression will be maintained.

Tentative Class Schedule

Week	Date	Topics
1	July 11	Safety lecture & quiz
	July 12	Experiment 21: Structure of Organic Compounds: Models
	July 13	Experiment 24: Classification and Identification of Hydrocarbons
	July 14	Experiment 23: Column & Paper Chromatography: Part A
2	July 18	No Lab-Exam 1
	July 19	Experiment 23: Column & Paper Chromatography: Part B
	July 20	Experiment 30: Aspirin
	July 21	Experiment 25: Alcohols & Phenols
3	July 25	Experiment 31: Isolation of Caffeine
	July 26	No Lab-Exam 2
	July 27	Experiment 26: Aldehydes & Ketones Part I
	July 28	Experiment 26: Aldehydes & Ketones Part II
4	August 1	Experiment 27: Carboxylic Acids and Esters
	August 2	Experiment 34: Preparation and Properties of Soap
	August 3	Experiment 32: Carbohydrates (last lab)
	August 4	No lab

5	Aug. 8-11	No lab
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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

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.

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>

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](#)

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

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

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.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

Gee Library- Room 162

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

Fax (903) 468-8148

Email: 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.