



TEXAS A&M UNIVERSITY
COMMERCE

CHEM 1307 Survey of Organic Chemistry and Biochem

COURSE SYLLABUS: Spring 2022

INSTRUCTOR INFORMATION

Instructor: Mrs. Shiloh Starnes

Office Location: Commerce High School Room A117

Office Hours: M-F 7:00-7:45 a.m

Phone: 903-886-3756

Email Address: shiloh.starnes@commerceisd.org

COURSE INFORMATION

M-F 9:33-10:18 am

Room: A117

Textbook: Introduction to General, Organic, and Biochemistry, 11th Edition, Brooks/Cole, Cengage Learning; ISBN-13: 978-1-285-86975-9; by Bettelheim, Brown, Campbell, Farrell, Torres. (Tenth edition is acceptable as well).

Non-programmable Calculator (bring to class) (Cell phones are not allowed on exams.)

COURSE DESCRIPTION

This is a one-semester survey of organic chemistry and biochemistry course. The course examines the principles, nomenclature, reactions and methods of synthesis of organic compounds. Special attention is given to the application of organic chemistry to various chemical and 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 2323- 2325). A letter grade earned in this class not only reflects the student's knowledge of basic organic chemistry, but also reflects the student's ability to solve scientific problems based on available information, and to become a better scientist.

Prerequisite: The student must have completed Lvl U Math Min Grade D or Lvl Math 1314 Min Grade D or Lvl U Math 175 Min Grade D or Lvl U Math 1324 Min Grade D or Lvl U Math 179 Min Grade D. 2

Student Learning Outcomes

- (1) Exam questions will be developed to evaluate a student critical thinking skills. The students in the course will be required to analyze, evaluate, or solve problems when given a set of circumstances or data.
- (2) Exam questions will be developed to evaluate a student's ability to understand and utilize mathematical functions and empirical principles and processes.

(3) Student communication in the class will be clear, purposeful, and make appropriate use of evidence, data and technology as applicable. Students will be able to engage with peers in a way that demonstrates their understanding of relevant course theories and concepts.

(4) Students should be able to apply the basic concepts of organic chemistry that are discussed to better understand mechanistic and synthetic organic chemistry problems.

COURSE REQUIREMENTS

Student Responsibilities or Tips for Success in the Course Pointers to Succeed in CHEM 1305:

1. The lectures in this course will cover Chapters 10-22 of the assigned textbook. This material will be covered at the rate indicated by the Tentative Class Schedule. **Be sure to read the textbook before coming to the lectures.** The lectures will focus on important chemistry concepts but will not serve as a substitute for reading the textbook. The textbook is a more detailed presentation with a more extensive set of example problems. Chemistry is a physical science and it is imperative to master calculations to pass the course.

2. **Attend the class regularly, take the notes and review the material after the class.**

3. **Finish your homework promptly.** Working the problems will help you succeed in the course. The more problems that you work the better prepared you will be for exams.

GRADING

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

A = 90%-100%

B = 89%-80%

C = 79%-70%

D = 69%-60%

F = 59% or Below

The grade for this course will be derived as follows:

Four examinations 60 %

Quiz and homework 20%

Attendance 5%

Final Exam 15 %

Late work will not be accepted, and makeup quizzes or exams will not be given. If you miss one exam, for whatever reason, you can drop one exam. If you miss two exams, you will receive a grade of zero for that exam and any subsequent exam that you miss. The final exam will be comprehensive over all material covered in the class. You will be allowed to miss 2 classes. If you miss 3 classes, you will get 4% of attendance grade. If you miss 4 classes, you will get 2% of attendance grade. If you miss 5 or more classes, you will get 0 grade of attendance. **The last drop date for the course please see the website:** <http://www.tamuc.edu/Admissions/registrar/academiccalendars/>

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 70% and is precluded from completion of the course by a documented illness or family crisis. If you miss 5 or more class periods and do not have a passing grade in the class, you may be administratively dropped from the class.

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 4 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

Communication: If the instructor needs to contact an individual student, it will be via the student's Texas A&M –Commerce email account.

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: [Netiquette http://www.albion.com/netiquette/corerules.html](http://www.albion.com/netiquette/corerules.html)

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>

ADA Statement

Students with Disabilities 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&MCommerce 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.

Week	Topics	Reading assignments
Jan. 10-14	Introductions, definition of organic chemistry	260-266
Jan. 18-21	Structural formulas, functional groups Functional groups, alkanes, isomers	266-272
Jan. 24-28	Nomenclature of alkanes & cycloalkanes Cycloalkanes and conformations	273-290
Jan. 31- Feb. 4	Alkanes: properties & reactions	290-295
Feb. 8-11	Alkenes: structure & nomenclature Alkenes: properties & reactions	298-320
Feb. 14-18	Alkenes: reactions Aromatic compounds: structure & nomenclature	322-328
Feb. 22-25	Aromatic compounds: reactions Alcohols: structure and physical properties	328-342
Feb. 28- Mar. 4	Alcohols: reactions; ethers Thiols, stereochemistry	342-365
Mar. 7-11	Stereochemistry Amines: nomenclature & physical properties	365-384
SPRING BREAK March 14, 2022- March 18, 2022		
Mar. 21-25	Amines: reactions	384-387
Mar. 28- Apr. 1	Aldehydes & ketones: nomenclature & properties Aldehydes & ketones: reactions	389-402
Apr.4-8	Carboxylic acids: properties and reactions Carboxylic acid derivatives: structure & reactions	404-438
Apr. 12-15	Carbohydrates: structure, nomenclature Carbohydrates: reactions	440-463

Apr. 18-22	Lipids: structure, properties & reactions Lipids: role in biology	467-495
Apr. 25-29	<i>Proteins: composition, structure & reactions</i> <i>Proteins: structure & conformations</i>	497-532
TBD	Final comprehensive exam	TBD

Homework is in the back of each chapter and the due day for the homework will be announced in the class.

SUGGESTED END-OF-CHAPTER PROBLEMS

Chapter 10: 12, 15, 17, 24, 27, 29, 30, 32, 38, 44, 47.

Chapter 11: 11, 14, 15, 21, 28, 29, 35, 36, 45, 48, 50, 51, 52, 55.

Chapter 12: 13, 14, 19, 22, 24, 29, 40, 41, 45.

Chapter 13: 2, 3, 4, 5, 10, 14, 15, 19, 21, 32.

Chapter 14: 10, 11, 12, 16, 20, 23, 26, 33, 38, 48.

Chapter 15: 8, 9, 13, 16, 22, 23, 31, 35.

Chapter 16: 11, 13, 15, 18, 25, 30, 32, 47, 52, 54.

Chapter 17: 13, 14, 17, 24, 28, 31, 36, 40, 49, 57, 64.

Chapter 18: 6, 7, 17, 18, 25, 27, 29, 34, 41, 42, 44.

Chapter 19: 4, 11, 13, 41, 42, 43, 44.

Chapter 20: 15, 18, 20, 21, 23, 34, 44, 64.

Chapter 21: 4, 10, 14, 43, 70, 79.

Chapter 22: 9, 10, 27, 30, 42, 50, 52, 56, 69, 92.