CHEM 1307 (Section 01W), Survey of Organic Chemistry and Biochem
(This is a face-to-face course)

Course schedule Information - Spring 2024

Course: CHEM 1307-01E meets Tuesday and Thursdays at 3:30p-4:45p; Location: STC122

INSTRUCTOR INFORMATION

Instructor: Allan D. Headley
Office: Science Building, 337
Office Hours: MWF, 10:00 a.m. – 11:00 noon; TR, 1:30 p.m. to 3:30 p.m.
Telephone: (903) 468 – 8106
E-Mail: allan.headley@tamuc.edu (preferred mode of communication)

COURSE INFORMATION

Your basic text is "Introduction to General, Organic, and Biochemistry, 11th Edition, Bettelheim, F. A.; Brown, W. B.; Campbell, M. K.; Farrell, S. O. and Torres, O. M.; Brooks/Cole, Cengage Learning, 2016; ISBN-13:978-1-285-86975-9.
A model set is recommended for this course and can be purchased at the University Bookstore.

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.
Prerequisites: CHEM 1305, CHEM 1405, CHEM 1411 or CHEM 1412.

Student Learning Outcomes

1. Students should be able to apply the basic concepts of organic chemistry that are discussed to better understand mechanistic and synthetic organic chemistry problems.
2. This course is designed to develop and improve the student's ability to think critically and solve problems.
3. Students' ability to think critically and solve problems should be improved.

COURSE REQUIREMENTS

Minimal Technical Skills Needed

It is expected that students will have a basic knowledge of the internet and how to interface with D2L Brightspace, our learning management system (LMS). In addition, students must have the ability to scan written work and convert it to a pdf format for upload to D2L. There are many free applications, such as Camscanner, that are available that can be downloaded to smart phones, which will allow students to scan a document and convert it to a pdf format for upload to D2L.

Instructional Methods

This is a face-to-face course, and we will meet as shown in the university schedule of classes. Each Wednesday throughout the course, there will be a face-to-face quiz or a midterm exam and students are expected to be present to take these quizzes and exams. The format of the quizzes and exams will be a combination of multiple-choice questions and written responses. The final exam will be an ACS multiple-choice exam.

Student Responsibilities or Tips for Success in the Course

It is assumed that the good student will be able to work all the problems in the textbook (even the study problems within each chapter); you must work lots of problems. It is not a good idea to try to memorize solutions to problems, since identical problems will not be used again. You should always critically analyze your work to ensure that you have applied reasonable steps to deduce your solution. Also, ask yourself how a problem might be rearranged as a possible test item. Be precise with your answers. You will find this helpful in preparing for exams. Since there is typically more than one possible solution to a problem, discuss possible solutions with other students. Be precise with your answers. On your exams, you will be graded on what you write, not what you meant to write, or thought you wrote. If your responses to different problems are difficult for your classmates to understand, then your responses to questions on the exam will be very difficult to grade.

GRADING

First Exam: Week of February 12, 2024
Second Exam: Week of March 18, 2024
Third Exam: Week of April 15, 2024
Final Exam: Week of May 6, 2024

Your course grade will be based on your exams, homework, and quizzes. Each course midterm exam is worth 100 points (18% of your final grade), homework will be 13% and the average of your quizzes will be worth 13%. A course comprehensive standardized final exam is worth 20% of your final grade. The key and score distribution will be posted on D2L.

Assessments

Your grade will be computed based on the class average, for example if the class average is around 76% with a standard deviation of approximately 15 the grade cutoffs is: A = 90%-100%; B = 80%-89%; C = 70%-79%; D = 60%-69%; F = 59% or below. If the class average is lower, the cutoffs will be adjusted and students informed of the grade cutoffs after each exam and before the final exam.

MAKE-UP EXAMS

NO make-up exams will be offered. If you miss a midterm for a reason beyond your control, you may request in writing to be excused from that exam providing you have valid written documentation supporting your reason.

COURSE WITHDRAWAL

See the following website for more details about course withdrawal deadlines: http://www.tamuc.edu/admissions/registrar/academicCalendars/.

TENTATIVE SYLLABUS

Date	TOPICS TO BE COVERED	READING ASSIGNMENTS
Week of	TOPICS TO BE COVERED	
Jan 8	Introductions and clarification of course syllabus	
Jan 15	definition of organic chemistry	260 – 266
Jan 22	Structural formulas, functional groups	266 – 270
	Functional groups, alkanes, isomers	270 - 272
Jan 29	Nomenclature of alkanes & cycloalkanes	273 - 282
	Cycloalkanes and conformations	283 - 290
Feb 5	Alkanes: properties & reactions	290 - 295
	Alkenes: structure & nomenclature	298 - 307
	Alkenes: properties & reactions	308 - 313
Feb 12	**Exam#1**	
	Alkenes: reactions	313 – 320
	Aromatic compounds: structure & nomenclature	322 – 328
Feb 19	Aromatic compounds: reactions	328 - 336
	Alcohols: structure and physical properties	338 - 342
Feb 26	Alcohols: reactions; ethers	342 - 353
	Thiols, stereochemistry	353 - 365
Mar 4	Stereochemistry	365 – 375
	Amines: nomenclature & physical properties	376 – 384
Mar 12	**Spring break**	
Mar 18	**Exam#2**	
	Amines: reactions	384 – 387
Mar 25	Aldehydes & ketones: nomenclature & properties	389 – 394
Apr 1	Aldehydes & ketones: reactions	394 - 402
	Carboxylic acids: properties and reactions	404 – 421
Apr 8	Carboxylic acid derivatives: structure & reactions	423 – 438
Apr 15	**Exam#3**	
	Carbohydrates: structure, nomenclature	440 – 450
	Carbohydrates: reactions	450 – 463
Apr 22	Lipids: structure, properties & reactions	467 – 472
	Lipids: role in biology	473 – 495
Apr 29	Proteins: composition, structure & reactions	497 – 512
	Proteins: structure & conformations	512 – 532
May 6	**Final Exam***	

*Check examination schedule: http://appsprod.tamuc.edu/Schedule/Schedule.aspx

Course withdrawal information: https://www.tamuc.edu/admissions/registrar/documents/2020-2021%20Academic%20Calendar.pdf

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.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

GENERAL ADVICE REGARDING PROBLEMS

It is assumed that the good student will be able to work all the problems in the textbook (even the study problems in each chapter) even though, only some have been suggested. You must work lots of problems, even from other textbooks and study guides to be sure you understand and can use the concepts studied. It is not a good idea to try to memorize solutions to problems, since identical problems will not be used again. You also should determine ways to check the answer to a problem you have solved by application of common sense. Also, ask yourself how a problem might be rearranged as a possible test item. You will find this helpful in preparing for exams.

Compare your answers with other students. Remember that there is typically more than one possible solution to a problem! Be precise with your answers. On your exams, you will be graded on what you write, not what you meant to write, or thought you wrote. If your explanations do not make sense to your classmate, then they probably will not make sense to the exam grader.

TECHNOLOGY REQUIREMENTS

LMS – myLeo Online – D2L Brightspace

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

I will communicate mostly through myLeo Online Learning Management System, D2L Brightspace with students. As a result, make sure that you have a way to get alerts of announcements that are posted on D2L. I will also communicate with students via e-mail, so please make sure to check your e-mail daily for important announcements and information about the course.

Technical Support

If you are having technical difficulty with any part of D2L 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

The preferred mode of communication is via e-mail and if you have any questions or are having difficulties with the course material, please contact your instructor, response time within one day is a typical time.

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: Netiquette
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
Waters 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.

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

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