Course Information
Chemistry 1307: Survey of Survey of Organic and Biochemistry
Spring 2018

Course:	CHEM 1307-001 meets Tuesdays and Thursdays 3:30p-4:45p, Room 253 of the AGIT Building.
Instructor:	Allan D. Headley
Office:	Science Building, 337
Office Hours:	Mondays and Wednesdays, 10:00 a.m. – 11:00 p.m.; Tuesdays, 10:00 – 11:00; Thursdays, 11:00 p.m. to 12:00 p.m.; Fridays, 9:00 – 10:00 am
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Texts:	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.

Course description, objectives, and learning outcomes

This is a one-semester survey of organic chemistry and biochemistry. 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 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 211-212.) The course is designed to develop and improve the student's ability to think critically and solve problems. Thus, 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 AND COREQUISITES

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

EXAMINATIONS

Your course grade will be based on exams, homework, and quizzes. Each course midterm exam is worth 100 points (20% of your final grade), homework will be 15% and the average of your quizzes will be worth 15%. A course comprehensive standardized final exam is worth 10% of your final grade. The key and score distribution will be posted on the bulletin board which is located in the hallway of the third floor – across from Room 351/352 (Science Building).

First Exam:	Tuesday, February 13, 2018
Second Exam:	Tuesday, March 27, 2018
Third Exam:	Tuesday, April 24, 2018
Final Exam:	Week May 6, 2018 (Check examination schedule: http://appsprod.tamuc.edu/Schedule/Schedule.aspx)

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
Tue, 1/16	Introductions, definition of organic chemistry	260 – 266
Thu, 1/18	Structural formulas, functional groups	266 – 270
Tue, 1/23	Functional groups, alkanes, isomers	270 - 272
Thu, 1/25	Nomenclature of alkanes cycloalkanes	273 - 282
Tue, 1/20	Cycloalkanes and conformations	283 - 290
Thu, 2/1	Alkanes: properties & reactions	290 - 295
Tue, 2/6	Alkenes: structure & nomenclature	298 - 307
Thu, 2/8	Alkenes: properties & reactions	308 - 313
Tue, 2/13	**Exam #1**	
Thu, 2/15	Alkenes: reactions	313 – 320
Tue, 2/20	Aromatic compounds: structure & nomenclature	322 – 328
Thu, 2/22	Aromatic compounds: reactions	328 - 336
Tue, 2/27	Alcohols: structure and physical properties	338 - 342
Thu, 3/1	Alcohols: reactions; ethers	342 - 353
Tue, 3/6	Thiols, stereochemistry	353 - 365
Thu, 3/8	Stereochemistry	365 – 375
Tue, 3/13	Spring Break	Study
Thu, 3/15	Spring Break	Study
Tue, 3/20	Amines: nomenclature & physical properties	376 – 384
Thu, 3/22	Amines: reactions	384 – 387
Tue, 3/27	**Exam #2**	
Thu, 3/29	Aldehydes & ketones: nomenclature & properties	389 – 394
Tue, 4/3	Aldehydes & ketones: reactions	394 - 402
Thu, 4/5	Carboxylic acids: properties and reactions	404 – 421
Tue, 4/10	Carboxylic acid derivatives: structure & reactions	423 – 438
Thu, 4/12	Carbohydrates: structure, nomenclature	440 – 450
Tue, 4/17	Carbohydrates: reactions	450 – 463
Thu, 4/19	Lipids: structure, properties & reactions	467 – 472
Tue, 4/24	**Exam #3**	
Thu, 4/26	Lipids: role in biology	473 – 495
Tue, 5/1	Proteins: composition, structure & reactions	497 – 512
Thu, 5/3	Proteins: structure & conformations	512 – 532
Wk of 5/7**	Final Examination	

* Each midterm exam is cumulative, but will emphasize the material covered since the previous midterm exam.
**Check examination schedule: http://appsprod.tamuc.edu/Schedule/Schedule.aspx

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.

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, quizzes and homework problems, 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.

CLASS ATTENDANCE POLICY

All students are expected to attend class on a regular basis. The Department of Chemistry adheres to the attendance policy set by the University as stated in the most current Undergraduate Catalog. Being late by more than 5 minutes is equivalent to missing a lecture or laboratory. You must be on time in order to take an exam. Excessive absence is defined as missing more than 10% of the lecture or laboratory sessions without excusable reasons. Excessive absence will be reported to the Dean of the College and the Dean of Students, in according to the TAMU-Commerce Procedure A13.02. Good class attendance will be necessary in order to pass the course. If you miss more than 3 lectures prior to the first exam, the instructor

reserves the right to drop you from the course. If you miss more than 6 lectures throughout the course of the semester, the instructor reserves the right to drop you from the course.

STUDENT CONDUCT POLICY

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment (see Student's Guidebook, Policies and Procedures, Conduct). Any student engaging in disruptive behavior will be dismissed from class on the first offence. A second offence may constitute dismissal from the course with a failing grade.

CHEATING AND OTHER BREACHES OF ACADEMIC CONDUCT

Academic cheating, plagiarism, and other forms of academic misconduct may result in removal of the student from class with a failing grade or may in extreme cases result in suspension or expulsion from the University as described in the "Code of Student Conduct" section of the " Student's Guidebook."

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
StudentDisabilityServices@tamuc.edu

NONDISCRIMINATION STATEMENT

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.