CHEM 1305 Survey of General Chemistry

Faculty contact:
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Office Hours: MWF 10:00-11:00 am & T 3:30-4:30 pm & M 3:00-4:00 pm

Introduction: Survey of *General Chemistry*. 3 Semester Hours (lecture only).
This course is designed for students majoring in Agricultural Science, Wildlife and Conservation science, the Environmental Sciences, Nursing and non-majors seeking an understanding of chemistry and its applications in human health, agriculture and the environment. Students are introduced to the scientific method, the basic structure of the atom, microscopic and macroscopic properties of the solutions, solids, liquids and gasses, basic nuclear chemistry and the utilization of basic mathematics manipulations to determine solution concentrations, reaction stoichiometry, etc. The course will prepare students for the survey of organic and biochemistry course.

Course Materials*:*
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.
Online homework OWL v1 on the OWL webpage at www.cengage.com/owl. The bookstore has a bundle with the lab manual and access code for the online homework.
Classroom: Lecture Chem 1305.002 TR 2:00–3:15 pm in Science 127

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.

Attendance Policy: Attendance in lecture is strongly recommended. You will find that you will learn a lot in lecture providing **you attend, engage, pay attention and stay awake.** It is definitely to your benefit to attend the lecture as additional material not contained in the text is given to help the student understand chemical principles. All students are expected to attend classes 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. **The attendance record is taken from the daily sign-in sheet. A student who is late by more than 5 minutes or fails to sign the sign-in sheet will be counted as missing a lecture.** Excessive absence will be reported to the Dean of the College and the Dean of Students. In addition, **according to the TAMU-Commerce Procedure 13.99.99.R0.01, if a student has excessive absences, the instructor may drop the student from the course**. The instructor will only excuse an absence if the student provides, with appropriate document, an excusable reason allowed by the TAMU-Commerce Procedure **13.99.99.R0.01**. Good class attendance will be necessary in order to pass this course.

Communication: If the instructor needs to contact an individual student, it will be via the student's e-mail account. Students should check e-mail frequently, especially after absence. Email is the best, easiest and fastest way to communicate with me.

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. All the students enrolled at the university shall follow the tenets of common decency and acceptable behavior conducive to positive learning environment. (See current Student Guidebook). 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 & 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.

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 A & M-Commerce Procedure 13.99.99.R0.10.

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

Campus Concealed Carry

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 ((http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf) and/or consult your event organizer).
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.

Pointers to Succeed in CHEM 1305:

1. The lectures in this course will cover Chapters 1-9 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. 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/Evaluation

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 sees the website:
http://www.tamuc.edu/Admissions/registrar/academiccalendars/

Grading will be based on a standard percentage scale: 100-87 = A; 86-78 = B; 77-68 = C; 67-58 = D; 57-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.

Lecture Learning Outcomes/ Course Objectives:

(1) Exam questions will be developed to evaluate a students 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) At the completion of the course, students will understand the scientific method, the basic structure of the atom, microscopic and macroscopic properties of solutions, solids, liquids and gases, basic nuclear chemistry and the utilization of basic mathematic manipulations to determine solution concentrations, reaction stoichiometry, etc.

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.

Tentative Class Schedule

Week	Topics	Reading assignments
01/16-01/18	Chapter 1. Matter, Energy and Measurement	1-12
01/23-01/25	Chapter 1. Matter, Energy and Measurement Chapter 2. Atoms	12-23 27-39
01/30-02/01	Chapter 2. Atoms	39-51
02/6-02/8	Chapter 2. Atoms Chapter 3. Chemical Bonds	51-56 58-64
02/13-02/15	**Exam 1: (Chapters 1-2)** Chapter 3. Chemical Bonds	 65-77
02/20-02/22	Chapter 3. Chemical Bonds Chapter 4. Chemical Reactions	77-89 91-99
02/27-03/01	Chapter 4. Chemical Reactions	99-116
03/06-03/18	Chapter 5. Gases, Liquids, and Solids **Exam 2: (Chapters 3-4)**	117-123
03/13-03/15	Spring Break	
03/20-03/22	Chapter 5. Gases, Liquids, and Solids	123-145
03/27-03/29	Chapter 6. Solutions and Colloids	147-164
04/03-04/05	Chapter 6. Solutions and Colloids Chapter 7. Reaction Rates and Chemical Equilibrium	164-173 175-185
04/10-04/12	**Exam 3: (Chapters 5-6)** Chapter 7. Reaction Rates and Chemical Equilibrium	 185-193
04/17-04/19	Chapter 7. Reaction Rates and Chemical Equilibrium Chapter 8. Acids and Bases	193-198 200-211
04/24-04/26	Chapter 8. Acids and Bases	212-230
05/01-05/03	Chapter 9. Nuclear Chemistry **Exam 4: (Chapters 7-9)**	233-259
05/07-05/11	**Final comprehensive exam (Chapters 1-9)**	See exam schedule on university website

Recommended HW problems and examples

Chapter 1:	16, 17, 18, 25, 26, 27, 28, 29, 32, 36, 37, 38, 39, 43, 53, 55, 56, 58, 60, 74.
Chapter 2:	10, 15, 16, 18, 22, 24, 25, 26, 28, 29, 30, 35, 46, 48, 51, 52 53, 54, 64, 66.
Chapter 3:	18, 21, 23, 28, 32, 34, 35, 38, 39, 42, 50, 52, 53, 75.
Chapter 4:	18, 21, 22, 24, 29, 30, 31, 38, 39, 42, 43, 45, 46, 55, 56, 59, 70, 71.
Chapter 5:	18, 20, 23, 32, 37, 38, 39, 46, 58, 62, 64, 96.
Chapter 6:	17, 18, 24, 25, 28, 35, 37, 40, 44, 48, 51,52, 59, 60, 67, 69, 75,76.
Chapter 7:	10, 16, 19, 25,26,27,28, 30, 31, 37, 38.
Chapter 8:	14, 16, 19, 20, 22, 26,30, 33, 37, 56, 66.
Chapter 9:	14,21,22,25,28.