

TEXAS A&M INTERNATIONAL UNIVERSITY CHEM 1370 101 SURVEY OF CHEMISTRY
SPRING 2013

Instructor: Anju Gupta, Ph.D
Telephone: (956) 326-2597
Email: anju.gupta@tamiu.edu
Office Hours: Mon, Wed, Friday 9.00-10.00 am
Or by appointment.
Office Location: LBV 305
Class Schedule: Mon, Wed, Friday 10.30-11.20 am
Classroom: LBV 102

Textbook: Chemistry for Changing Times, 13th Edition, J. W. Hill & D. K. Kolb, Prentice Hall

Course Description

Introduction to the fundamental principles of chemistry. Topics include atomic structure, atomic theory and periodicity, chemical bonding, stoichiometry, solution chemistry, gas laws, organic chemistry and polymers. This course is mainly designed for students intending to enroll in non-science and majors.

Student Learning Outcomes: Upon the conclusion of the course the students will be able to:

1. Apply the elementary concepts of chemistry and discuss how science and technology influences our daily lives.
2. Use critical thinking and the scientific method to examine chemical phenomena.
3. Collaborate effectively on a research project and oral presentation.
4. State the concept of atoms, molecules, ions, solutions and chemical reactions.
5. Explain atomic structure, bonding and intermolecular forces.
6. Solve quantitative problems involving unit conversions, chemical formulas and equations.
7. Recognize the periodic properties and trends.
8. Deduce the chemistry of acids and bases and their application in life.
9. Describe the process of oxidation and reduction reactions.
10. Name, identify, and classify various carbon compounds.
11. Distinguish the structure and properties of commonly used polymers.

Core-Curriculum Learning Outcomes:

1. Critical Thinking: includes creative thinking, innovation, inquiry and analysis, evaluation, and synthesis of information. (SLOs: 1, 2, 3)
2. Communication Skills: Students will demonstrate their ability to communicate effectively by using written communication. (SLOs: 1,3)
3. Empirical and Quantitative Skills: includes the manipulation and analysis of numerical data or observable facts resulting in informed conclusions. (SLOs: 6,7)
4. Teamwork: includes the ability to work effectively with others to support a shared goal. (SLOs: 3)

Student Evaluation

The student will be evaluated through the administration of assessment modes including: four tests, a comprehensive final exam, project presentation and class participation. All the tests must be completed for a passing grade. The final examination, which is comprehensive, is mandatory.

Point values for tests and examination:

Tests	75 (25 points each)
Final Exam	100 points
Group project	25 points

<i>Total points</i>	200
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Questions on above instruments may be in the form of:

- multiple choice
- fill in the blank
- short answers
- numerical problems

The *tentative* breakdown is given below. I reserve the right to adjust this breakdown in the class's favor but I will never adjust it to a more disadvantageous one.

<i>Grade</i>	<i>Percentage</i>
A	100-90
B	90-80
C	80-70
D	70-60
F	60-50

Group Project

You will be assigned groups/group projects which is intended to provide hands-on participation in problem-based activities on concepts covered in class. More information will be provided in class.

Academic Honesty

All students are expected to abide by the values of honesty, integrity, and truthfulness in their academic pursuits. Violations of academic honesty, such as plagiarism or cheating, will result to failure in the course and the matter will be referred to the Executive Director of Student Life for possible disciplinary action.

Attendance and Exam Make-up Policies

Attendance is essential for success in this course.

Make-up exams will be made available for only officially permitted (serious illness, death in the family, and university sponsored events) and validated absences that occur on the scheduled exam dates and times.

Incompletes

The grade of incomplete will be given in a situation after the discussion between the student and instructor. Student will be responsible for submission of the appropriate paperwork.

Students with disabilities

Students who are covered under the American Disabilities Act should submit a Notification of Disability Form to the instructor so that appropriate instructional arrangements can be made. This form is available through the Office of Student Counseling and Disability Services (RM 138) in the University Success Center.

Communication

All official email communication will be conducted using TAMIU email (addresses ending in @tamiu.edu). Students must check their TAMIU email accounts regularly for notifications regarding the class.

Class behavior and discipline

The College of Arts and Sciences encourages classroom discussion and academic debate as an essential intellectual activity. It is essential that students learn to express and defend their beliefs, but it is also essential that they learn to listen and respond respectfully to others whose beliefs they may not share. The College will always tolerate diverse, unorthodox, and unpopular points of view, but it will not tolerate condescending or insulting remarks. When students verbally abuse or ridicule and intimidate others whose views they do not agree with, they subvert the free exchange of ideas that should characterize a

University classroom. If their actions are deemed by the professor to be disruptive, they will be subject to appropriate disciplinary action, which may include being involuntarily withdrawn from the class.

No texting or attending phone calls in the classroom. Cell phones must be switched off before coming to the class.

Copyright Restrictions

The Copyright Act of 1976 grants to copyright owners the exclusive right to reproduce their works and distribute copies of their work. Works that receive copyright protection include published works such as a textbook. Copying a textbook without permission from the owner of the copyright may constitute copyright infringement. Civil and criminal penalties may be assessed for copyright infringement. Civil penalties include damages up to \$100,000; criminal penalties include a fine up to \$250,000 and imprisonment.

Independent study courses

Independent Study (IS) courses are offered only under exceptional circumstances. Required courses intended to build academic skills may not be taken as IS (e.g., clinical supervision and internships). No student will take more than one IS course per semester. Moreover, IS courses are limited to seniors and graduate students. Summer IS course must continue through both summer sessions.

Class drop responsibility

The College of Arts & Science Adheres to the Attendance Policy in the current University catalog. "It is the responsibility of the STUDENT to drop the course before the drop date. Faculty is not responsible for dropping students who suspend class attendance".

Final Examination

Final Examinations will be comprehensive and must be taken on the day specified

Tips for success

1. A rule of thumb for science classes is that you should expect to work at least two hours on your own for every hour in class.
2. Review and if possible, print the slides before coming to the class.
3. On exams and homework problems, show the work, always write appropriate units and make unit conversions.
4. Bring your textbook and calculator to every class.
5. If you are having trouble with the materials (or just some doubts, come see me.
Don't wait until the week of exam. Also, free tutoring is available at Student Learning Center.
Take advantage of it.

Course Syllabus (Note: The syllabus is subject to change)

Week	Topic
Jan 23	Introduction to class
Jan 28-Feb 1	Chapter 1. Chemistry
Feb 4- Feb 8	Chapter 2. Atoms
Feb 11- Feb 15	Chapter 3. Atomic structure
Feb 18- Feb 22	Test 1(Chapters 1-3) and Chapter 4. Chemical bonds
Feb 25- Mar 1	Chapter 5. Chemical accounting
Mar 4- Mar 8	Chapter 6. Gases, Liquids, Solids and Intermolecular forces
Mar 11-Mar 15	Spring Break
Mar 18-Mar 22	Chapter 7. Acids and Bases
Mar 25-Mar 27	Test 2 (Chapters 4-6) and Chapter 8. Oxidation and Reduction
Mar 29	Easter break
Apr 1-Apr 5	Chapter 9. Organic Chemistry
Apr 8- Apr 12	Chapter 10. Polymers Test 4 and Project presentations
Apr 15	Group Project discussion
Apr 17	Test 3 (Chapters 7-10)
Apr 19	Project presentations
Apr 22-Apr 26	Project presentations
Apr 29 –May 3	Project presentations
May 6	Final exam review