

ELEMENTARY CHEMISTRY

Chem V20 | CRN 72251 | HyFlex

Instructor Information

Name: Howard Han
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Office Hours: T 02:00 pm – 04:00 pm @ SCI-320
R 10:00 am – 11:20 am @ SCI-320
R 02:00 pm – 04:00 pm @SCI-320
Contact Hours: Monday-Thursday, you can expect me to respond to email within 3 hours. Messages and submissions posted after 11 pm on Thursday may not reach the instructor until Monday of the following week.

Class Information

This course includes fundamental theories, laws, and techniques of general chemistry, together with their more important applications, drill in chemical formulas, equations and calculations.

Course Required Materials

- Introductory Chemistry by Tro 6th Edition (hardcover) ISBN: 9780134302386
- Online Textbook Link:
https://chem.libretexts.org/Bookshelves/Introductory_Chemistry/Introductory_Chemistry
- Non-graphing, non-programmable Calculator
- Personal laptop/computer
- Scanning device (a scanner or mobile device with camera and scanner app)

On Campus resources:

Counseling	MESA	Library	Educational Assistant Center (EAC)	Extended Opportunity Programs and Services (EOPS)	Veteran's Affairs Office
					

Class Meetings

TR 11:30 am - 1:20 pm
@SCI-313

Course Units

4.0 (1 hour 50 minutes of lecture twice + 8 – 12 hours outside of class per week)

Prerequisites

MATHV01 or MATHV01E or MATHV11B or 1 year of high school beginning algebra with a grade of C or better

Course Objectives

Upon successful completion of this course, the student will be able to demonstrate the following measurable skills and abilities:

- A. Apply the scientific method to chemistry data and problems, including developing hypotheses and hypothesis testing and evaluation.
- B. Solve problems using the correct number of significant figures and scientific notation.
- C. Solve problems involving the metric system and conversion of units between systems.
- D. State the symbols of common elements and the structure of simple molecules.
- E. Write formulas and state names of salts, acids, and molecular compounds.
- F. Formulate and balance simple chemical equations.
- G. Perform mole calculations, including limiting reactant stoichiometry problems.
- H. Solve problems involving ideal gases.
- I. Solve solution concentration problems involving molarity and percent concentration.
- J. Distinguish between elements, compounds, and mixtures.
- K. Arrange elements according to their properties by referring to the periodic table.
- L. Construct diagrams of the atomic structures of common elements and differentiate between the elementary particles that make up an atom.

Course Format: HyFlex

1. **Flexible Attendance Options:** Students can choose to attend class in person or over Zoom. All lectures will be recorded and streamed live via Zoom, ensuring that all students have access to the same content regardless of their chosen attendance method.
2. **Mandatory Attendance:** Regular attendance is required for all students, whether attending in person or online via Zoom. Participation and engagement are essential components of the course.
3. **Digital Homework Submission:** Homework must be submitted digitally via Canvas. Students are expected to know how to digitally write using a tablet and stylus or scan their physical work to submit online.

In-Person Exams: Exams will be conducted in person only, with no online version available. It is essential for students to attend these sessions on campus

Classroom Policy

Attendance:

Each class covers significant material, including quiz and exam examples. Success requires your active participation. Attendance is mandatory and will be recorded every class. Missing two weeks' worth of class may result in a "W" for the course. Inform me of any emergencies beforehand or as soon as possible to catch up on missed content. Absences do not excuse missed assignments or avoid late penalties.

Classroom Conduct:

Come to class prepared with your notebook, calculator, writing utensils, and full attention. Professional courtesy is required, including punctuality, silencing electronic devices, refraining from talking or disruptive behavior, and respecting others. Disruptions will lead to warnings, and repeated issues will result in being asked to leave, point deductions, and a report to the Behavioral Intervention Team.

Academic Integrity:

Cheating or plagiarism is a serious violation and will result in a zero for the assignment and a report to the Behavioral Intervention Team. Cheating includes unauthorized assistance during exams or quizzes. Plagiarism includes copying homework. Any form of cheating is unacceptable.

Grading Policy

Grades for all assignments will be posted on Canvas throughout the semester, allowing students to track their progress. The final letter grade will be based on the total points earned and will not be rounded. Final grades are conclusive.

Evaluation of Student Performance:

- **Exams** (4 total): 100 points each
- **Quizzes** (13 total): 20 points each
- **Homework (Worksheet)** (13 total): 40 points each
- **Homework (Exam Error Analysis)** (4 total): 40 points each
- **Week 0 Assignments** (2 total): 10 points each
- **Attendance:** 100 pts

The total points available in this grading system are 1460 points.

Grade Scale:

- A: 90%-100%
- B: 80%-89%
- C: 70%-79%
- D: 60%-69%
- F: 59% or lower

Exams and Quizzes:

At the end of every chapter, students will take a quiz online.

There will be 4 exams that will cover 3 to 4 chapters. The exams will be completed in class.

Homework:

Worksheet:

For each chapter, students will receive a comprehensive worksheet. Completion of these worksheets is mandatory and serves as an integral part of their preparatory work. These worksheets are designed to reinforce key concepts and ensure a thorough understanding of the chapter material.

Exam Error Analysis:

After each exam, students are required to conduct a detailed analysis of their performance. This involves a meticulous review of the exam to identify and correct any incorrectly answered questions. Students must not only correct their answers but also provide in-depth explanations for their initial errors and articulate specific strategies to prevent similar mistakes in future assessments. This reflective exercise is crucial for fostering a deeper understanding of the subject matter and enhancing exam-taking skills.

Tentative Schedule

Week	Tuesday	Thursday	Saturday
1	8/13 Course Orientation Chapter 1 & 3	8/15 Chapter 1 & 3	8/17 Quiz 1 (Ch 1 & 3)
2	8/20 Chapter 2	8/22 Chapter 2	8/24 Quiz 2 (Ch 2)
3	8/27 Exam 1 Review	8/29 Exam 1 (Ch 1 – 3)	8/31
4	9/3 Chapter 4	9/5 Chapter 4	9/7 Quiz 3 (Ch 4)
5	9/10 Chapter 5	9/12 Chapter 5	9/14 Quiz 4 (Ch 5)
6	9/17 Chapter 6	9/19 Chapter 6	9/21 Quiz 5 (Ch 6)
7	9/24 Chapter 7	9/26 Chapter 7	9/28 Quiz 6 (Ch 7)
8	10/1 Exam 2 Review	10/3 Exam 2 (Ch 4 – 7)	10/5
9	10/8 Chapter 8	10/10 No Class (Flex Day)	10/12
10	10/15 Chapter 8	10/17 Chapter 9	10/19 Quiz 7 (Ch 8)
11	10/22	10/24	10/26

	Chapter 9 Chapter 10	Chapter 10	Quiz 8 (Ch 9) Quiz 9 (Ch 10)
12	10/29 Chapter 11	10/31 Chapter 11	11/2 Quiz 10 (Ch 11)
13	11/5 Exam 3 Review	11/7 Exam 3 (Ch 8 – 11)	11/9
14	11/12 Chapter 12	11/14 Chapter 12	11/16 Quiz 11 (Ch 12)
15	11/19 Chapter 13	11/21 Chapter 13	11/23 Quiz 12 (Ch 13)
16	11/26 Chapter 14	11/28 No Class (Thanksgiving Day)	11/30
17	12/3 Chapter 14	12/5 Exam 4 Review	12/7 Quiz 13 (Ch 14)
18	12/10 & 12/12 Exam 4 (Ch 12 – 14)		