ELEMENTARY CHEMISTRY

Chem V20 Online | CRN 70714 | Online

Instructor Information

Name: Howard Han

E-mail: hhan@vcccd.edu

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 Meetings

MW 1:00 pm - 2:50 pm

@Zoom

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

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

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.

Student Learning Outcomes

By the end of this class, you will be able to:

1. Solve quantitative chemistry problems using various mathematical procedures including dimensional analysis and algebraic equations and demonstrate clear reasoning in their work.
2. Explain the basic structure of atoms and molecules and describe how atoms combine to form compounds.
3. Describe how the structure of atoms and molecules leads to the macroscopic properties of a material such as reactivity, boiling point, melting point, and polarity.
4. Analyze, predict, and represent chemical changes using knowledge of chemical formulas, solubility rules, periodic trends, stoichiometry, and chemical equations.

Core Competencies for the class can be found at:
http://www.venturacollege.edu/sites/default/files/imported/assets/pdf/core_competencies/corecomps_chemistry.pdf

Course Format: Fully Online

This Chemistry course is fully online, designed to deliver a comprehensive and immersive educational experience entirely through digital means. The curriculum leverages the advantages of online learning, using the college's Canvas learning management system to provide a rich, interactive educational journey from the comfort of your home.

Key Features of the Course:

1. **Virtual Classroom Engagement:** This course simulates the in-person classroom experience in a virtual environment. Engage with interactive simulations, virtual lab experiments, and live video discussions to understand the practical aspects of chemistry. Regular online meetings foster a sense of community and facilitate direct interaction with peers and the instructor.
2. **Comprehensive Online Resources:** Through Canvas, you will have access to a wide array of digital resources, including digital copies of all class materials, online assignment submission, and real-time updates on grades and feedback. The platform serves as the central hub for course communications, ensuring you stay informed and connected throughout your learning journey.

Classroom Policy

Attendance:

In this fully online course, consistent engagement and active participation are vital for success. Regular participation in online discussions, timely submission of assignments, and consistent progress in course materials are expected. Attendance is gauged through your active involvement in online activities rather than physical presence. While the flexibility of an online course accommodates various schedules, staying on pace with the course schedule is crucial. If you face significant difficulties, please communicate promptly to discuss accommodations or catch-up strategies. Absence from online activities does not excuse missed assignments or deadlines unless prior arrangements have been made.

Classroom Conduct:

A professional and respectful online environment is essential. Maintain courtesy in discussion forums, be respectful during live sessions, and adhere to the same standards of behavior online as in a physical classroom. Minimize distractions to maintain an effective learning environment, fully engage with course materials and discussions, and act respectfully. Disruptive behavior will be addressed directly, potentially leading to removal from the session or further actions consistent with the college's policies.

Academic Integrity:

Upholding academic integrity is paramount. Cheating, plagiarism, or any form of dishonesty will result in strict consequences, including a zero for the assignment or exam and potential disciplinary action. In an online context, academic dishonesty includes unauthorized collaboration, use of unauthorized resources during assessments, and plagiarism. Submit original work and follow all guidelines for assignments and exams. Any incidents of academic dishonesty will be reported and may affect your standing in the course.

Grading Policy

Throughout the semester, the grades for all assignments will be posted on Canvas so that the current progress can be tracked by students. The final letter grade will be assigned based on the final point total of each student. Final grades will be considered conclusive and will not be rounded.

Evaluation of Student Performance:

- **Quiz (11 total):**
  - 40 points each
- **Homework (Worksheet) (11 total):**
  - 40 points each
- **Week 0 Assignments (2 total):**
  - 10 points each
- **Attendance**
  - 100 pts

Grade Scale:

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

Tentative Schedule

Week	Monday	Wednesday	Friday
1	9/9 Orientation Chapter 1 & 3	9/11 Chapter 1 & 3	9/13 Quiz 1 (Ch 1 & 3)
2	9/16 Chapter 2	9/18 Chapter 2	9/20 Quiz 2(Ch 2)
3	9/23 Chapter 4	9/25 Chapter 4	9/27 Quiz 3 (Ch 4)
4	9/30 Chapter 5	10/2 Chapter 5	10/4 Quiz 4 (Ch 5)
5	10/7 Chapter 6	10/9 Chapter 6	10/11 Quiz 5 (Ch 6)
6	10/14 Chapter 7	10/16 Chapter 7	10/18 Quiz 6 (Ch 7)
7	10/21 Chapter 8	10/23 Chapter 8	10/25 Quiz 7 (Ch 8)
8	10/28 Chapter9	10/30 Chapter 9	11/1 Quiz 8 (Ch 9)
9	11/4 Chapter 10	11/6 Chapter 10	11/8 Quiz 9 (Ch 10)
10	11/11 No Class (Veterans Day)	11/13 Chapter 11	11/15 NO QUIZ

11	11/18 Chapter 11	11/20 Chapter 12	11/22 Quiz 10 (Ch 11)
12	11/25 Chapter 12	22/27 Quiz 11 (Ch 12)	