

CHEMISTRY 2024 - 2025

Teacher Contact Information

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Course Description

Chemistry is the study of the composition, structure and properties of matter. It includes the processes that matter undergoes and the energy changes that accompany these processes. Chemistry is often called the central science, since it

either involves or is involved in all of the other sciences. An understanding of chemistry will equip you to better understand science and the world around you. My goal for this class is to provide you with an understanding of chemistry that allows you to appreciate it and its relevance to your life.

Essential Learning Outcomes (ELOs)

In addition to demonstrating mastery of course content, students will be able to:

- Construct and revise explanations based on evidence for various chemical processes
- Develop and use models to illustrate chemical processes
- Plan and conduct experimental investigations into chemical processes
- Use mathematical and/or computational representations to support and revise explanations.
- Evaluate claims, evidence and reasoning
- Make and defend claims based on evidence

Participation Expectations

- Attending and participating in class
- Completing assigned activities on Schoology on time
- Participating in discussion posts on Schoology as needed
- Engaging in group activities while being attentive and respectful to others
- Communicating with your teacher and/or counselor if you have an obstacle in the way of your success

Grading Policy

Grades in chemistry are weighted according to the following manner:

Unit Tests	40%
Chapter Tests/Final	20%
Labs/Projects	20%
Classwork/Quizzes	20%

Semester Grades will be assigned using the following scale:

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

Grades will be updated biweekly at a minimum

Student Absences

If you are absent, refer to Schoology for any work that you missed. You will have a number of days equal to the number of days that you were absent to complete any work missed.

If you are absent on the day of a unit test, you will have one week from the day that you return to make it up. Failure to do so will result in a score of zero on the test with no chance to make it up.

Late Work Policy

All assignments are expected to be completed on the assigned due date. Failure to have the work on the assigned date will result in a loss of 30% of the assignment value

Late work is accepted until *two weeks before the end of each semester*

What Units will we cover?

SEMESTER 1:

1. UNIT 1- BASICS OF CHEMISTRY

- a. Chapter 1: An Introduction (The Scientific Method, Lab Equipment and Technique)

ELO1: Describe and utilize the scientific method to investigate scientific questions and analyze scientific data to make meaningful conclusions.

- b. Chapter 2: Measurements and Calculations (Significant Figures, Units of Measurement, Density)
- c. Chapter 3: Matter (States of matter, Physical vs Chemical Properties)

ELO2: Describe and compare the different states of matter at the atomic and molecular level.

2. UNIT 2- ATOMS

- a. Chapter 4: Elements, Atoms and Ions (The Periodic Table and its trends)
- b. Chapter 11: Modern Atomic Theory (Models of the Atoms)

3. UNIT 3- NOMENCLATURE AND BONDING

- a. Chapter 5: Nomenclature (Type I, Type II)

ELO6: Distinguish between the different terminology used to describe the quantity of a compound.

- b. Chapter 12: Bonding (Ionic, Covalent)

ELO3: Utilize the periodic table to predict chemical bonding.

ELO4: Apply understanding of chemical bonds to name compounds.

ELO8: Utilize the periodic table to predict chemical bonds based on molecular structure and atomic stability.

SEMESTER 2:

4. UNIT 4- CHEMICAL REACTIONS

- a. Chapter 6- Chemical Reactions (The 5 types)

ELO5: Identify and predict chemical reactions, and demonstrate how to balance chemical equations.

- b. Chapter 18- Oxidation-Reduction (Redox) Reactions

ELO12: Identify oxidation/reduction reactions, demonstrate how to assign oxidation states to balance redox reactions.

5. UNIT 5- CHEMICAL QUANTITIES

- a. Chapter 8- Chemical Composition
- b. Chapter 9- Chemical Quantities

6. UNIT 6- SOLUTIONS

- a. Chapter 7- Reactions in Aqueous Solutions
- b. Chapter 16- Acids and Bases

7. UNIT 7- GASES

- a. Gases- Ch. 13

ELO9: Apply gas laws to describe the relationship between volume, pressure and temperature and predict these changes in a mixture under various scenarios.

8. UNIT 8- ENERGY

- a. Energy- Ch. 10

ELO7: Distinguish between endothermic and exothermic reactions and calculate the amount of energy transferred during a reaction.

Resources

Schoology is an online learning management system that I use as a one-stop source for all course information. You will find what occurred in class as well as links to digital copies of all handouts and homework as well Google Slide Presentations used in class.

Also, I have a class site with our pacing plan (in progress) at

SEMESTER 1

<https://www.dangerfieldclass.com/chemistry-2024-25-semester-1.html>

SEMESTER 2

<https://www.dangerfieldclass.com/chemistry-semester-2.html>

If you are absent, I expect that you will check Schoology and/or class site to keep up to date.

Also, as this is my first year, I am adding items as we go along.