

SC254O/ Chemistry 2 Syllabus

Course Title-----	Chemistry 2
Course Number-----	SC254O
Grades:-----	11-11
High School Credit Value:-----	0.5
Prerequisites:-----	Prerequisite is successful completion of Chemistry 1 and Algebra 1-2. Strongly recommended that student is concurrently taking second year Algebra or similar math class.
Course Length:-----	Regular courses: 17 weeks CR: 9-17 weeks.
Course Time:-----	Regular courses: 17 week schedule: 75 - 90 minutes per school day (6-7.5 hours per week) Credit Retrieval: 75 - 90 minutes per school day (6-7.5 hours per week) until course completion.

{ Course Description }

Chemistry 2 is the second semester of high school chemistry. Students should have already taken or currently be enrolled in second year Algebra as a prerequisite for the math content in this course. The course content is located within our Angel web site. Many labs are offered in a virtual online format, but some may require students to provide their own materials. A semester final is required.

Course Materials:

The list of required course materials is located in the Course Description and Materials page located within this Orientation folder. Students need a computer with speakers to hear the audio lessons, allow pop-ups to see the video portion of the lessons, and a headset is recommended. Also, the ability to download and install freeware such as Adobe Flash is required.

State Alignments

Washington State Standards guided the design of the course. Learning expectations are found within the course itself.

The following standards are used to create and evaluate lessons in second semester chemistry

1. Investigate: Scientific progress requires the use of various methods appropriate for answering different kinds of research questions, a thoughtful plan for gathering data needed to answer the question, and care in collecting, analyzing and displaying the data.

2. Explain: Conclusions must be logical, based on evidence, and consistent with prior established knowledge.
3. Communicate Clearly: The methods and procedures that scientists use to obtain evidence must be clearly reported to enhance opportunities for further investigation.
4. The ability to solve problems is greatly enhanced by use of mathematics and information technologies.
5. Solutions are mixtures in which particles of one substance are evenly distributed through another substance. Liquids are limited in the amount of dissolved solid or gas that they can contain. Aqueous solutions can be described by relative quantities of the dissolved substances and acidity or alkalinity (pH).
6. Moles: Use the mole in describing chemical quantities by count, mass and volume.
7. Stoichiometry: Use stoichiometry to predict quantities in chemical reactions.

Course Outline

Unit 6: Chemical Reactions and the Mole

- Section A – The Mole
- Section B – Mole Calculations
- Section C – Types of Reactions
- Section D – Balancing Equations
- Section E – Stoichiometry

Unit 7: Solids, Liquids, and Gases

- Section A – The Kinetic Molecular Theory
- Section B – Properties of Gases
- Section C – Properties of Solids and Liquids
- Section D – Changes in State

Unit 8: Water and Solution Chemistry

- Section A – Water and its Solutions
- Section B – Solution Properties
- Section C – Acids and Bases
- Section D – Acid Base Reactions
- Section E – Electrochemistry

Unit 9: Chemical Thermodynamics and Equilibrium

- Section A – What is Heat?
- Section B – Calculating Energy Changes
- Section C – Laws of Thermodynamics
- Section D – Reaction Rates
- Section E – Thermodynamic Equilibrium

Unit 10: Nuclear Chemistry

- Section A – Radioactivity
- Section B – Nuclear Reactions
- Section C – Conservation of Matter and Energy
- Section D – Nuclear Energy

Semester 2 Exam**Course Work**

The Course Syllabus contains a link to the course calendar. Students enter their start and end dates and the calendar generates a weekly list of which assignments are due. This schedule is the ultimate planner for this chemistry course.

To be successful, students are advised to be current within one week of the suggested calendar, and contact their teacher weekly to discuss course content and academic progress.

All of the course content is found within the Angel web site. The official grade book will also be found in Angel. All email communication will take place within Angel. The links to live contact with the instructor are also found within the Angel site.

Grading

Unit tests and the semester final may only be taken once. Revision of labs or research activities will be allowed until students meet minimum standards.

Occupational Credit:

This course may qualify for *occupational credit. Please consult your school counselor for further clarification.

*Please note that FLA901 (Sign Language) does not qualify for occupational credit.

