



EduCalc Learning Chemistry

Instructor

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Course Description

Students in this course learn the composition of matter through studying chemistry. They learn elements and their interactions, stoichiometry, and physical and chemical reactions. They learn how bonds, reactions, and compositions create and energize the world around us.

Fully Online Course

This is an online course through the learning management system, Canvas. Activities consist of reading text, watching instructional videos, and taking online quizzes and tests. This is a one-credit course upon completion of all 8 units.

Scope and Sequence

| Unit | Title | Topics Include |
|---------|---------------------------|--|
| Unit 1 | Introduction to Chemistry | Measurements, properties, density, SI units. |
| Unit 2 | Elements | Periodic Table, elements, isotopes, trends. |
| Unit 3 | Atoms, Molecules, Ions | Atoms, electrons, molecules. |
| Unit 4 | Composition | Molarity, acids, bases, equilibrium. |
| Unit 5 | Stoichiometry | Write, balance, and classify chemical equations. |
| Unit 6 | Bonding | Ionic, covalent, polar, non-polar bonds. |
| Unit 7 | Liquids, Solids, Gases | Phases of matter, the Gas Laws, solutions. |
| Unit 8 | Types of Elements | Metals, Nonmetals, Metalloids. |
| Unit 9 | Thermodynamics | Thermodynamics, kinetics, thermochemistry. |
| Unit 10 | Organic Chemistry | Alcohols, ethers, hydrocarbons, carbonyls. |
| Unit 11 | Nuclear Chemistry | Nuclear structure, nuclear energy, radiation. |
| Unit 12 | Electrochemistry | Oxidation-reduction, cells, corrosion, electrolysis. |

Grading Policy

Quizzes and tests are percentage based (number correct divided by total questions). Assignments are automatically set for two tries if a student wants to improve their grade.