Chemistry I
Course Overview and Syllabus

Course Subject Code: 5051

Grade level: 9-12

Prerequisite Courses: None

Credits: 1.0

Course Description

This full-year course engages students in the study of the composition, properties, changes, and interactions of matter. The course covers the basic concepts of chemistry and includes eighteen virtual laboratory experiments that encourage higher-order thinking applications, with wet lab options if preferred. The components of this course include chemistry and its methods, the composition and properties of matter, changes and interactions of matter, factors affecting the interactions of matter, electrochemistry, organic chemistry, biochemistry, nuclear chemistry, mathematical applications, and applications of chemistry in the real world.

Course Objectives

Throughout the course, you will meet the following goals:

- Conduct investigations and evaluate experimental designs.
- Explore simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, knowledge of the patterns of chemical properties, and formation of compounds.
- Analyze reaction rates and the effects of introducing catalysts.
- Evaluate the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay.
- Explore wave properties and understand how to use mathematical representations to describe relationships among the frequency, wavelength, and speed of waves

The course objectives are implemented throughout specific lessons, which include examples of scientific and scholarly texts as well as virtual labs and wet labs which allow for a real-world, hands on experience. The objectives focus on investigating, evaluating, and exploring the scientific principles which guide further research and understanding.

The lesson objectives are assessed through assignments, quizzes, unit tests, virtual and wet labs and cumulative exams.

Student Expectations

This course requires the same level of commitment from you as a traditional classroom course. Students are expected to spend approximately five to seven hours per week online on:

- Interactive lessons that include a mixture of instructional videos and tasks
- Assignments in which you apply and extend learning in each lesson
- Assessments, including quizzes, tests, and cumulative exams

Communication

Your teacher will communicate with you regularly through discussions, e-mail, chat, and system announcements, and will provide you with hours of availability, contact policies, and any synchronous attendance requirements. You will also communicate with classmates, either via online tools or face to face, as you collaborate on projects, ask and answer questions in your peer group, and develop your speaking and listening skills.

Grading Policy

You will be graded on the work you do online and the work you submit electronically to your teacher. The weighting for each category of graded activity is listed below.

Grading Category	Weight
Assignments	10%
Labs	15%
Lesson Quizzes	20%
Unit Tests	30%
Cumulative Exams	20%
Projects	5%

Scope and Sequence

When you log into Edgenuity, you can view the entire course map—an interactive scope and sequence of all topics you will study. The units of study are summarized below:

Unit 1: Atoms, Elements, and the Periodic Table
Unit 2: States and Changes of Matter
Unit 3: Chemical Bonding
Unit 4: Chemical Reactions and Equilibrium
Unit 5: Stoichiometry and the Gas Laws
Unit 6: Energy in Chemical Reactions
Unit 7: Mixtures, Solutions, Acids, and Bases
Unit 8: Organic and Nuclear Chemistry

Standards Alignment

The course was designed to meet the requirements of the 2014 Oklahoma Academic Standards for science. The standards aligned to each lesson are available in the student portal in the lesson information panel.

Materials and Technology Requirements

All course materials are provided through the student portal. You will become familiar with them through an orientation video and the student handbook. These resources are available within the Student Organizer, where you can also check the status of your operating system, processor speed, plug-ins and connection speed.

Accessibility

The course is designed for accessibility to all students. The system provides features and accommodations to meet the needs of ELL and students with IEP's, 504 plans, and Section 508. These accommodations include addressing multiple learning styles, accommodations for assessments, video caption/transcripts, read-aloud and translation tools, and many other features/accommodations.