

Introduction to Chemistry

Year Course Offered: 2014
Semester Course Offered: Fall
Department: NS
Course Number: Chem1305
Name of Course: Introduction to Chemistry
Name of Instructor: Chemistry faculty

The information contained in this class syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.

Learning Objectives (LO)

This course is a fundamental principle of everyday chemistry for non-science majors. The introduction to chemistry stretches from fundamental science to applications, and describes what the everyday world is made of and applications of chemical science in all fields.

Upon successful completion of this course, students will be able to recognize the basic principles in chemical science and applications.

Work with peers to apply content knowledge in problem solving.

Core Objectives (CO)

Introduction to Chemistry addresses the following core objectives to ensure students develop the essential knowledge and skills they need to be successful in college, in a career, in their communities, and in their lives. The core objectives meet the Texas Core Curriculum objectives for the Social and Behavioral Sciences Foundational Component Area.

- Critical Thinking Skills - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
- Communication Skills - to include effective development, interpretation and expression of ideas through written, oral and visual communication
- Empirical and Quantitative Skills - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
- Social Responsibility - to include intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities.
- Team Work - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.

Learning Outcomes	CO	Assessment Methods	Criteria/Targets
1. Define the fundamental properties of matter. Determine the basic nuclear and electronic structure of atoms. Identify trends in chemical and physical properties of the elements using the Periodic Table.	CT, EQS	Exams	Students will be able to define the fundamental properties of matter. Determine the basic nuclear and electronic structure of atoms. Identify trends in chemical and physical properties of the elements using the Periodic Table.
2 Demonstrate understanding of the basic chemical science and their applications in daily life.	CT, COM	Assignment and tests.	Students will be able to demonstrate understanding of the basic chemical science and their applications in daily life.
3. Understanding how amino acids and proteins keep us healthy. Household chemicals and their environmental impact. Forensic chemistry and applications	SR, COM	Students will be evaluated based on quiz, lecture questions and answers.	Students will be able to understand how amino acids and proteins keep us healthy. Household chemicals and their environmental impact. Forensic chemistry and applications

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Tentative list of topics

Atoms: the chemical elements and their personalities

Molecules: shapes and structures

Chemistry and Structure of the Earth

Food – Fertilizer

Compounds and daily life

Pharmaceuticals, dyes, perfumes, fabrics...what do they have in common? Carbon

How amino acids and proteins keep us healthy

Sugars are more than just sweet

Why you should know about DNA

Household chemicals and their environmental impact

Forensic chemistry and applications