

J. Sargeant Reynolds Community College
Course Content Summary

Course Prefix and Number: CHM 101

Credits: 4

Course Title: Introductory Chemistry I

Course Description: Emphasizes experimental and theoretical aspects of inorganic, organic, and biological chemistry. Discusses general chemistry concepts as they apply to issues within our society and environment. Designed for the non-science major. Prerequisite: Competency in Math Essentials (MTE), units 1-6, as demonstrated through the placement and diagnostics tests or equivalent. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

General Course Purpose: Provide the non-science major with a laboratory science that is relevant to issues related to society and the environment. Provides non-science majors with a laboratory science. Credits earned from this course do not satisfy the requirements of a laboratory science course in the AS degree in Science.

Course Prerequisites and Co-requisites:

Prerequisites: Competency in Math Essentials (MTE), units 1-6, as demonstrated through the placement and diagnostics tests or equivalent. Completion of MTH 3 is recommended.

Course Objectives:

Upon completing the course, the student will be able to

- a. Discuss the application of general scientific principles to given specific environmental problems and other problems of chemical origin;
- b. Discuss the application of general chemical principles to given specific environmental problems and other problems of chemical origin;
- c. List the major chemical contributions to environmental quality or lack thereof; and
- d. Demonstrate a conceptual understanding of general chemical principles through writing, problem-solving, and library or Internet research projects.

Major Topics to Be Included:

- a. Atmospheric and natural water content and pollution
- b. Global warming
- c. Chemical aspects of energy production and consumption
- d. Acid precipitation
- e. Nuclear fission
- f. Alternate energy sources
- g. Plastics and polymers, drug design, human nutrition
- h. Chemical principles

Effective Date of Course Content Summary: January 1, 2018