J. Sargeant Reynolds Community College
Course Content Summary

Course Prefix and Number: CHM 1 **Credits:** 4

Course Title: Chemistry I

Course Description: Presents basic inorganic and organic principles to students with little or no chemistry background. Taught as pass/fail, the course can be taken in subsequent semesters as necessary until course objectives are completed. The credits are not applicable to any of the college's academic programs, although high school level chemistry or higher may be required for entrance into certain programs. The credits do not transfer. Prerequisite: MTH 3 or equivalent. Lecture 4 hours per week.

General Course Purpose: This course is designed for students deficient in high school level chemistry or students requiring a refresher course before attempting a college level chemistry course. Credits earned from this course do not satisfy the science laboratory requirements of the Science AS degree.

Course Prerequisites and Co-requisites:
Prerequisite: MTH 3 or equivalent

Course Objectives:
Upon completing the course, the student will be able to
a. Apply the mole concept to problems involving chemical composition and chemical reactions;
b. Balance simple chemical equations;
c. Solve problems involving mass and molar relationships in solutions;
d. Determine the electron configurations in non-transition elements;
e. Describe the basic structure of atoms;
f. Use simple bonding concepts to determine formulas and structures of molecules; and
g. Recognize and name simple organic compounds with various functional groups.

Major Topics to Be Included:
a. General background
b. Atomic structure
c. Periodic table
d. Reactions
e. Stoichiometry
f. Solutions
g. Organic and biochemistry

Effective Date of Course Content Summary: 02/16/09