

**J. Sargeant Reynolds Community College
Course Content Summary**

Course Prefix and Number: CHM 102

Credits: 4

Course Title: Introductory Chemistry II

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. Part II of II. Prerequisite: CHM 101. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

General Course Purpose:

Provide the non-science major 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:

Prerequisite: CHM 101

Student Learning Outcomes:

Upon completing the course, the student will be able to

- a. Apply the basic concepts of chemistry to explain the interaction of different forms of matter;
- b. Identify organic/biochemical families;
- c. Carry out and interpret basic experiments related to these concepts; and
- d. Explain clearly and concisely the methods and reasoning used to accomplish the above objectives.

Major Topics to Be Included:

- a. Nuclear chemistry
- b. Alkanes
- c. Alkenes and alkynes
- d. Benzene and its derivatives
- e. Alcohols, ethers, and thiols
- f. Chirality
- g. Amines
- h. Aldehydes and ketones
- i. Carboxylic acids
- j. Anhydrides, esters, and amides
- k. Carbohydrate, lipids, proteins, and enzymes

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