A. Course Description

Credits: 4

Prerequisites: CHEM 111 General Chemistry I AND MATH 115 College Algebra
OR
CHEM 111 General Chemistry I AND MATH 120 Precalculus

Lab Hours/ Weeks: Corequisites: None

Lecture Hours/ Week:

MnTC Goals: Goal 03 - Natural Science

The second semester of the comprehensive algebra-based first year course in chemistry. Covers acid/base theory, chemical equilibria, nuclear and electrochemistry, redox reactions, terminology, functional groups, reactivity of organic compounds and an introduction to biochemistry. Includes lab. Intended for students pursuing the biology or life sciences teaching major and/or chemistry minor.

B. Course Effective Dates: 08/16/2017 - Present

C. Outline of Major Content Areas:

See Course Description for major content areas.

D. Learning Outcomes (General)

1. Understand, use and apply theories and principles behind important chemical reactions in biochemistry and physiology, such as acid/base reactions, chemical equilibria, redox reactions, etc.
2. Understand and use the terminology, functional groups, and reactivity of organic compounds.
3. Demonstrate quantitative reasoning skills and competency with arithmetic, algebra, and statistics at a level appropriate for intermediate level science majors.
4. Recall, explain and apply the concepts, knowledge and vocabulary of general chemistry at the level necessary for success in intermediate and upper division course for science majors.

E. Learning Outcomes (MN Transfer Curriculum)

Goal 03 - Natural Science

1. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
2. Demonstrate understanding of scientific theories.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.

G. Special Information

Note: First day attendance required except by instructor permission.