Minnesota State University Moorhead

CHEM 210: General Chemistry II

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites:
CHEM 150 - General Chemistry I

Corequisites: None

MnTC Goals: Goal 03 - Natural Science

CHEM 210: General chemistry principles: kinetics, chemical equilibrium, acid-base chemistry, solubility equilibrium, thermodynamics, oxidation-reduction, electrochemistry, coordination chemistry, and nuclear chemistry. Should register for CHEM 210L to be taken concurrently. CHEM 210 and 210L are both required to satisfy LASC 3 requirements. MnTC Goal 3.

B. COURSE EFFECTIVE DATES: 01/12/2009 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. States of matter and their relationship to/interaction with energy.
2. Chemical kinetics.
3. Chemical equilibrium.
4. Acid-base chemistry.
5. Thermodynamics.
6. Reduction-Oxidation chemistry.
7. Nuclear chemistry.

D. LEARNING OUTCOMES (General)

1. Understand the fundamental relationships between matter and energy.
2. Describe the chemical systems and concepts introduced in General Chemistry I with greater depth.
3. Recognize that physical and chemical change are not unidirectional and be able to predict how change occurs.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

Goal 03 - Natural Science

1. Demonstrate understanding of scientific theories.
2. 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.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted