

Fond du Lac Tribal and Community College
COURSE OUTLINE

I. Catalog Information

A. Title of Course: Aspects of Inorganic Chemistry B. Course Designator: CHEM 1001

C. Number of Credits: Lecture 3 Lab 1 D. Control Number: 24

E. Catalog/Course description:

This is an introductory course in inorganic chemistry, intended for nursing majors, or those preparing for CHEM 1010. The primary components of this course are atomic structure, periodicity of the elements, chemical bonding, matter and energy, and a brief introduction to organic chemistry. (Meets MnTC goal area 3).

F. Course prerequisites:
MATH 0020 Beginning Algebra

G. Date Approved: _____
Date Revised: 05/13/10

II. Course Materials (Recommended course materials and resources. List all that apply, e.g. textbooks, workbooks, study guides, lab manuals, videos, guest lecturers)

Text: "General, Organic and Biological Chemistry: Structures of Life" 3rd edition

Lab Manual: by the same name 2nd edition.

III. Learning Goals, Outcomes, and Assessment Minimum of one goal and two learning outcomes in each competency. *If your course does not meet one of the Competencies Across the Curriculum, please justify your rationale.* Minimum of two assessment measures for each learning outcome. Add other goals and outcomes as needed. If this course is part of the Minnesota Transfer Curriculum (MnTC), attach the MnTC goals, outcomes, and your assessment measures to this form; if possible, use them to complete the information below.

A. Information Literacy (the ability to use print and/or non-print tools effectively for the discovery, acquisition, and evaluation of information as well as core computer tools for the manipulation and presentation of information.)

1. Learning Goals:

Goal: Students will demonstrate an understanding of atomic theory from a historical perspective to the present day. They will express chemical reactions in word, formula, and ionic equations. They will be able to predict chemical quantities based on molar ratios.

2. Learning Outcomes and Assessments:

Outcome: They will formulate and test hypothesis by performing laboratory simulation. The students will perform no less than fourteen laboratory experiments dealing with properties of inorganic compounds and the interactions of those compounds.

B. Ability to Communicate (the ability to listen, read, comprehend, and/or deliver information in a variety of formats.)

1. Learning Goals:

Goal: Communicate their experimental findings, analysis, and interpretations both orally and in writing.

2. Learning Outcomes and Assessments:

Outcome: With all lab experiments the students will generate lab reports that range from somewhat formal to very formal. In these lab reports the students are expected to analyze the data collected, make interpretations, determine sources of error and its effects on their experimental results. Following each lab a verbal discussion of the student's experiences will demonstrate their understanding.

C. Problem Solving (the ability to conceptualize, apply, analyze, synthesize, and/or evaluate information to formulate and solve problems.)

1. Learning Goals:

Goal: Students will understand problem solving techniques used in chemistry. Some techniques are mathematical and some are based on observation.

2. Learning Outcomes and Assessments:

Lab reports and homework assignments are designed to help students understand and transfer knowledge to other aspects of society.

D. Culture (knowledge of Anishinaabe traditions and culture, knowledge of one's own traditions and culture, knowledge of others' traditions and cultures, and/or respect for global diversity.)

1. Learning Goals:

Chemistry demonstrates no cultural bias and does not lend itself to cultural discussions.

2. Learning Outcomes and Assessments:

Since it is not addressed there are no assessments or outcomes for this topic.

Documentation for MnTC

Goal 3 Natural Sciences

IV. Course Content (Outline the major topics covered in this course.)

1. SI units, measurements and conversions
2. Atomic structure and the periodicity of the elements
3. Bonding and how elements combine to form compounds
4. Nomenclature (naming and writing formulas) of chemical compounds
5. Matter and energy
6. Chemical equations
7. The mole concept
8. Acids and bases
9. Introduction into organic chemistry

(revised October 2009)