

# Minnesota State University Moorhead

## CHEM 110L: Fundamentals of Chemistry Lab

### A. COURSE DESCRIPTION

Credits: 1

Lecture Hours/Week: \*.\*

Lab Hours/Week: 2

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: Goal 03 - Natural Science

Lab component of CHEM 110 Fundamentals of Chemistry. MnTC Goal 3.

### B. COURSE EFFECTIVE DATES: 08/25/2008 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Become familiar with the lab safety rules and the proper use of fire extinguishers, fire blanket, safety showers and eye washers.
2. Become familiar with corrosives and how to handle toxic chemicals.
3. What are the three states of matter?
4. What is heat of reaction? What is an exothermic reaction? What is an endothermic reaction?
5. What is an oxidizing agent? What is a reducing agent?
6. How do metals react with water?
7. What is a mole and how do we use it?
8. How do we define acids and bases?
9. How do we measure the pH of a solution?

### D. LEARNING OUTCOMES (General)

1. Understand the lab safety rules and how to handle different forms of fires.
2. Understand the concept of corrosives and how to handle toxic chemicals.
3. Understand the influence of society on the practice of science.
4. Gain experience at applying the scientific method through designing and implementing several experiments and analyzing and drawing conclusions from the results.

### 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.

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

**G. SPECIAL INFORMATION**

None noted