



EFFECTIVE: SEPTEMBER 2004 CURRICULUM GUIDELINES

A. Division: **Academic** Effective Date: **September, 2004**
B. Department / **Science and Technology** Revision New Course
 Program Area:
 If Revision, Section(s) **C, H, J, P**
 Revised:
 Date of Previous Revision: **October 31, 2002**
 Date of Current Revision: **September 2004**
C: CHEM 1210 **D: Chemical Energetics and Dynamics** **E: 5**

Subject & Course No.	Descriptive Title	Semester Credits
F: Calendar Description:		

Topics studied will include liquids, solids, a review of redox reactions, solutions, electrochemistry, the laws of thermodynamics, equilibrium, acids and bases, ionic equilibria and chemical kinetics.

Allocation of Contact Hour

J: Course for which this Course is a Prerequisite
CHEM 2303 and CHEM 2310 and CHEM 320

Laboratory Objectives

The student will be able to:

1. Give the name and describe the use of some of the more common laboratory equipment.
2. Perform accurately standard laboratory techniques using the accepted methods, such as titration, weighing, pipetting.
3. Give the random and systematic errors inherent in each of the common quantitative techniques which are used in the laboratory.
4. Given an experimental problem, state the series of steps and the accepted techniques required to solve that problem in the laboratory.
5. Write a report based on observations and data obtained in the laboratory using a standard report format.
6. Given a set of experimental data or using data obtained in the laboratory, apply the appropriate mathematical techniques (e.g. graphical analysis, solution of equations, etc.) necessary to obtain a numerical result.
7. 7.7.7.7.7.

Laboratory Course Content

1. Redox Reactions
2. Solids
3. Electrochemistry
4. Thermodynamics
5. Equilibrium
6. Spectrophotometric determinations
- 7.