

Office of Academic Affairs
Tarleton State University
May, 2007

Master Course Syllabus Outline

Department: Chemistry, Geosciences, and Environmental Science

Course Prefix/Number: CHEM 102

Official Course Title: Essential Elements of Chemistry

Master Syllabus Approved by Department on: _____/_____/_____
month date year

I. Catalog Description (50 words; brief synopsis of course content, emphases)

An introduction to the science of chemistry with a broad overview of the essential elements of chemistry and real-life applications. Enrollment in this course is restricted to Interdisciplinary Studies majors. Lab Fee \$10, Course Fee \$10

II. Prerequisites

None. However it is recommended that the student have knowledge of high school math.

III. Expanded Course Description (150 words; primary course content, intended student level and role(s) course is to play in the curriculum)

Topics to be covered include an introduction to chemistry, atoms and atomic structure, nuclear chemistry, chemical bonds, chemical names, formulas, and equations, acids and bases, oxidation and reduction, organic chemistry and biochemistry. Also included is a basic overview of the philosophy and history of chemical science as well as how to apply the above concepts to a classroom situation.

This course is required for students in several tracks of Elementary Education. This course is not a prerequisite for any higher level chemistry course.

The course consists of two (2) lecture hours per week and three (3) laboratory hours per week for three (3) hours of college credit.

IV. Intended Student Learning Outcomes? Required; knowledge outcomes (what students who successfully complete the course will be expected to know). Optional; skill outcomes (what students who successfully complete the course will be able to do). Optional; value outcomes (what students who successfully complete the course will value or appreciate).

Knowledge outcomes

Upon completion of this course the student will:

understand the basic concepts of chemistry
understand how these concepts apply to the real world
understand the Scientific Method and its applications

Skill outcome

Upon completion of this course students will:

be able to apply chemical concepts to problems
be able to perform basic chemical laboratory procedures safely.
be able to plan a simple chemical laboratory procedure safely

Value outcomes

Upon completion of this course students will:

be able to appreciate the Scientific Method and the role of chemistry in everyday life.

- V. Unless otherwise stipulated in this master syllabus by the department, the following items are subject to faculty discretion as described in each faculty member's individual course outline/syllabus:
- a) Course Requirements (grading/evaluation procedures; class attendance policy; term papers, projects, field assignments; examinations; class participation, etc.)
- Typically 4 tests, 1 final for the lecture portion
Laboratory will be counted as one fourth of the total grade.
- b) Required Text(s)?
Basic Chemistry by Karen Timberlake

Department Head Signature/Date:

Signature

_____/_____/_____
Date