

CHEM 10 Course Outline as of Fall 2004**CATALOG INFORMATION**

Dept and Nbr: CHEM 10 Title: CHEMISTRY & SOCIETY

Full Title: Chemistry and Today's Society

Last Reviewed: 4/30/2007

| Units | | Course Hours per Week | | Nbr of Weeks | Course Hours Total | |
|---------|------|-----------------------|------|--------------|--------------------|-------|
| Maximum | 3.00 | Lecture Scheduled | 3.00 | 17.5 | Lecture Scheduled | 52.50 |
| Minimum | 3.00 | Lab Scheduled | 0 | 17.5 | Lab Scheduled | 0 |
| | | Contact DHR | 0 | | Contact DHR | 0 |
| | | Contact Total | 3.00 | | Contact Total | 52.50 |
| | | Non-contact DHR | 0 | | Non-contact DHR | 0 |

Total Out of Class Hours: 105.00

Total Student Learning Hours: 157.50

Title 5 Category: AA Degree Applicable

Grading: Grade or P/NP

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

Catalog Description:

An investigation of the role that chemical concepts play in our modern world. Special emphasis will be given to topics of current interest, including toxic waste disposal and pollution, food additives, drugs, geochemistry, the chemical industry and energy sources.

Prerequisites/Corequisites:**Recommended Preparation:**

No science background is necessary. Since extensive reading and writing assignments are required, students must qualify for entry into Engl 1A.

Limits on Enrollment:**Schedule of Classes Information:**

Description: An investigation of the role that chemical concepts play in our modern world. (Grade or P/NP)

Prerequisites/Corequisites:

Recommended: No science background is necessary. Since extensive reading and writing assignments are required, students must qualify for entry into Engl 1A.

Limits on Enrollment:

Transfer Credit: CSU;UC.

Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

| | | | | |
|----------------------|----------------------|-------------------|-------------------|------------------|
| AS Degree: | Area | | Effective: | Inactive: |
| | C | Natural Sciences | Fall 2008 | Spring 2011 |
| CSU GE: | C | Natural Sciences | Fall 1989 | Fall 2004 |
| | Transfer Area | | Effective: | Inactive: |
| | B1 | Physical Science | Fall 2008 | Spring 2011 |
| | B1 | Physical Science | Spring 1990 | Fall 2004 |
| IGETC: | Transfer Area | | Effective: | Inactive: |
| | 5A | Physical Sciences | Fall 2008 | Spring 2011 |
| CSU Transfer: | | Effective: | Inactive: | |
| UC Transfer: | | Effective: | Inactive: | |

CID:

Certificate/Major Applicable:

Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:

A successful student in Chemistry 10 should be able to:

1. Show a basic understanding of chemical concepts, including atomic theory, bonding theory, and the kinetic molecular theory.
2. Describe the scientific method and how science "works".
3. Analyze current problems in modern society as they relate to chemical concepts.
4. Describe possible solutions to these current problems.

Topics and Scope:

1. Basic Chemical Concepts.
 - a. forms and states of matter
 - b. atomic structure
 - c. chemical bonding
 - d. chemical reactions
 - e. solutions
 - f. energy
2. Chemistry and the Environment Within.
 - a. some basic biochemistry
 - b. pharmaceuticals - chemistry and disease
 - c. "recreational" drugs - the growing scourge
 - d. food and nutrition
 - e. food additives
3. Chemistry and the Environment Without.

- a. agricultural chemistry
- b. water and water pollution
- c. air pollution
- 4. Chemistry, Energy, and the "Gaia Concept".
 - a. present sources of energy
 - b. "alternative" energy sources
 - c. earth as an organism

Assignment:

Assignments for Chemistry 10 include:

1. specific reading assignments from textbooks as well as from the periodic literature.
2. written reports from reading assignments.
3. a written term paper.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Reading reports, Essay exams, Term papers

Writing
40 - 50%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Quizzes, Exams

Problem solving
20 - 30%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None

Skill Demonstrations
0 - 0%

Exams: All forms of formal testing, other than skill performance exams.

Multiple choice, True/false, Matching items, Completion

Exams
20 - 30%

Other: Includes any assessment tools that do not logically fit into the above categories.

None

Other Category
0 - 0%

Representative Textbooks and Materials:

CHEMISTRY AND OUR CHANGING WORLD by Sherman and Sherman, Prentice Hall, 1986.

CHEMISTRY FOR CHANGING TIMES by Hill, Burgess Publishing Co., 1986.

