

CATALOG INFORMATION

Dept & Nbr: CHM 200 Title: INTRO TO CHEMISTRY  
Full Title: Introduction to Chemistry

Units	Course Hours	Per Week	Nbr of Weeks	Course Hours	Total
Max: 5.0	Lecture	4.0	17	Lecture	68.0
Min: 5.0	Lab	3.0		Lab	51.0
	Contact DHR	0.0		Contact DHR	0.0
	Contact Total	7.0		Contact Total	119.0
	Non-contact DHR	0.0		Non-contact DHR	0.0

Title 5 Category: 01 AA Degree Applic  
Grading: GC Credit course for grade or CR/NC  
Repeatability: 00 No repeatability allowed or defined  
Also listed as:

CATALOG DESCRIPTION:

Basic chemical principles including atoms, chemical bonds, gases, chemical reactions, water, solutions, pH, inorganic elements, and chemical calculations. Course is intended for health sciences, general education, and as a prerequisite for CHM 250.

PREREQUISITES:

MTH 55 or high school Algebra I.

COREQUISITES:

RECOMMENDED PREPARATION:

No advisories.

LIMITS ON ENROLLMENT:

SCHEDULE OF CLASSES INFORMATION:

Prerequisites: MTH 55 or high school Algebra I.  
A preparatory course for General Chemistry I (CHM 250). Satisfies the chemistry requirement for students majoring in allied health or paramedical fields, nutrition or agriculture. (Grade or CR/NC)  
Transfer Credit: CSU; UC.

ARTICULATION and CERTIFICATE INFORMATION

ASSOCIATE DEGREE:		Effective: FALL	1981	Inactive:
Area:	A	NATURAL SCIENCES		
CSU GE:		Effective: FALL	1981	Inactive:
Transfer area:	B1	PHYSICAL UNIVERSE		
	B3	LAB ACTIVITY		
IGETC:		Effective: FALL	1981	Inactive:
Transfer area:	5A	PHYSICAL SCIENCES		
CSU TRANSFER: TRANSFERABLE		Effective: FALL	1981	Inactive:

UC TRANSFER: TRANSFERABLE Effective: FALL 1981 Inactive:

CAN:

CERTIFICATE APPLICABLE: N NOT CERTIFICATE/MAJOR APPLICABLE

#### APPROVAL AND DATES

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Version 01 Submitted by: GERALD DECHAINED Date: 12/10/1996  
Department approved: Catherine Indermill Date: 06/27/2005  
Curriculum approved: 06/01/1981 Version approved: 06/01/1981  
Prerequisites approved: 04/22/2005 Last reviewed: 12/10/1996  
Term effective: FALL 1997 Last taught: FALL 2008 Inactive:

#### COURSE CONTENT

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##### OUTCOME AND OBJECTIVES:

1. Demonstrate a mastery of the subject matter.
2. Demonstrate an ability to perform the necessary calculations required in the topics listed under course content.
3. Demonstrate an understanding and capability of laboratory techniques as indicated by the results of the laboratory experiments and as indicated in the course content.
4. Perform all experiments using proper safety techniques.

##### TOPICS AND SCOPE:

###### Lecture:

1. Atoms and elements
2. Chemical measurements and calculations
3. Compounds and their bonds
4. Chemical quantities and equations
5. Types of chemical reactions
6. Acids and bases
7. Energy and states of matter
8. Gases
9. Solutions, concentrations and fluid transport
10. Electronic structure in the atom
11. Nuclear chemistry

###### Laboratory:

1. Introduction to laboratory techniques
2. Safety in the chemistry Laboratory
3. Glass Bending
4. Separation of cations by paper chromatography
5. Graham's Law and Charles Law
6. Identification of a substance
7. Qualitative analysis
8. Types of Chemical Reactions
9. Red Cabbage as a pH indicator
10. Titration of an acid with a base
11. Analysis of a stomach acid tablet
12. Preparation of an aluminum compound from its aluminum can
13. Preparation of ethyl alcohol by fermentation
14. Rates of Reaction
15. Polymers

##### ASSIGNMENTS:

###### READING ASSIGNMENTS:

The student will be responsible for all reading assignments from the textbook and laboratory manual relating to the topics of the course.

#### WRITING ASSIGNMENTS:

In addition to written exams and quizzes, the student will submit written reports of all laboratory experiments.

#### OUTSIDE ASSIGNMENTS:

The student will maintain a laboratory notebook and submit written reports of all laboratory experiments.

#### ASSIGNMENTS THAT DEMONSTRATE CRITICAL THINKING:

All exams, quizzes and laboratory assignments require that the student must go through a decision making process. The laboratory exercises involve the determination of the value of his/her data taken and the degree to which that data may be used in determining the student's conclusion which must be expressed in a written laboratory report.

#### METHOD OF INSTRUCTION:

The lecture will be augmented by demonstration and use of overhead projections with appropriate handouts. The hands-on laboratory exercises will follow a short lecture on concept, techniques and safety.

#### METHODS OF EVALUATION:

1. Writing Assignments, including lab reports 2. Computational or non-computational problem-solving demonstrations: N/A 3. Skill demonstrations: N/A 4. Examinations, including multiple choice, true/false, matching, essay, completion 5. Other methods of evaluation: quizzes and final examination

#### BASIS FOR GRADING:

The assignment of a grade is based on the level of achievement of the outcomes and objectives of the course outline and is reflected in quantifiable terms in the course syllabus.

#### REPRESENTATIVE TEXTBOOKS:

Required: Introductory Chemistry: A Foundation, Zumdahl, Steven S. Study Guide for Introductory Chemistry, Stovall, Iris; Laboratory Manual, Calculator capable of four basic functions plus logarithm and square root  
Recommended: Lecture Notes, DeChaine, Gerald