

## COURSE OUTLINE

Revision: Joan Stover, February 2008

DEPARTMENT:	Academic Programs
CURRICULUM:	The Natural World
COURSE TITLE:	General Chemistry Prep
COURSE NUMBER:	CHEM& 139
TYPE OF COURSE:	Academic Transfer
Special Requirement Met:	Mathematics/Quantitative Reasoning
AREA(S) OF KNOWLEDGE:	The Physical Universe
COURSE LENGTH:	1 quarter
CREDIT HOURS:	5
LECTURE HOURS:	55
LAB HOURS:	0
CLASS SIZE:	30
PREREQUISITES:	MATH 098 (Intermediate Algebra)

## COURSE DESCRIPTION:

Topics include chemical mathematics; basic atomic structure; chemical bonding; chemical equation balancing; mole concept; and chemical stoichiometry.

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STUDENT LEARNING OUTCOMES ADDRESSED:

1. Computation – Use arithmetic and other basic mathematical operations as required by program of study. Apply quantitative skills for personal, academic and career purposes. Identify, interpret, and utilize higher level mathematical and cognitive skills.
2. Critical Thinking and Problem Solving - Think critically in evaluating information, solving problems and making decisions.
3. Personal Responsibility - Be motivated and able to continue learning and adapt to change. Be aware of civic and environmental issues.

GENERAL COURSE OBJECTIVES:

At the end of the course the student will:

1. Have a background (and confidence) needed for a subsequent successful encounter with a main sequence college level general chemistry course.

TOPICAL OUTLINE:

I.	Chemical mathematics	8
II.	Basic atomic structure	8
III.	Chemical bonding	8
IV.	Chemical nomenclature	8
V.	Mole concept	7
VI.	Chemical stoichiometry	8
VII.	Chemical equation balancing	8
	Total hours	55

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SLO #	Included in Course Objective Number	SSCC Student Learning Outcomes
SLO 1.1		Communication - Read and listen actively
SLO 1.2	1	Communication - Speak and write effectively
SLO 2.1	1	Computation - Use mathematical operations
SLO 2.2	1	Computation - Apply quantitative skills
SLO 2.3	1	Computation - Identify, interpret, and utilize higher level mathematical and cognitive skills
SLO 3.1		Human Relations - Use social interactive skills to work in groups effectively
SLO 3.2		Human Relations - Recognize the diversity of cultural influences and values
SLO 4.1	1	Critical Thinking and Problem Solving -
SLO 5.1		Technology - Select and use appropriate technological tools
SLO 6.1		Personal Responsibility - Be motivated and able to continue learning and adapt to change
SLO 6.2		Personal Responsibility - Value one's own skills, abilities, ideas and art
SLO 6.3		Personal Responsibility - Take pride in one's work
SLO 6.4		Personal Responsibility - Manage personal health and safety
SLO 6.5		Personal Responsibility - Be aware of civic and environmental issues
SLO 7.1		Information Literacy - Access and evaluate information
SLO 7.2		Information Literacy - Use information to achieve personal, academic, and career goals, as well as to participate in a democratic society

PREPARED BY: J. Stover  
DATE: May 2008