



**School of Arts & Science**  
**CHEMISTRY AND GEOSCIENCE DEPARTMENT**  
**CHEM 060-001**  
**Introduction to Chemistry**  
**2008 Fall**

## **COURSE OUTLINE**

This course introduces chemical concepts for understanding life and the environment. Topics include atomic structure; the periodic table of elements; molecules and chemical bonding; chemical formulas and reactions; stoichiometry; gases, liquids, solutions; and organic chemistry. Non-science students will also find this course interesting.

### **1. Instructor Information**

(a)	Instructor:	Alan Gell		
(b)	Office Hours:	tba		
(c)	Location:	F344B		
(d)	Phone:	370-3446	Alternative Phone:	
(e)	Email:	gella@camosun.bc.ca		
(f)	Website:			

### **2. Intended Learning Outcomes**

Upon completion of this course the student will be able to:

1. Utilize the specialized vocabulary and nomenclature of chemistry.
2. Use metric and SI units in performing chemical calculations.
3. Describe the experimental discovery of subatomic particles, summarize the characteristics of electrons, protons and neutrons, and identify their roles as components of atoms, ions and isotopes including radioisotopes.
4. Communicate an understanding of atomic structure, the differences between elements, and the role of the periodic table in organizing elements within a coherent theoretical and empirical system.
5. Describe and account for the periodic table trends concerning atomic number, atomic radius, ionization energy and electronegativity.
6. Demonstrate an ability to name chemical compounds, and identify and construct chemical formulas.
7. Compare the formation and characteristics of ionic and molecular compounds.
8. Demonstrate an ability to perform mathematical calculations involving chemical formulas, molecular weights, moles, Avogadro's number and Molarity.
9. Balance chemical equations, demonstrate an understanding of the information they provide chemists and solve stoichiometry problems.
10. Identify and account for the general characteristics of the gas state and solve mathematical problems involving Boyle's Law, Charles' Law, Gay-Lussac's Law and Avogadro's Law.

11. Use basic organic chemistry nomenclature and structural representations associated with simple organic molecules and common functional groups.
12. Conduct experiments in basic chemistry utilizing common chemistry laboratory equipment with a knowledge and practice in basic chemical safety procedures.

### 3. Required Materials

(a)	Texts	Chem 060 course study notes, lab manual, problem sets
(b)	Other	<b>SAFETY GLASSES</b>

### 4. Course Content and Schedule

Lecture, lab: (1) Monday: F302, F300 6:30 – 9:20; (2) Wednesday: F300 6:30 – 9:20

### 5. Basis of Student Assessment (Weighting)

(a)	Assignments	Labs 20%
(b)	Quizzes	
(c)	Exams	Midterm #1 - 15%, #2 – 15%, #3 – 15%, Final 35%
(d)	Other (eg, Attendance, Project, Group Work)	

### 6. Grading System

**Standard Arts and Science Grading System**

### 7. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

#### LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College calendar, at Student Services or the College web site at [camosun.ca](http://camosun.ca).

#### STUDENT CONDUCT POLICY

There is a Student Conduct Policy **which includes plagiarism**. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, at Student Services and on the College web site in the Policy Section.