



**SCHOOL OF ARTS & SCIENCE  
CHEMISTRY AND GEOSCIENCE DEPARTMENT**

**CHEM 120-04  
College Chemistry 1  
2006F**

## **COURSE OUTLINE**

**The Approved Course Description is available on the web @ [Camosun.bc.ca](http://Camosun.bc.ca)**

Ω *Please note: this outline will be electronically stored for five (5) years only.  
It is strongly recommended students keep this outline for your records.*

### **1. Instructor Information**

Instructor:	Diana Li
Office Hours:	M, W, Th 1:30-2:20 and 3:30-4:30 pm, or by appointment
Location:	F344C
Phone:	370-3444
Email:	<a href="mailto:lid@comosun.bc.ca">lid@comosun.bc.ca</a>
Website:	<a href="http://archive.camosun.bc.ca/schools/artsci/chemgeo/index.php">archive.camosun.bc.ca/schools/artsci/chemgeo/index.php</a> .

**\*\*To avoid class interruptions & cancellations, please refrain from wearing fragrance or other strongly scented products to class!\*\***

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

*(No changes are to be made to this section, unless the Approved Course Description has been forwarded through EDCO for approval.)*

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

1. Utilize nomenclature rules to name ionic and covalent compounds.
2. Demonstrate an understanding of stoichiometry by balancing chemical equations and performing mathematical calculations involving chemical reactions.
3. Describe the electronic structure of any atom in the periodic table and apply it to explain many of the physical and chemical properties of the elements.
4. Utilize simple bonding theories to explain why elements combine to form the compounds they do and also to explain many of the properties of compounds.
5. Apply knowledge of intermolecular interactions to rationalize many important physical properties of bulk matter in the gas, liquid and solid phases.
6. Use standard chemistry lab equipment, including burets, pipets, Buchner filters, and volumetric glassware in the correct manner.
7. Perform many standard laboratory procedures, such as titrations, preparation of standard solutions, the preparation, isolation, and purification of compounds, as well as use spectrophotometers to make analytical measurements.

### 3. Required Materials

Texts	"Chemistry, The Central Science" by Brown, LeMay, Bursten, 10 <sup>th</sup> Ed., 2006—a.k.a. B-L-B. Solutions Manual & Organic Supplement (for Chem 121) may be sold bundled with the text.
Other	◆Chem 120 Lecture Notes Supplement & Appendix by D. Li, 2005 or 2006 Ed. This supplement goes with both 9 <sup>th</sup> & 10 <sup>th</sup> editions of B-L-B although the 10 <sup>th</sup> edition is preferred. Note: Homework questions selected from both editions are not necessarily identical but equivalent. ◆Chem 120 Lab Manual (Safety glasses mandatory & lab coat recommended)

### 4. Course Content and Schedule

Lecture Plan:	
<u>Chapter</u>	<u>Topic (approximate number of lecture hours)</u>
1-4	Review of Selected Topics (9)
10	Gases (3-4)
6	Electronic Structure of Atoms (7-8)
7	Periodic Properties of the Elements (3)
8	Basic Concepts of Chemical Bonding (3-4)
9	Molecular Geometry & Bonding Theory (3 + lab lecture)
11	Intermolecular Forces, Liquids & Solids (30)
13	Solutions (3)
18	Chemistry of the Environment (3)

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

Labs (9 experiments)	20%
Test I (Review & Gases)	15% (Week VII Lab Period)*
Test II (Ch. 6, 7, & 8)	20% (Week XII Lab Period)*
Final Exam (comprehensive)	45% (TBA~Week V, 3 hours in December)

Notes:

- (1) Student must pass the lab portion of the course to obtain credit for Chem 120.
- (2) Student is encouraged to attempt both tests. Test score that is not as high as that of the December final exam will be dropped automatically and its weight redistributed to the final exam. For anyone who misses both tests, your final exam will then be 80% of the course grade.
- (3) Student must write each test as scheduled for his/her section. No one is allowed to write late and there will be no exceptions. Early exam is a privilege and not a right, thus, at full discretion of the instructor.

\* Test dates to be confirmed during the first week of classes in September.

## 6. Grading System

(No changes are to be made to this section, unless the Approved Course Description has been forwarded through EDCO for approval.)

### Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
95-100	A+		9
90-94	A		8
85-89	A-		7
80-84	B+		6
75-79	B		5
70-74	B-		4
65-69	C+		3
60-64	C		2
50-59	D	Minimum Level of Achievement for which credit is granted; a course with a "D" grade cannot be used as a prerequisite.	1
0-49	F	Minimum level has not been achieved.	0

### Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy at [camosun.ca](http://camosun.ca) or information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	<i>Incomplete:</i> A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.
IP	<i>In progress:</i> A temporary grade assigned for courses that are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
CW	<i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy E-1.5 at [camosun.ca](http://camosun.ca) for information on conversion to final grades, and for additional information on student record and transcript notations.

## 7. Important Dates

Week

- VI Oct. 9 (Mon): Thanksgiving Day
- VII Test I in Lab: Oct. 17 (Tue) for 120-02; Oct. 18 (Wed) for 120-04
- X Nov. 7 (Tue): Last Day to Withdraw or Change to Audit...
- XI Nov. 13 (Mon): Remembrance Day Observed
- XII Test II in Lab: Nov. 21 (Tue) for 120-02; Nov. 22 (Wed) for 120-04

December 11-16 & 18-19: Exam Period for Fall 2006

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

Articles in the Library Reserve Room for Chem 120 & 121:  
(at least one copy of the followings)

9<sup>th</sup> & 10<sup>th</sup> Editions B-L-B: Test & Solutions Manual, Student's Guide, "Math Review Toolkit" & the organic chemistry booklet.

### 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.