



School of Arts & Science
CHEMISTRY AND GEOSCIENCE DEPARTMENT

CHEM 120-01
College Chemistry 1
2006F

COURSE OUTLINE

The Approved Course Description is available on the web @ _____

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

(a)	Instructor:	Dr. Paul O'Connor		
(b)	Office Hours:	10:00-11:00 Wednesday		
(c)	Location:	Office 348A (shared),		
(d)	Phone:		Alternative Phone:	
(e)	Email:	poconnor@uvic.ca		
(f)	Website:			

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

(a)	Texts	Chemistry the Central Science, 10 th edition by Brown, LeMay and Bursten Chemistry 120 Lab Manual (in house)
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(b)	Other	
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4. Course Content and Schedule

(Can include: class hours, lab hours, out of class requirements and/or dates for quizzes, exams, lectures, labs, seminars, practicums, etc.)

For both university and technology students, this course starts with atomic structure and periodic properties and leads to a discussion of chemical bonding, molecular structure, intermolecular forces. The experiments include chemical synthesis and analysis by titration and spectroscopy.

Credits: 4

Mode of Delivery:

3 hours lecture (**Thursday 6:30-9:20**) and 3 hours of lab **attendance is mandatory! (Tuesday 6:30-9:20)** each week as well as out of class work (at least six hours a week). A valid medical note indicating that the student was unable to write the test on the scheduled date is required in order for a student to be excused from a test. Please note, a passing grade on the lab portion of the course and at least 75% of the lab work must be submitted is required to write the final exam. Students must provide and wear safety glasses during the laboratory.

Important Dates:

Date	Activity	Report Type	Due Date*
<i>September</i>			
5	Lecture		
7	Lecture		
12	Intro and Exp 2	Data Sheet	Sept 19
14	Lecture		
19	Exp 3 (Group B)	Full Report	Oct 10
21	Lecture		
26	Test 1 (Ch 1-4)		
28	Lecture		
<i>October</i>			
3	Exp 3 (Group B)	Full Report	Oct 10
5	Lecture		
10	Exp 4	Data Sheet	Oct 19
12	Lecture		
17	Test 2 (Ch 6 and 7)		
19	Lecture		
24	Exp 5	Full Report	Oct 31
26	Lecture		
31	Exp 8	Data Sheet	at end of lab period
<i>November</i>			
2	Lecture		
7	Test 3 (Ch 8 and 9)		
9	Lecture		
14	Exp 6	Data Sheet	Nov 21
16	Lecture		
21	Exp 9		
23	Lecture		
27	Exp 9 continued	Full Report	Dec 5
29	Lecture		
<i>December</i>			
5	Exp 10		at end of lab period
7	Lecture		
11-18	Exam Period: Do not make travel plans until exam schedule is posted!		

*Prelab questions are due at the start of the lab. **A penalty of 25% will be applied to any late prelabs or labs. A mark of zero will be given for assignments that are more than one week late or that are submitted after the marked assignments have been returned to the class.**

Course Outline:

Topic	Chapter	Aprox. Time
Review	Parts of 1-4	4h
Electronic Structure of Atoms	6.1-9	5h
Periodic Properties of the Elements	7.1-5	3h
Chemical Bonding	8.1-8	3h
Molecular Geometry	9.1-6	5h
Gases	Review 10.1-3 Study 10.4-7	3h
Intermolecular Forces	11.1-2, 11.4, 11.6, 11.8	6h
Solutions	13.1-3	4h

5. Basis of Student Assessment (Weighting)

(Should be linked directly to learning outcomes.)

Mark Breakdown:

Experiments	20%
Test 1	10%
Test 2	15%
Test 3	15%
Final Exam	40%
<i>(Covers all course material)</i>	

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		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 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 for information on conversion to final grades, and for additional information on student record and transcript notations.

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.

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.

Pre-requisites: Chem 12