CAMOSUN COLLEGE
DEPARTMENT OF CHEMISTRY AND GEOSCIENCE
Chemistry 060-02, Introduction to Chemistry
Course Outline Winter 2010

A. General Information

Instructor: John Lee

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Lectures:
Wed: (Y220) 1:30 - 2:20 pm
Thurs (F210), 12.30 - 2.20 pm
Fri: (F200) 1:30 – 2:20 pm

Lab:
Mon (F 300): 12.30 pm – 2.20 pm

Office Hours: TBA

Important Dates: January 20th: Fee Deadline. February 18th 19th Reading Break (College closed). March 10th: Last day to withdraw without a failing grade. April 10th: Last Day of Instruction

B. Required Materials for the Course

Principal Text: CHEM 060, Course Pack, Camosun College (In-House)

It is essential that all students have a copy of this manual

C. Course Content and Schedule

The course includes:

a) 6 in class review quizzes, each 10 multiple choice questions

b) One 90-minute written midterm test

c) A 3 hour written final examination covering all the material in the course.

D. Summary of Lecture Material with Page References

Subject	Material Covered	Classes (approximate)	Course Notes pages
Measurements and Calculations	Units, dimensional analysis, scientific notation, sig figs, density and energy calculations	**4**	**1-19**
Atoms, ions and molecules Mixtures , compounds and elements	Physical and chemical changes, elements, compounds and mixtures, The atom, isotopes, ions, periodic table	**4**	**29-44**
Naming compounds	Chemical Formula and names, naming molecular and ionic compounds	**4**	**49-67**
The Mole	Molecular mass, % composition, converting grams to moles to number of molecules	**4**	**74-87**
Stoichiometry	Balancing chemical equations, limiting reactants, % yields and heat of reactions	**6**	**93-115**
Periodic table and electron distribution	Electron shells and orbitals for the first 20 elements, ionization energy and chemical properties. Atomic spectra	**4**	**120-139**
Gases	Kelvin scale, Gas volume and temperature, gas volume and pressure, partial pressure, gas stoichiometry	**6**	**170-184**
Liquids and Solutions	Solution stoichiometry and concentrations	**4**	**191-213**
Organic Chemistry	Hydrocarbons, naming simple alkanes, structural isomers	**4**	**221-240**
Radioactivity	Alpha, beta and gamma decay, half life calculations	**4**	**247-256**

Notes

1. There are recommended questions found after each chapter. These problem sets will not be marked but solutions may be found at the end of the coursebook.

2. The midterm test will be on material covered in the half of the course. It will take place during the lab period of week VIII (Feb. 22nd)

3. The in class quizzes will be on material covered in the previous 2 weeks. They will be given at the start of class, answers will be given after the quiz.

E. Basis of Student Assessment (Weighting)

The course mark will be derived in the following manner:

6 Quizzes	(2% each) = 12 %
1 Midterm test	18 %
Final	37 %
Laboratory work	33 %

If it is advantageous to the student the theory mark will be solely derived from the final examination, or the combination of midterm and final.
In the event of a quiz or midterm test being missed due to illness/other, the weight of the missed quiz/test will be carried over to the midterm or final depending on which grade is higher. There are no make-up dates for quizzes or midterm.

F. The Laboratory Mark

Detailed information will be presented at the first laboratory meeting.

G. The Grading System

The following scale is used:

>90 A+ 85-89 A 80-84 A- 77-79 B+ 73-76 B 65-69 C+ 60-64 C 50-59 D 0-49 F

1. You must score a minimum of 50 % on laboratory work to be permitted to take the final exam
2. You must pass both the lecture portion and the laboratory portion in order to pass the course.

John Lee Winter 2010 Lab Schedule:

Chem 060 (002) – Mondays, 12:30-2:20 pm in Fisher 300

Week Number Begins on	Activity & Experiment Number	Actual Date of Lab Mondays
I Jan 4th		
II Jan 11th	Review & Lab Orientation	Jan 11th
III Jan 18th Gp. A	Expt 1 Density	Jan 18th
IV Jan 25th Gp. B	Expt 1 Density	Jan 25th
V Feb 1st Gp. A	Expt. 3 Separating mixtures	Feb 1st
VI Feb 8th Gp. B	Expt. 3 Separating mixtures	Feb 8th
VII Feb 15th Gp. A	[no lab due to 2 group continuity]	Feb 15th
VIII Feb 22nd Gp. B	[Expt 4 Heat of combustion]	Feb 22nd
IX Mar 1st Gp. A	Expt 4 Heat of combustion	Mar 1st
X Mar 8th Gp. B	Expt 5 Recycling Copper	Mar 8th
XI Mar 15th Gp. A	Expt 5 Recycling Copper	Mar 15th
XII Mar 22nd Gp. B	Expt. 7 Copper and Silver nitrate reaction	Mar 22nd
XIII Mar 29th Gp. A	Expt. 7 Copper and Silver nitrate reaction	Apr 1st
XIV Apr 5th	Easter Monday	Apr 8th
Final Exam Period	Final Exams Apr 12th to Apr 17th,	

*Expt 7 may be switched to reactivity series depending on course teaching schedule