

# Camosun College Chemistry 150

## Summer Quarter 4 – June 27 to September 16, 2005

**Instructor:** Blair Humphrey, TECH 232, Telephone 370-4447 or 385-8888  
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Office hours: see schedule below or by arrangement

**Text:** Fine, Beall & Stuehr, 2000. **Chemistry for Scientists and Engineers**, Prelim. Edn., Saunders  
Recommended only, not required.

**Lab. Manual:** On the web site; [www.camosun.bc.ca/~humphreb/](http://www.camosun.bc.ca/~humphreb/) and follow the links.

### Evaluation

### Grading as in calendar

		Approximate time @ 3.6 minutes/%
Laboratory (9)	10%	NA
Quizzes (4)	20%	18 minutes each
Midterm	20%	72 minutes
Final	50%	180 minutes
<b>Total</b>	<b>100%</b>	

### Blair's timetable Q4, 2005. June 27-Sept. 9.

	Monday	Tuesday	Wednesday	Thursday	Friday
930-1020		Usually in Tech 232	Usually in Tech 232	Usually in Tech 232	Usually in Tech 232
1030-1120	Usually in Tech 232	Chem 150-01 Tech 173	Chem 150-01 Tech 173	Chem 150-01 Tech 173	Chem 150-01 Tech 173
1130-1220	Chem 150-02 Tech 173	Chem 150-02 Tech 173	Chem 150-02 Tech 173	Chem 150-02 Tech 173	Chem 150-02 Tech 173
1230-1320	<b>Lunch</b>				
1330-1420	Chem 150-01 Tech 173	Usually in Tech 232	Usually in Tech 232	Usually in Tech 232	
1430-1520		Chem 150 Lab Mech Tech 230	CHEM 150 Lab Elex Tech 230	CHEM 150 Lab Comp Tech 230	
1530-1620					
1630-1720					

Tutorial times outside normal office hours by arrangement.

## Course Outline

The midterm will be on Monday, July 19, 8:30-10:30 in CC124

Week	Topics	Laboratory
June 27- June 30	Introduction, measurement and the scientific method. Atoms, elements, molecules, compounds, mixtures, Ionic and covalent molecules, the mole The periodic table, nomenclature: naming compounds Chemical reactions,	No lab
July 4 – 8	<b>Quiz 1</b> , Stoichiometry. Thermochemistry. Atomic structure,	Introduction, lab safety; 1: Densities
July 11 – 15	Periodic properties. Bonding.	2: Stoichiometry
July 18 – 22	<b>Midterm</b> includes up to atomic structure. Molecular structure. Molecular shape, size and bond strength. Molecular orbitals, hybrid orbitals.	3: Nickel determination
July 25 – 29	Gases. Intermolecular forces Liquids, vapour pressure, mixtures, phase diagrams. Solutions Solids, structure and bonding. <b>Quiz 2</b>	4: Thermochemistry
Aug. 2 – 5	Polymers and ceramics, Kinetics	6: Distillation
Aug. 8 – 12	Equilibrium. Acid/base equilibria <b>Quiz 3</b>	7: Determination of chloride
Aug. 15 – 19	Aqueous equilibria	8: Kinetics
Aug 22 – 26	Thermodynamics <b>Quiz 4</b>	9: pK <sub>a</sub> of acetic acid
Aug. 29 – Sep. 2	Electrochemistry)	Tutorial
Sep. 6 – 9	Metals, semi-conductors	Tutorial
Sep. 12 – 16	Exam period	