

## Camosun College Chemistry 150

Summer Quarter 4 – June 24 to September 13, 2002

**Instructor:** Blair Humphrey, CBA 146, Telephone 370-4447 or 385-8888

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Office hours: see schedule below

**Text:** Brown, Lemay and Bursten, Chemistry: The Central Science 8<sup>th</sup> ed. Solution guide optional but recommended.

**Lab. Manual:** provided

### Evaluation

### Grading as in calendar

Laboratory (10)	10%
Quizzes (4)	20%
Midterm	20%
Final	50%
<b>Total</b>	<b>100%</b>

### Blair's timetable for Q4, 2001

	Monday	Tuesday	Wednesday	Thursday	Friday
830 920	C150 –2 TEC 173				
930 1020	C150 –2 TEC 173	Usually in CBA 146	Usually in CBA 146	Usually in CBA 146	
1030 1120	C150 –1 TEC 173	Usually in CBA 146	Usually in CBA 146	Usually in CBA 146	
1130 1220	C150 –1 TEC 173	C150 –2 TEC 173	C150 –2 TEC 173	C150 –2 TEC 173	
1230 1320					
1330 1420	Usually in CBA 146	C150 –1 TEC 173	C150 –1 TEC 173	C150 –1 TEC 173	
1430 1520	Usually in CBA 146	C150 Lab1 TEC 230	C150 Lab2 TEC 230	C150 Lab3 TEC 230	
1530 1620	Usually in CBA 146	C150 Lab1 TEC 230	C150 Lab2 TEC 230	C150 Lab3 TEC 230	
1630 1720		C150 Lab1 TEC 230	C150 Lab2 TEC 230	C150 Lab3 TEC 230	

### Course Outline

Week	Topics	BLB chapter and assignments	Laboratory
1	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,	<b>1:</b> 1,2,3,4,7,8,9,10,23,24,25, 26,31-38,39-50 <b>2:</b> 13-18,19-38,41-44 <b>3:</b> 5-8,9-14,15-24,29,30, 33,43,45-50,59-66,71-79	Introduction, lab safety; 1: Densities
2	Stoichiometry Thermochemistry, Atomic structure, <b>Quiz 1</b> (Thursday)	<b>4:</b> 5,6,9,10,13,14,34,37,38,40, 51,52,53, 54,67, 68, 96, 97 <b>5:</b> 25-36,37-46,47-54,55-66 <b>6:</b> 59-70	2: Stoichiometry
3	Periodic properties Bonding Molecular structure Molecular shape, size and bond strength	<b>7:</b> 5,6,9,10,19-25,35-40,41-47 <b>8:</b> 1-10,21-28,29-44,47-56, 58-62,63 <b>9:</b> 13,14,17,18,19,20,42,61,62, 63,72	3: Nickel determination
4	Gases Intermolecular forces Liquids, vapour pressure, mixtures, phase diagrams Solids, structure and bonding <b>Quiz 2</b> (Thursday)	<b>10:</b> 3-10,17-20,21-26,35-38,41-46,47-56,71-74 <b>11:</b> 7-22,23-26,33-36, 47-52, 61,62,65,73-76	4: Thermochemistry
5	Polymers and ceramics Solutions	<b>12:</b> 13-22,30,33,44 <b>13:</b> 1,3,8-11,13,15,17,19,23, 25,27,31,45,47,57	5: VSEPR (in lecture)
6	<b>Midterm</b> (Monday) includes up to solutions.Kinetics	<b>14:</b> 5,6,11,31-35,49,50,59,64	6: Distillation
7	Equilibrium Acid base equilibria	<b>15:</b> 3,7-16,19-26,27-42 <b>16:</b> 7,8,15,16,23-27,33-38,41,42,47	7: Determination of chloride
8	Aqueous equilibria <b>Quiz 3</b> (Thursday)	<b>17:</b> 2-6,9-20,25-32,35-46	8: Kinetics
9	Thermodynamics	<b>19:</b> 1,2,5,7,13,43,47,57	9: pK <sub>a</sub> of acetic acid <b>Major report</b>
10	Electrochemistry <b>Quiz 4</b> (Thursday)	<b>20:</b> 3-10,13,14,23-32, 35,36,43,44,67,71-74	10: Electrochemistry
11	Metals	<b>23:</b> 5,6,9,11,14,16,23-28,	
12	Exam period		