

# Grande Prairie Regional College

School of Business

COURSE OUTLINE – FALL 2006 & WINTER 2007

## CH 0120 5 (4 – 0 – 2) HS Chemistry Grade 11 Equivalent

<b>Instructor</b>	Nancy Fraser	<b>Phone</b>	539 – 2980
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<b>Office Hours</b>	10:00 – 10:50 TWRF (Subject to change.)		

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### **Prerequisite(s)/corequisite(s):**

CH 0110 or SC 0100/MA 0110

### **Required Text/Resource Materials:**

Chemistry: A Study of Matter, by Dorin, Demmin, Gabel, 4<sup>th</sup> edition, 1992.

CH 0120 lab manual

Lab coat

Lab notebook (coiled notebook is fine do not spend the money on a real lab notebook)

Nonprogrammable calculator,

10 quad to 1 cm graph paper are also required.

### **Description:**

This course is designed to provide the student with an understanding of the following chemical concepts: Bonding, Chemical Equations, Stoichiometry, Solutions, and Organic Chemistry.

**Delivery Mode(s):**

Lecture will be the main method of delivery. There is also a large laboratory component in this course. Blackboard will also be utilized.

**Credit/Contact Hours:**

This is a 5 credit course and meets 6 hours per week (4 hour lecture and 2 hours lab).

**Objectives:**

Students should be able to solve a variety of stoichiometry problems.

1. Students should be able to recognize several organic functional groups.
2. Students should be able to write the electronic and orbital box diagrams for any element.
3. Students should be able to compare the reactivity and radius based on atomic and electronic structures, ionization energy and electronegativities.
4. Students should be able to distinguish between polar, nonpolar covalent and ionic bonds. Students should also know hydrogen bonding, and Van der Waal's force.
5. Students should be able to draw the structural diagrams for various molecules etc. using VSEPR.

**Transferability:**

This course is equivalent to Alberta grade 12 chemistry and is transferable to other post secondary institutions.

## **Grading Criteria:**

Regular attendance is expected of all students, and is crucial to passing this course.

Students who miss classes will soon find themselves falling behind and failing. Lateness will **not** be tolerated as it interrupts the instructor and fellow classmates. As per Department Policy, if you miss more than 15 % per semester of classes (approximately 1 day/week) in any course, you may be debarred from the final exam for that course.

A certificate (a doctor's or a note from the funeral home) will be required to make up the midterm or final exam. **You will receive a grade of F if you miss the final.** Call if you are going to miss a test. There may be a deduction of 10% for test rewrites.

**\*\*\*Very important:**      **Laboratory attendance to each specific experiment is compulsory; a passing grade in the laboratory component is required to pass the course.** There are **NO** 'make up' labs in this course. Being absent from an experiment will result in a grade of **ZERO** for that experiment.

Lab reports must be submitted on the required date and at the **required time**. Assignments will not be accepted after the assignment has been returned to the class. I am usually a speedy marker and return papers the next day.

Penalties for late **assignments** are as follows: (Assuming that I have not returned the marked assignments)

1 day late – 20%, 2 days late – 50%, 3 days late – 100%

Penalties for late **lab reports** are as follows:

5 minutes – 10%, 24 hours – 20%, after that – 100%

### Marking Scheme:

Lab Reports:		15%
Assignments:	15%	
Tests:	15%	
Midterm:	15%	
Final Exam:	<u>40%</u>	
Total		100%

Grades will be assigned on the Letter Grading System.

<b>Academic Upgrading Department</b>			
<b>Grading Conversion Chart</b>			
<b>Alpha Grade</b>	<b>4-point Equivalent</b>	<b>Percentage Guidelines</b>	<b>Designation</b>
<b>A<sup>+</sup></b>	<b>4</b>	<b>90 – 100</b>	<b>EXCELLENT</b>
<b>A</b>	<b>4</b>	<b>85 – 89</b>	
<b>A<sup>-</sup></b>	<b>3.7</b>	<b>80 – 84</b>	<b>FIRST CLASS STANDING</b>
<b>B<sup>+</sup></b>	<b>3.3</b>	<b>76 – 79</b>	
<b>B</b>	<b>3</b>	<b>73 – 75</b>	<b>GOOD</b>
<b>B<sup>-</sup></b>	<b>2.7</b>	<b>70 – 72</b>	
<b>C<sup>+</sup></b>	<b>2.3</b>	<b>67 – 69</b>	<b>SATISFACTORY</b>
<b>C</b>	<b>2</b>	<b>64 – 66</b>	
<b>C<sup>-</sup></b>	<b>1.7</b>	<b>60 – 63</b>	
<b>D<sup>+</sup></b>	<b>1.3</b>	<b>55 – 59</b>	<b>MINIMAL PASS</b>
<b>D</b>	<b>1</b>	<b>50 – 54</b>	
<b>F</b>	<b>0</b>	<b>0 – 49</b>	<b>FAIL</b>

### Course Schedule/Timeline:

<u>Week(s)</u>	<u>Topic</u>	<u>Required Reading</u>
1	Review: 1. Metric conversion 2. Significant figures 3. Definition of : chemistry, matter, density, states of matter, classification of matter, properties of matter 4. **Atomic structure (review, old stuff) 5. *** Nomenclature	
2 days	*Organic Chemistry	Chapter 24
2 days	*Biochemistry	Chapter 25
4	Stoichiometry	Chapters 8, 10, 16
2	**Atomic structure (new material)	Chapter 6, 13
1	Trends in the periodic table	Chapter 14
2	Chemical bonding	Chapter 15
0.5 days	Phases of matter	Chapter 11, Pgs 259 – 264, 274 – 277
2 days	Solutions	Chapter 16

**\*\*\*Nomenclature is one of the most important topics that you will learn at the secondary level. It will NOT be review at the post secondary level. If you are having trouble with this topic, get help IMMEDIATELY!!! See me!**

\*\* Atomic structure will be covered in two parts. The first part will be review material. The second part will cover wave mechanical model.

\* Organic and Biochemistry are stand alone topics and will be covered when they are convenient to the timing of the course.

**Examinations:**

Midterm will be at the end of stoichiometry.

There will be a 3 hour final at the end of the course. The time and date are set by the Registrar's office.

**Statement on Plagiarism:**

See the calendar. The instructor reserves the right to use electronic plagiarism detection services.