



**College and Career Preparation
GREGOIRE LAKE LEARNING CENTRE
Fall 2014**

**Chem 025 Section G
CHEMISTRY 25**

6 credits, 16 weeks, 6 hours/week

Chemistry 025 begins with an introduction to elements and the Periodic Table, followed by atomic theory and periodicity, chemical bonding and types of compounds, chemical nomenclature, and chemical reactions. The remainder of the course focuses on calculations involving measurements in chemistry, the metric systems (SI), and scientific notation as applied to gases, solutions (including acids and bases), and stoichiometry.

Alberta Education Course Equivalency: Chemistry 20

Co-requisite: Math 010C or permission from the Program Chair

Class Hours: Tuesday 2:00 - 4:00
 Wednesday 3:00 – 5:00
 Thursday 1:00 – 3:00

Instructor: Melodee Helgason
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 838-4361 Cell (leave message)
E-Mail: melodee.helgason@keyano.ca

Office Hours: Monday and Tuesday 12:00-1:00
 Wednesday 1:00-2:00
 Thursday 12:00-1:00 and 3:00-4:00

Required Resources:

1. Chemistry 025 Course Modules
2. Textbook: *Chemistry 20*; Nelson

STUDENT LEARNING OUTCOMES: Upon successful completion of this course students will be able to

- Understand science, scientific method
- Will know about branches of Chemistry
- Describe the basic particles that make up the underlying structure of matter
- Understand Daltons's atomic theory
- Describe the three subatomic particles which make up the atom
- Explain the division of elements in the periodic table
- Identify and characterize elements in groups and periods
- Explain the chemical bonding and properties of compounds
- Explain the structure of compounds
- Write formulas for compounds
- VSEPR Theory
- Understand the types of intermolecular forces
- Recognize the systematic chemical names of binary, ternary and higher compounds
- Understand and recognize the difference between precision vs accuracy, types of errors and significant digits
- Use the measurement system for unit conversion and density problems
- Understand and apply the mole concept for calculation of molar mass, moles of elementary units and molar volume of gas
- Explain molecular behavior using models of the gaseous state of matter
- Investigate solutions describing their physical and chemical properties
- Describe the molar concentration of ions in solutions and dilutions
- Describe acidic and basic solutions qualitatively and quantitatively
- Explain how balanced chemical equations indicate the quantitative relationship of reactants and products involved in chemical changes
- Use stoichiometry in quantitative analysis

EVALUATION:

Assignments / Activities	40%
Unit Tests	30%
<u>Final Exam</u>	<u>30%</u>
Total	100%



Grading System:

Posted in Classroom: Keyano College Grading System: Credit Calendar

Descriptor	4.0 Grade Scale	Percentage Scale
Excellent	4.0	96% - 100%
	4.0	90 % - 95 %
	3.7	85 % - 89 %
Good	3.3	81 % - 84 %
	3.0	77 % - 80 %
	2.7	73 % - 76 %
Satisfactory	2.3	69 % - 72 %
	2.0	65 % - 68 %
Minimum Prerequisite	1.7	60 % - 64 %
Poor	1.3	55 % - 59 %
Minimum Pass	1.0	50 % - 54 %
Failure	0.0	0 % - 49 %

The student must attain a grade in excess of 64%, or a 1.7 on the 4.0 Grade Scale, to assure progression to Chem 030.

Classroom Expectations:

In order to make the learning center a happy and productive place to learn, each student is expected to:

- attend classes regularly;
- arrive to school on time;
- phone the learning center to notify the instructor should she/he be unable to attend classes that day;
- limit the use of the school telephone to short important phone calls;
- keep her/his work table tidy;
- wash her/his own dishes;
- wear indoor shoes or slippers to help keep the classroom floors clean;
- show respect to fellow students and contribute to maintaining a peaceful learning atmosphere.



Student Rights and Responsibilities:

Students should be aware of their rights and responsibilities as laid out in the *Keyano College Credit Calendar 2014-2015*, on pages 36-39, or as included in the student package.

In order to “refrain from unduly disturbing, disrupting or otherwise interfering with studies...” (*KCCC, 2014/2015*, p. 36), students should turn cell phones and pagers off when they come to class, and refrain from bringing children or other visitors to class.

ADDITIONAL INFORMATION:

Assignments

Assignments must be submitted in a timely fashion. You need to complete the course in one semester, so any postponement will cause delays later in the semester. If you become too far behind you will not be successful this year.

In-class Assignments/Tests

There will be no re-writes. If you must be absent, be sure to phone me to let me know before class. You will then be expected to make the assignment/test up within 24 hours of your return or a grade of zero will be given. If you are away for an extended period of time, with a legitimate reason, you will be excused from the test. **It is your responsibility to inform me of absences and to arrange make-up tests.**

Plagiarism

Taking the words or ideas of another person and stating them as your own is plagiarism. When it is necessary to borrow ideas from others, you must give credit to the lender. You may **never** use another student's work as your own. If you are resubmitting one of your own, previously marked papers, it must be with my approval. **Students who plagiarize will be given a grade of zero.**

Final Examination

All final exams must be written on the specified examination date unless the conditions listed in the Keyano College Calendar under "Deferred Exams" apply.

Counselling and Disability Services

Counselling Services provides a wide range of specialized counselling services to prospective and registered students, including personal, career, and academic counselling.

Disability Services provides educational services to students with disabilities.

Both Counselling and Disability Services are located in CC167.

PROPOSED Chem 025G SCHEDULE:

WEEK	DATES	TOPICS COVERED
1 - 3	Sept 3 - 19	Unit 1: Matter and Atomic Structure
4 - 6	Sept 22 - Oct 10	Unit 2: structure of Compounds
7 - 8	Oct 13 - 24	Unit 3: Chemical Nomenclature
9 - 11	Oct 27 - Nov 14	Unit 4: Calculations in Chemistry (gases)
12 - 13	Nov 17 - 28	Unit 5: Calculations in Chemistry (solutions)
14 - 15	Dec 1 - 12	Unit 6: Chemical Reactions and Stoichiometry
16	Dec 15 - 17	Final Exam (date to be announced)

Please Note:

This course outline may be modified at the instructor's discretion to facilitate unforeseen time constraints.



Important College Dates:

Fall 2014

Orientation Day	September 2
First Day of Class	September 3
Last day to ADD Courses	September 9
Tuition is due (\$100 late fee charged after this date)	September 9
Last day to DROP Courses with full refund (\$100 deposit is non-refundable)	September 16
Last day to WAIVE SAKC health and dental plan or add family	September 16
Last day to submit Keyano College Fall Awards Applications	September 30
Last day to WITHDRAW with a refund (50%)	October 10
Last day to WITHDRAW (Grade of W)	November 26



Authorization: Chem 025 Section G

This course outline has been authorized by the following individuals:

M. Helgason _____
(Instructor)

Lisa Turner _____
(Chair)

Guy Harmer _____
(Dean)

Course Outline Effective Date: September 3, 2014