



Northern Gateway
Public Schools

CHEMISTRY 20 COURSE OUTLINE

September 2022 – January 2023



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INTRODUCTION:

Chemical change and matter are the themes common to all the units in Chemistry 20. An understanding of the nature of matter and an analysis of its changes is essential for understanding what is happening and for predicting what will happen; control of change is essential for the design of technological systems. The principles of conservation of mass and energy help to predict and explain the changes that occur in a closed system. Observations that provide evidence to support theories are stressed through experimentation and linking empirical and theoretical knowledge.

PREREQUISITES:

Science 10

UNITS OF STUDY & LEARNING OUTCOMES:

Topic	Timeline:	Major Objectives	Weighting
Unit X: Science 10 Review	September (approx. 8 days)	<ul style="list-style-type: none"> describe procedures for the safe handling, storage and disposal of materials used in the laboratory, with reference to WHMIS and consumer product labelling information use appropriate <i>Système international</i> (SI) units, fundamental and derived units and significant digits recall principles for assigning names to ionic, molecular, acids and bases compounds recall the categories of pure substances and mixtures and explain the nature of homogeneous mixtures recall the empirical definitions of acidic, basic and neutral solutions determined by using indicators, pH and electrical conductivity predict the product(s) of a chemical reaction based upon the reaction type recall the balancing of chemical equations in terms of atoms, molecules and moles translate word equations for chemical reactions into chemical equations, including states of matter for the products and reactants 	5%
Unit 1: The Diversity of Matter and Chemical Bonding	September (approx. 14 classes)	<ul style="list-style-type: none"> describe the role of modelling, evidence and theory in explaining and understanding the structure, chemical bonding and properties of ionic compounds describe the role of modelling, evidence and theory in explaining and understanding the structure, 	15%

		chemical bonding and properties of molecular substances.	
Unit 2: Forms of Matter: Gases	October (approx. 12 classes)	<ul style="list-style-type: none"> explain molecular behaviour, using models of the gaseous state of matter. 	16%
Unit 3: Matter as Solutions, Acids and Bases	October-November (approx. 23 classes)	<ul style="list-style-type: none"> investigate solutions, describing their physical and chemical properties describe acidic and basic solutions qualitatively and quantitatively. 	32%
Unit 4: Quantitative Relationships in Chemical Changes	December-January (approx. 23 classes)	<ul style="list-style-type: none"> explain how balanced chemical equations indicate the quantitative relationships between reactants and products involved in chemical changes use stoichiometry in quantitative analysis. 	32%

The full Program of Studies for Chemistry 20 can be found at the following link:

https://education.alberta.ca/media/3069388/pos_chem_20_30.pdf

RESOURCES/TEXTS/SUPPLIES:

Nelson Chemistry 20 textbook, binder, loose-leaf, pen, pencil, highlighter, graphing calculator

TEACHING METHODOLOGIES:

Teaching methodologies will be varied and adapted to student needs. They will include, but are not limited to, the following:

- Videos
- PowerPoint presentations
- Group work
- Internet research
- Student presentations
- Student self-assessment
- Individual work
- Labs

TEACHER EXPECTATIONS AND CLASSROOM CONDUCT:

Ready

- When the bell rings, be in your seat with your materials out. If you are late, enter the classroom quickly and quietly.
- If there are warm-up questions on the board, be sure to answer them.
- The due dates for all assignments and labs will be stated in class as well as displayed. It is up to the individual student to make sure that they know when they are due and complete these assignments on time. Assignments must be handed in by the end of the school date when they are due. Late assignments may not be accepted after the posted due date without consultation with Miss Swainston. Extenuating circumstances will be given appropriate consideration.
- You will be informed of a lab at least a day before the class date. Be prepared for the lab by not wearing loose clothing, wearing closed-toe shoes, and having long hair tied back.

Responsible

- You are expected to keep up with assignments. Class time may be given for the completion of assignments but expect to do some homework.
- You should be checking PowerSchool regularly to keep informed about your progress in the class.
- Be responsible for your own learning.

- If you are absent, ask your teacher and check the extra hand-outs basket for your class to get missed assignments.
- If you are absent on a day you were to write a quiz or a test, you will write it on the day that you return to classes.
- If you need extra help, arrangements can be made with your teacher if needed.

No Bus Days

- In the event of buses not running; I will run a drop in google scheduled during regular time. This will be time to ask questions , clarify concepts, work on assignments, have group discussions, etc. No new material covered but dependent on the frequency of this situation this could change.

Respectful

- Respect your classmates by being polite and listening attentively when they are speaking.
- Respect your teacher by listening attentively in class, following all instructions given, and using class time given to complete assignments.
- Respect classroom equipment. After a lab and other activities, make sure that all materials are cleaned and put back in their proper places.

COURSE EVALUATION AND STUDENT ASSESSMENT:

Assessment for Learning	Assessment of Learning
Formative assessment is a systematic process of collecting information or evidence about student learning and is not assigned a grade/mark for the report card.	Summative assessment is the judgment we make about the assessment of student learning based on established criteria and a mark/grade is recorded for the report card.

The purpose of assessment is to improve student learning. This means that judgments of student performance must be criterion-referenced so that descriptive feedback can be given that includes clearly expressed next steps for improvement. Tools of varying complexity are used by the teacher to facilitate this.

THE FINAL MARK/GRADE:

The evaluation for this course is based on the student's achievement of curriculum expectations and the demonstrated skills required for effective learning. Grades for each reporting period will be determined by the following categories and weightings:

Assignments	15%
Quizzes	25%
Unit Exams	40%
Final Exam	20%
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Total	100%

The final mark/grade represents the quality of the student's overall achievement of the expectations for the course and reflects the corresponding level of achievement. Credit is granted and recorded for this course if the student's final grade is 50% or higher.

APPEALS PROCESS:

Should a situation arise where a student is not satisfied with an assessment outcome, first discuss the matter with the teacher outside of class time. If the teacher and student are unable to resolve the issue, then the teacher will approach another teacher to assess the assignment. (The teacher will not have prior knowledge of the student's name or the previous grade for the given assignment). If there is still an issue, a meeting will be set up between the student, teacher, parents and administration to resolve the matter. The commencement of an appeal must occur in a timely manner; within 48 hours of receiving the marked assignment. In return, the appeal process will be completed as soon as possible.

EXTRA HELP:

I am available to help students after school or mornings by appointment. I expect you to come for extra help if you are struggling with or need clarification of any aspects of the course.

HELPFUL WEBSITES:

www.nelson.com/ABchem20-30;

Username: nelsonchem_student; Password: nelsonchem_onlinelearning

www.exambank.com

www.khanacademy.com