NORTHWESTERN POLYTECHNIC

SCHOOL OF BUSINESS AND EDUCATION- DEPARTMENT OF ACADEMIC UPGRADING

COURSE OUTLINE – Fall 2025

CH0120 (A2): Chemistry Grade 11 Equivalent – 5 (4-0-2) HS 90 Hours for 15 Weeks

Northwestern Polytechnic acknowledges that our campuses are located on Treaty 8 territory, the ancestral and present-day home to many diverse First Nations, Metis, and Inuit people. We are grateful to work, live and learn on the traditional territory of Duncan's First Nation, Horse Lake First Nation and Sturgeon Lake Cree Nation, who are the original caretakers of this land.

We acknowledge the history of this land and we are thankful for the opportunity to walk together in friendship, where we will encourage and promote positive change for present and future generations.

INSTRUCTOR:	Doris LaChance	**PHONE:**	780-539-2234
OFFICE:	A205A	**E-MAIL:**	dlachance@nwpolytech.ca
OFFICE HOURS:	TBD or by appointment		

CALENDAR DESCRIPTION:

Major concepts include: inorganic nomenclature; modern atomic structure, orbitals; ionic and covalent bonding, hydrogen bonding, metallic bonding, Van der Waal forces, ionization, electronegativity, VSEPR; solutions, stoichiometry, empirical formulas, percent composition, pH, molarity, equilibrium, Arrhenius acids and bases.

PREREQUISITE(S):

Complete all of the following:

- SC0110 (Science 10)
- A student may register in CH0120 if the student has achieved a mark of 60% or better in Alberta Education Science 10 within the previous five years or permission of the instructor.
- MA0110 (Math 10C)

COREQUISITE(S): NA

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REQUIRED MATERIALS:

- Nelson Chemistry (Alberta 20-30) (Recommended)
- Chemistry Data Booklet (colour copies in the bookstore, or can be printed from myClass)
- Scientific non-programmable calculator (if you need to purchase, TI-30XIIS is recommended)
- Lab coat (can be purchased from the NWP Bookstore)
- Lab Safety Glasses (may be purchased at the NWP Bookstore or Home Depot, Northern Metallic or Gregg Distributing)
- Graph Paper (fine lined 10 lines/cm-may be printed from myClass).

DELIVERY MODE(S):

- **On-campus (attend on-campus, in-person) –** This type of course will be delivered on campus in a specific location which will be indicated on the student timetable. Students are expected to fully attend in person.
- Use of D2L is required

LEARNING OUTCOMES:

Students will:

Unit A: The Diversity of Matter and Chemical Bonding

- 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, chemical bonding and properties of molecular compounds.

Unit B: Forms of Matter: Gases

- explain molecular behaviour, using models of the gaseous state of matter.

Unit C: Matter as Solutions, Acids and Bases

- investigate solutions, describing their physical and chemical properties
- describe acidic and basics solutions qualitatively and quantitatively

Unit D: Quantitative Relationships in Chemical Changes:

- explain how balanced chemical equations indicate the quantitative relationships between reactants and products involved in chemical changes.
- use stoichiometry in quantitative analysis

TRANSFERABILITY:

Please consult the Alberta Transfer Guide for more information. You may check the transferability of this course at the Alberta Transfer Guide main page http://www.transferalberta.alberta.ca.

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** For courses with alpha (letter) grading, a grade of D or D+ may not be acceptable for transfer to other post-secondary institutions. **Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability.**

EVALUATIONS:

Unit Tests (equally weighted)	40%
Labs	15%
Pre- Labs, Assignments, Quizzes	15%
Final Exam (Cumulative)	30%

GRADING CRITERIA :

Please note that most institutions will not accept your course for transfer credit **IF** your grade is **less than C-**.

Alpha Grade	4-point Equivalent	Percentage Guidelines	Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	95-100	C+	2.3	67-69
A	4.0	85-94	C	2.0	63-66
A-	3.7	80-84	C-	1.7	60-62
B+	3.3	77-79	D+	1.3	55-59
B	3.0	73-76	D	1.0	50-54
B-	2.7	70-72	F	0.0	00-49

COURSE SCHEDULE/TENTATIVE TIMELINE:

Test 1: Chemical Bonding	October 1
Test 2: Gases	October 20
Test 3 : Solutions, Acids & Bases	November 18
Test 4 : Stoichiometry	December 10
Final Exam	**TBD (Dec. 13-20)**

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STUDENT RESPONSIBILITIES:

In addition to the Student Rights and Responsibilities as set out in the Northwestern Polytechnic website (https://www.nwpolytech.ca/leadership/policies/display?ID=69), the following guidelines will maintain an effective learning environment for everyone:

- Attendance: Regular attendance and class participation is expected of all students and is crucial to good performance in the course. Class interruption due to habitual late arrival or leaving early will not be permitted. You may be debarred from the final exam if your absences exceed 15% of class days.
- Check myClass as well as NWP email on a regular basis.
- Assignments and lab reports must be submitted on time. A LATE ASSIGNMENT WILL NOT BE ACCEPTED FOR MARKS ONCE THE ASSIGNMENT HAS BEEN RETURNED TO THE OTHER STUDENTS. You may still submit it and I will mark it (so that you have feedback on how well you understood the concepts) but the mark WILL NOT count towards your grade.
- Exams must be written on the days announced in class.
    - If an emergency prevents attendance on an exam day, students must contact me as soon as possible via phone or email, and may be asked to provide documentation to justify their absence.
- No unspecified electronic devices will be permitted during exams.
- Complete daily homework. At least 1 hour of study per day outside of class time is required.
- Behaviors that interfere with learning are not acceptable.
- Take responsibility for your learning.

STATEMENT ON ACADEMIC MISCONDUCT:

Academic Misconduct will not be tolerated. For a more precise definition of academic misconduct and its consequences, refer to the Student Rights and Responsibilities policy availablehttps://www.nwpolytech.ca/about/polytechnic-leadership/policies-directory.

**Note: all Academic and Administrative policies are available on the same page.

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Additional Information:

Labs

- Attendance is compulsory in all labs.
- Missed labs result in a score of zero. **There are NO make-up labs.**
- In particular, you **MUST** attend the Lab Safety and Orientation. If you miss it, you will be excluded from participating in the lab component of the course.
- If you are late and have missed the lab safety discussion for that lab, you may be excluded from participating in the lab and will receive a mark of zero.
- Lab reports are due at the beginning of the following week's lab block.
- Download the lab manuals and complete the Pre-lab assignment **BEFORE** the lab period (the Pre-lab assignment is due at the beginning of each lab), data tables are completed during the lab and analysis and questions after the lab.
- **Lab Schedule will be provided as part of your tentative course schedule, posted on myClass. Changes will be discussed in class.**