NORTHWESTERN POLYTECHNIC

SCHOOL OF BUSINESS AND EDUCATION-DEPARTMENT OF ACADEMIC UPGRADING

COURSE OUTLINE – Winter 2026

CH0130 (A3): Chemistry Grade 12 Equivalent 5 (5-0-2) HS 105 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:

Course concepts include: thermochemical changes; electrochemical changes; chemical equilibrium focusing on acid-base systems; and chemical reactions of select classes of organic compounds. Energy changes and safety are emphasized.

PREREQUISITE(S):

Complete all of the following:

- CH0120 (Chemistry 20)
- A student may register in CH0130 if the student has achieved a mark of 60% or better in Alberta Education Chemistry 20 or equivalent within the previous four years or by permission of the instructor.
- MA0122 (Math 20-2) or MA0120 (Math 20-1)

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: Thermochemical Changes

- determine and interpret energy changes in chemical reactions
- explain and communicate energy changes in chemical reactions

Unit B: Electrochemical Changes

- explain the nature of oxidation-reduction reactions
- apply the principles of oxidation-reduction to electrochemical cells

Unit C: Chemical Equilibrium Focusing on Acid-Base Systems

- explain that there is a balance of opposing reactions in chemical equilibrium systems
- determine quantitative relationships in simple equilibrium systems

Unit D: Chemical Changes of Organic Compounds

- explore organic compounds as a common form of matter
- describe chemical reactions of organic compounds

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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.

** 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	50%
Labs	10%
Pre- Labs, Assignments, Quizzes	10%
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

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COURSE SCHEDULE/TENTATIVE TIMELINE:

CH0130 consists of 4 units (approx 3 weeks each)

1. Thermochemical Changes
2. Electrochemical Changes
3. Chemical Equilibrium Focusing on Acid-Base Systems
4. Chemical Changes of Organic Compounds

Exam dates to be announced in class.

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 it 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 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.

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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.

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.**

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