NORTHWESTERN POLYTECHNIC

School of Business and Education - Department of Academic Upgrading

COURSE OUTLINE – Winter 2026

# BI0120 (A3): Biology Grade 11 Equivalent – 5 (4-0-2) 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.


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| **INSTRUCTOR:** | Tara Lee Whittaker | **PHONE:** | TBA |
| **OFFICE:** | C405 | **E-MAIL:** | TWhittaker@nwpolytech.ca |
| **OFFICE HOURS:** | TBA | | |


## CALENDAR DESCRIPTION:

The major concepts in this course include human systems (digestion; respiration; circulation; immune; excretory and motor systems); energy and matter exchange in the biosphere; population change; photosynthesis and cellular respiration.

## PREREQUISITE(S)/COREQUISITE(S):

SC0110 (Science 10); EN0110 (English10-1 or 10-2); MA0110 (Math 10C) or MA0113 (Math 10-3). A Student may register in BI0120 if the student has achieved a mark of 60% or better in Alberta Education Science 10 within the previous five years or consent of the instructor.

## REQUIRED MATERIALS:

Inquiry into Biology-McGraw-Hill Ryerson. You must also print the lab manual which will be available on D2L.

## DELIVERY MODE(S):

Classroom instruction and lab. Use of D2L required.

**LEARNING OUTCOMES:** As stated by Alberta Education, upon successful completion of this course the student will be able to:

- Explain the constant flow of energy through the biosphere and ecosystems
- Explain the cycling of matter through the biosphere
- Explain the balance of energy and matter exchange in the biosphere, as an open system, and explain how this maintains equilibrium

- Explain that the biosphere is composed of ecosystems, each with distinctive biotic and abiotic characteristics
- Explain the mechanisms involved in the change of populations over time
- Relate photosynthesis to storage of energy in organic compounds
- Explain the role of cellular respiration in releasing potential energy from organic compounds
- Explain how the human digestive and respiratory systems exchange energy and matter with the environment
- Explain the role of the circulatory and defense systems in maintaining an internal equilibrium
- Explain the role of the excretory system in maintaining an internal equilibrium in humans through the exchange of energy and matter with the environment
- Explain the role of the motor system in the function of other body systems

## 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.....20%
Labs, Quizzes, Assignments.....20%
Midterm (Cover Units 1&2).....30%
Final (Covers Units 3&4).....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:

A Course Schedule is provided on myClass. Please print it off and keep a copy to refer to as it will contain a day-by-day breakdown of the topics we will be covering each day, the readings in the textbook, workbook questions, lab schedule, due dates and exam dates that you will be held to, whether or not those dates are referred to during class time.

## STUDENT RESPONSIBILITIES:

Refer to the NWP Policy on Student Rights and Responsibilities at
https://www.nwpolytech.ca/about/administration/policies/fetch.php?ID=69
If you are late for a lab, you might not be permitted to do the lab as important safety concerns are always addressed at the beginning of each lab period. The lab is certified as a Level 2 biohazard facility and the regulations that apply will be given to you during your first lab. If you miss a lab, you will not have the opportunity for a make-up lab. You automatically receive a grade of 0 for that lab.

## 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 available https://www.nwpolytech.ca/about/polytechnic-leadership/policies-directory.

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

**Tests and Exams:** Use of any electronic communication devices during Tests and Exams is not permitted.