

DEPARTMENT OF ACADEMIC UPGRADING

COURSE OUTLINE – Fall 2024

BI0120 (A2): 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.

INSTRUCTOR: Maiya Sears
OFFICE: C405
OFFICE HOURS: By appointment

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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): Complete all of the following:

- 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 permission of the instructor.

REQUIRED TEXT/RESOURCE MATERIALS: Inquiry into Biology-McGraw-Hill Ryerson. You must also print the lab manual which will be available on D2L.

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.
- Classroom instruction with laboratory components; materials will be delivered in a lecture-style format with practice questions incorporated when possible.
- Use of D2L is 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 to ensure the transferability of this course at the Alberta Transfer Guide main page

<http://www.transferralberta.alberta.ca>.

** 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: Final grades will be assigned based on the following components:

Unit Tests	30%
Labs, Quizzes, Assignments	15%
Midterm (covers Units 1&2).....	25%
Final (covers Units 3&4)	30%

No electronics are permitted in exams other than non-programmable calculators (when necessary). All tests and exams MUST be written at the scheduled times. A missed test (exam) will result in a score of ZERO on that test (exam). To defer an exam due to illness you will require a medical note. Quizzes will be delivered online and open book; they will close a week after they open. No opportunity will be provided for missed quizzes and thus a missed quiz will result in an automatic 0. The final exam is 3 hours long and is scheduled by the registrars' office during NWP exam weeks.

GRADING CRITERIA:

Please note that most universities 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: Labs will be held every week on Monday, beginning the second week of class (September 9). Unit tests and exams will be held during lab or 80 min. lecture days to allow sufficient time for completion. All dates are tentative.

Unit Exam 1	October 3
Unit Exam 2	October 31
Midterm (covers Units 1&2)	November 7
<i>Fall Break</i>	November 11-15
Unit Exam 3	December 2
Unit Exam 4	December 9
Final Exam (covers Units 3&4)	December 12-19

STUDENT RESPONSIBILITIES: Refer to Northwestern Polytechnic's Policy on *Student Rights and Responsibilities* at <https://www.nwpolytech.ca/about/administration/policies/fetch.php?ID=69>

Students are expected to participate fully in achieving their educational goals. This includes regularly attending and remaining in class, keeping technology use relevant to the class, and engaging purposefully with classroom and lab activities. Students are expected to demonstrate respect for their peers, as well as faculty and staff. Any questions, concerns, or appointment requests for the instructor should be communicated by email.

If you are late for a lab, you might not be permitted to do the lab as important safety concerns are 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 will automatically receive a grade of ZERO 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 at <https://www.nwpolytech.ca/about/administration/policies/index.html>.

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