

DEPARTMENT OF ACADEMIC UPGRADING

COURSE OUTLINE – Winter 2023

BI0130 (A3): Biology Grade 12 Equivalent – 5 (5-0-2) 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: Nicoletta Harabor **PHONE:** 780-539-2794
OFFICE: J222 **E-MAIL:** NHarabor@nwpolytech.ca
OFFICE HOURS: As posted on my office door.

CALENDAR DESCRIPTION: The concepts in this course include nervous and endocrine systems; human reproduction and development; cell division, genetics and molecular biology; populations and community dynamics.

PREREQUISITE(S)/COREQUISITE: BI0120 (Biology 20); EN0120 (English 20-1 or 20-2); MA0110 (Math 10C) or MA0123 (Math 20-3). A student may register in BI0130 if the student has achieved a mark of 60% or better in Alberta Education Biology 20 within the previous four years or consent 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): Classroom instruction and lab. Use of D2L required.

COURSE OBJECTIVES:

Detailed course objectives are found in the course syllabus that will be provided to you.

The course is divided into 4 units:

Unit 1: The Nervous and Endocrine Systems

Unit 2: Reproduction and Development

Unit 3: Cell Division, Genetics, and Molecular Biology

Unit 4: Populations and Community Dynamics

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

- Explain how the nervous system controls physiological processes
- Explain how the endocrine system contributes to homeostasis
- Explain how survival of the human species is ensured through reproduction
- Explain how human reproduction is regulated by chemical control systems
- Explain how cell differentiation and development in the human organism are regulated by a combination of genetic, endocrine and environmental factors.
- Describe the processes of mitosis and meiosis
- Explain the basic rules and processes associated with the transmission of genetic characteristics
- Explain classical genetics at the molecular level
- Describe a community as a composite of populations in which individuals contribute to a gene pool that can change over time
- Explain the interaction of individuals in a population with one another and with members of other populations and explain, in quantitative terms, the change in populations over time
- Lab Skill objectives (focus on scientific inquiry) Initiate, plan, perform, record, analyze, interpret, communicate and work in a team

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.transferalberta.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:

Unit Exam 1.....	15%
Unit Exam 2.....	15%
Labs, Quizzes, Presentations.....	15%
Midterm.....	25%
Final	30%

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). In order to defer an exam due to illness you will require a medical note. Quizzes will be written in labs; 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: (The following criteria may be changed to suite the particular course/instructor)

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	90-100		C+	2.3	67-69
A	4.0	85-89		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:

Tentative test and exam dates:

Unit Exam 1	15%	February 6
Midterm	25%	February 27
Unit Exam 2	15%	March 27
Final Exam	30%	April 14-24

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 PLAGIARISM AND CHEATING:

Cheating and plagiarism will not be tolerated and there will be penalties. For a more precise definition of plagiarism and its consequences, refer to the Student Conduct section of the NWP Calendar at <https://www.nwpolytech.ca/programs/calendar/> or the NWP Policy on Student Misconduct: Plagiarism and Cheating at <https://www.nwpolytech.ca/about/administration/policies/index.html>

**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.