

Biology 12 – Syllabus

Teacher Trevor Gallant
E-mail trevor.gallant@nbed.nb.ca
Room 246

Extra Help
Mornings from 8:15 to 8:45

Course Description:

Biology 12 is a challenging one-semester course. Previous Chemistry courses are not required but would provide good preparation for this course. Major topics covered are systems regulating change in human and other organisms, reproduction and development, chromosomes, genes, DNA; and change in populations, communities and species.

Prerequisites:

Biology 111/112

Corequisites:

[N/A]

Major assessments that are not completed will be recorded as Incomplete (INC) and the final mark will be changed to INC until the assessment is completed and handed in.

An INC at the end of the course will result in the student not earning a credit in the course.

Assessment Plan

Unit 1 - Macromolecules	5.25%
Unit 2 - Energy Use, Storage, and Transformation	9.5%
Unit 3 - DNA and Protein Synthesis	9.5%
Unit 4 - Cell Cycle	8.75%
Unit 5 – Genetics and Heredity	9.5%
Unit 6 - Animal Form and Function	7.5%
Science Practices	50%

Learning from Home:

The expectation is that all students will engage in the daily work assigned by their teachers during at-home learning days. Each student is expected to join the Teams meeting during class on their at-home learning days. This may include actively participating in live-streamed lessons during class time, online group work, completing projects, reading, watching videos, completing practice work, or other tasks. The expectations will be different for each class, so be sure that you clearly understand what each teacher needs you to do on each of your at-home learning days.

Course Outline

Unit 1 – Macromolecules

- Carbohydrates
- Lipids
- Proteins
- Nucleic acids

Unit 2 – Energy Use, Storage, and Transformation

- Enzymes and Their Regulation
- Cellular Respiration
- Photosynthesis

Unit 3 – DNA and Protein Synthesis

- Structure and Replication of DNA
- Protein Synthesis

Unit 4 – Cell Cycle

- Cell Cycle and its Control
- Cancer
- Meiosis and Genetic Diversity

Unit 5 – Genetics and Heredity

- Mendelian Genetics
- Chromosomal Inheritance and Sex-Linkage

Unit 6 – Animal Form and Function

- Reproductive System
- Nervous System

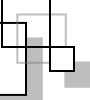
Assignments

- All assignments **MUST** be submitted via Microsoft Teams. Assignments may be typed but they do not have to be. You may also submit a photograph of your assignment.
- Students may complete most assignments with a partner, but all students will be assessed individually. Assessment on each assignment will be based on mastery of six important science practices (http://thelessonlocker.com/kvhs/biology/Science_Practices.pdf). All assessment will be oral, and a student can attempt to improve his/her assessment result on any science practice for any assignment as often as s/he likes until the desired level of mastery is reached.
- Missing assignments will be awarded a grade of INC.

Tests

- Tests will be taken by all students on the day decided by the class. There are no make-up tests. Students who think they might need extra time to complete tests can begin at 8:15 am.

- All tests will consist of a multiple-choice section and a free response section. All parts of all tests are open book.
- If a student misses a test, s/he must take that test during the assessment week at the end of the semester.
- If a student needs to miss a test for some reason (a school event, compassionate circumstances, *etc.*), s/he must see me **BEFORE** the test is scheduled to be written so that alternate arrangements can be made.



Quizzes

- We will have a quiz every Wednesday. The quiz will always cover everything we have learned since the previous quiz, so you should try to review your notes for a few minutes each day.
- Quizzes are always based on material in the online notes. For this reason, students will be required to write a quiz even if they were absent the day the material was presented. Exceptions to this can be made on an individual basis for extended absences.
- Quizzes are formative in nature and, as such, will not be included in the calculation of a student's grade. The quizzes do, however, provide a great way to check your understanding. (**Note:** The quizzes in Biology 121 will be included in a student's grade.)