

New Westminster Online Learning School

Physics 11:

Course Description

Students considering taking this course should have, within the past 5 years, achieved at least a B in Foundations of Mathematics and Pre-Calculus 10 or an equivalent course.

In this online course, we learn how forces acting on an object affect its movement and energy level. Wave motion, including sound waves, and electric circuits are also explored.

Course Expectations

Students are expected to complete their online course within a 4–5-month period. If additional time is needed, contact your course instructor.

Before each test, the accompanying learning guide assignment must be completed and submitted online.

Ensuring Understanding/Big Ideas

Students will focus on:

- An object's motion can be predicted, analyzed, and described.
- Forces influence the motion of an object.
- Energy is found in different forms, is conserved, and has the ability to do work.
- Mechanical waves transfer energy but not matter.

Specific Learning Outcomes

https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/curriculum/science/en_science_1_1_physics_elab.pdf

Course Content

Module 1	Math Tools
Module 2	Motion
Module 3	Projectiles
Module 4	Forces
Module 5	2D Forces
Module 6	Energy
Module 7	Electricity
Module 8	Waves

Student Learning Activities and Strategies

The online lessons use a combination of text, short videos, interactives, simulations, and animations to help students understand the concepts.

The Learning Guide booklet, provided at the start of each unit, is aligned with the lessons, and forms the notes and practice questions needed for that unit.

Assessment

Each unit has a Learning Guide, quizzes and a test, which can all be completed from home. The Learning Guides and quizzes provide a way to check understanding and to get feedback and help from their teacher.

Important Note: Students are also required to write two exams, a mid-term and final, at a **supervised location**. Students who live outside New Westminster can arrange to have these invigilated at their school or at an educational institution where they live.

Evaluation

Learning Activity	Percentage of Final Mark
Learning Guides	20%
Unit Tests	40%
Midterm	20%
Final Exam	20%
Total	100%

Resources

All materials are available online.