

New Westminster Online Learning School

Physics 12:

Course Description

Students considering taking this course should have, within the past 5 years, achieved at least a C+ in Physics 11 or an equivalent course or by our assessment.

This course builds on the concepts from Physics 11 in that the measurement of linear and circular motion depends on our frame of reference. Energy interactions and momentum 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:

- Measurement of motion depends on our frame of reference.
- Forces can cause linear and circular motion.
- Forces and energy interactions occur within fields.
- Momentum is conserved within a closed and isolated system.

Specific Learning Outcomes

https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/curriculum/science/en_science_12_physics_elab.pdf

Course Content

Module 1	Physics Review
Module 2	Equilibrium & Torque
Module 3	Centripetal Motion
Module 4	Momentum
Module 5	Electricity
Module 6	Electromagnetism
Module 7	Induction
Module 8	Modern Physics

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.