

## 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 Expectation

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

#### Enduring Understanding/Big Ideas\_(taken right from bced.gov.bc.ca)

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

#### Course Content

Unit 1	Vectors and Static Equilibrium
Unit 2	Kinematics
Unit 3	Momentum and Energy
Unit 4	Circular Motion and Gravitation
Unit 5	Electrostatics
Unit 6	Special Relativity
Unit 7	Magnetic Forces
Unit 8	Electromagnetic Induction

#### Student Learning Activities and Strategies

- The online lessons use a combination of text, short videos, and animations.
- This course aims to promote the development of the understanding of physics through inquiry and problem solving.

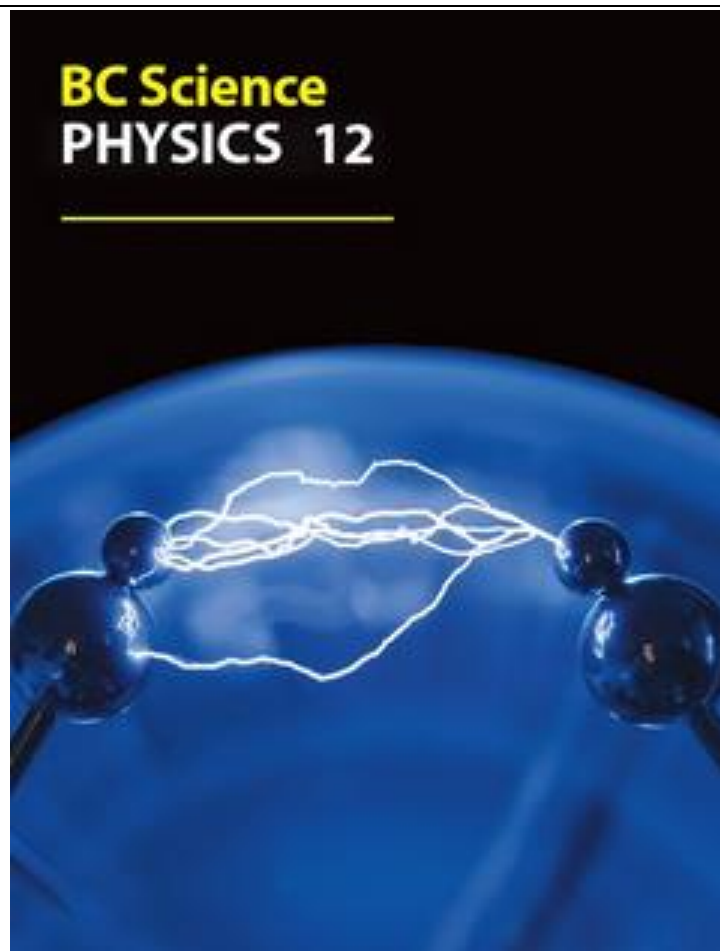
### Assessment

- This course has eight units that are assessed through six tests. You must complete the tests in order starting with Unit 1.
- The tests are timed. Depending on the unit(s) covered, you will have 40 or 80 or 100 minutes to complete the test.
- You are expected to complete one Unit Test every 2-3 weeks.
- The Unit Tests can be done online from any location where a student has the use of reliable technology with a dependable internet connection. Please note though that at any time during this course, students may be required to come on-site to write a test.
- There is no final exam. Students must complete all 6 tests to obtain a course mark.

### Evaluation

A student's final mark in this course is based on their six Unit Tests submissions.

### Resources



Students could get by without the BC Science Physics 12 WORKTEXT for Unit 1, but you will definitely need it for Units 2-8.

There are a few ways to do this:

1. If you're an adult or out-of-district student, buy a book for \$30 from Columbia Square Education Centre (#200 – 1065 Columbia St, Phone: 604-517-6191) between the hours of 9:30am-3:30pm on school days. Workbook fees are non-refundable.

or

2. If you currently attend NWSS, borrow a book from Room #3039 on the top floor.