



COURSE OUTLINE

Course Name: Physics 12 - Part 1

Course Number: PHYS 0983

Number of Credits: 4.0

Effective Date: January 2017

Course Description:

This course begins with the study of kinematics in one and two dimensions. The equations of motion are utilized, stressing the vector nature of the physical quantities. Vector addition and manipulation are covered using trigonometric component methods. The same vector techniques are then applied to an analysis of dynamics in one and two dimensions, two-dimensional equilibrium, momentum in two dimensions and uniform circular motion. The final topics covered are energy conservation, waves and optics.

Both Physics 0983 and Physics 0993 are required for completion of ABE Provincial level Physics.

Physics 0983 and Physics 0993 can be taken at the same time or in any order.

School or Centre:

School of Arts and Science

Year of Study:

ABE Provincial Level (Grade 12)

Course History:

Revised Course

Name of Replacing Course (if applicable):

Course Pre-requisites (if applicable):

Physics 11 or equivalent; Precalculus 11 (successfully completed within the last 3 years, a minimum score of 72% on the Intermediate Algebra Math Assessment, or equivalent); English 10 or equivalent.

Completion of Precalculus 12 recommended, if not completed enrollment in MATH 0983 recommended.

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

No Yes (details below):

Instructional Strategies:

Class-based: Physics 0983 uses a lecture-based model. A significant amount of class time will be spent on hands-on activities, concept-development worksheets and problem-solving. Four labs will be conducted and will relate to the core topics of Kinematics, Dynamics, Waves and Optics.

Course Learning Outcomes:

Students will meet the learning outcomes for ABE Provincial Level Physics as stated in the most recent ABE Articulation Handbook.

Program Learning Outcomes:

If this course is taken as part of the ABE Provincial Certificate program, see the Program Content Guide for the program learning outcomes.

Evaluation/Grading System

Grading System	Specify if 'Other':	Specify Passing Grade:
Letter Grades		D

Components and Weighting of the Assessment/Evaluation Plan:

Type	Percentage	Evaluation Plan (provide a brief explanation for each component especially if value exceeds 35%):
Exam	45	3 tests at 15%
Lab Work	20	includes formal and informal lab reports
Assignments	15	
Quizzes/Tests	20	a number of quizzes which adds up to 20%
Total		100

Learning Environment/Type

Instruction Type	Hours Per Instruction Type	Comments
L - Classroom	64	
E - Seminar	32	
Total		96

Resource Material(s):

Resources are items in addition to tuition that the student is responsible for purchasing. Course resource information will be supplied by the department/instructor.

Course Topics:

Kinematics in Two Dimensions
Dynamics in Two Dimensions (Newton's laws)
Uniform Circular Motion
Two-dimensional Equilibrium
Momentum in Two Dimensions
Energy Conservation
Waves and Optics

VCC Education and Education Support Policies

There are a number of **Education** and **Education Support** policies that govern your educational experience at VCC, please familiarize yourself with them.

The policies are located on the VCC web site at:

<http://www.vcc.ca/about/governance--policies/policies/>

To find out how this course transfers, visit the BC Transfer Guide at www.bctransferguide.ca.

FOR COMMITTEE USE ONLY

Approved by Curriculum Committee:	October 25, 2016	Approved by Education Council:	
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