



Durham District School Board
Brooklin High School
Science Department
Course Outline: PHYSICS, Grade 12, College

Department Head: D. O'Neill

Teacher: McClure

Course Code: SPH 4C (Credit Value: 1.0)

Prerequisite: SNC 2P (or SNC2D)

Overall Curriculum Expectations:

Students will develop their scientific investigation skills as they test laws of physics and solve both assigned problems and those emerging from their investigations.

Course Description:

This course develops students' understanding of the basic concepts of physics. Students will explore these concepts with respect to motion; mechanical, electrical, electromagnetic, energy transformation, hydraulic, and pneumatic systems; and the operation of commonly used tools and machines. Students will also consider the impact of technological applications of physics on society and the environment.

Course Strands:

Scientific Investigation Skills, Motion and Its Applications, Mechanical Systems, Electricity and Magnetism, Energy Transformations, Hydraulic and Pneumatic Systems

Units of Study:

Unit 1: Motion and Its Applications
Unit 2: Mechanical Systems
Unit 3: Electricity and Magnetism
Unit 4: Energy Transformations
Unit 5: Hydraulic and Pneumatic Systems

Teaching Strategies:

A variety of teaching and learning strategies will be incorporated throughout the course.

Assessment & Evaluation:

Assessment and evaluation will encompass all four categories of achievement: **Knowledge and Understanding; Thinking/Inquiry; Communication; and Making Connections/Application.** This course will involve a number of assessment and evaluation strategies that will provide all students an opportunity to meet with success.

Term Work: 70%

Labs and Assignments	35%
Quizzes	10%
Tests	25%

Final Summative: 30%

Final Exam	25%
Summative Assignment	5%

Learning Skills and Work Habits:

The following Learning Skills and Work Habits are evaluated regularly using a scale of Excellent, Good, Satisfactory or Needs Improvement: **Responsibility, Organization, Independent Work, Collaboration, Initiative, Self-Regulation.**

Textbook: None

Class requirements: 3-ring binder, scientific calculator, pen, pencil, ruler, protractor