

## **Physics, Grade 12 – College Preparation**

### **SPH 4C0**

This course enables students to deepen their understanding of the concepts and theories of physics. Students will explore further the laws of motion with kinematics as well as dynamics and energy transformations. Students will investigate electrical, gravitational and magnetic fields, and understand how electrical circuits work. They will understand how hydraulic and pneumatic systems operate both with theory and with calculations. They will further develop inquiry skills, by building, testing, and analyzing different structures based on the five units in the course. Students will have the ability to be creative in their building process and will make calculations to support their process and analyze their findings. The course enables students to test a handful of variables in their experiments in order to visualize relationships and deepen their understanding of physics concepts. Students will further consider the impact on society and the environment of past and current technological applications of physics.

**Prerequisite:** Science, Grade 10, Academic (SNC 2D0) or Applied (SNC 2P0)