



SPH 4U  
Physics  
Grade 12 University Preparation  
2016-17

#### General Course Information

Prerequisite(s):	SPH 4U
Teacher:	_____ (Science office, 416-395-3290 ext 20095)
Department:	Science
Assistant Curriculum Leader:	S. Evans, K. Fischer
Extra Help:	Available upon request unless otherwise noted
Textbook and Replacement Cost:	Physics 12 (Nelson): \$115
Material Required:	Scientific calculator, graph paper, binder, lined paper, ruler, pencil, eraser

#### Course Description

This course enables students to deepen their understanding of the concepts and theories of physics. Students will explore further the laws of dynamics and energy transformations, and will investigate electrical, gravitational, and magnetic fields; electromagnetic radiation; and the interface between energy and matter. They will further develop inquiry skills, learning, for example, how the interpretation of experimental data can provide indirect evidence to support the development of a scientific model. Students will also consider the impact on society and the environment of technological applications of physics.

A list of the course expectations can be found at:

<http://www.edu.gov.on.ca/eng/curriculum/secondary/science1112curr.pdf>

#### Course Information

##### Unit Titles

- Forces and Motion: Dynamics
- Energy and Momentum
- The Wave Nature of Light
- Electric, Gravitation, and Magnetic Fields
- Quantum Mechanics and Relativity

##### Teaching Strategies

You will have opportunities to learn and be assessed (formative assessment) before evaluations. List of evaluation strategies which may be used (but are not limited to) are: quizzes, tests, problem-sets, laboratory activities, hands-on activities, independent study, problem-based learning, role-plays, and simulations.

#### Assessment and Evaluation:

To promote student success, ongoing assessment and feedback is given regularly to the students. A variety of assessment and evaluation strategies are used in this course. Expectations are evaluated based on the provincial curriculum expectations and the strands and/or categories outlined in the ministry document.

The four categories of achievement are:

- Knowledge and Understanding
- Application
- Thinking and Inquiry
- Communication

These categories help guide the creation of assessment and evaluation tools.



SPH 4U  
Physics  
Grade 12 University Preparation  
**2016-17**

Each student's final mark will be in the form of a percentage grade based on their achievement in the following areas

Knowledge/Understanding	30%
Application	25%
Thinking/Inquiry	25%
Communication	20%

The breakdown of the final mark is as follows:

Term Evaluation	70%
Culminating Project: Design and Build	5%
Final Evaluation	25%

The final evaluation will be completed during the exam period.

In addition to students' performance in the achievement categories, students will also be assessed on their performance in the following learning skills:

- Responsibility
- Organization
- Independent Work
- Collaboration
- Initiative
- Self-Regulation

For specific policies on assessment and evaluation, and academic honesty, please refer to School Procedures in the student agenda.