

SPH3U1: Grade 11 Physics

Syllabus

Instructor Information

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Class Information

Dates: 2022/Jul/09 - 2022/Dec/17

Time: Saturday, 1900 - 2100

Course Description

This class is to introduce classical physics to grade 11 students. It acts as a continuation from previous science courses, and intends to prepare students for university level courses in relevant fields. However, the ultimate goal is to let students appreciate physics and mathematical descriptions of physical phenomena. *Prerequisites:* SNC2D.

The class time will be divided into two 1-hour blocks; The first one will introduce new concepts, while the second acts as a practice session comprised of exercises and occasional quizzes.

Course Objectives

After this course, you should be able to...

- To gain a fundamental understanding of Newtonian kinematics
- To understand the concept of energy and how it constrains motion of objects.
- To learn how waves interact with each other and propagates.
- To gain a fundamental understanding on electromagnetism.
- To encourage you to be thinking logically and rigorously about physics.
- To understand mathematical tools that are useful in future studies.
- To learn to [self] assess physics problems, solutions, and concepts.
- And lastly but not the least, to learn to appreciate physics.

Textbook, Calculators, & Software

Textbook: [Textbook](#) can be accessed online. There are mostly two versions of textbooks, and we are going to use the Nelson version of the Grade 11 Physics textbook.

A supplementary note on some fundamental mathematical tools that we use in this class will be provided as well.

Calculator: You will need a calculator to do the computations that will arise throughout the course. No specific calculator is required; however, scientific calculators are highly recommended. For more information, see [U of T allowed calculator](#), under the list for Type C. These are the most common types of calculators that are used in universities across Canada, and it's good to practice using them.

Email Policy

If you have questions, please do not hesitate to email me at the email listed above. I am free after 1830h on weekdays, and is usually free during the entire weekend. I will attempt to respond to your emails within 24 hours; in an occasion that I failed to do so, please reply to your email again and spam me.

Phone and Device Policies

Usage of your phone for questions strictly relating to course materials during class time is encouraged, yet unrelated searches and distractions are strictly prohibited.

Class Participation

Participation in discussions is not required but highly recommended. The instructor will pick students to answer questions during class time.

Homework

Homework will be given on a weekly basis. There will be no homework for the first week. The instructor will return the homework within 2 weeks of the due date of the homework.

Quizzes

Quizzes might be given at any time during practice hours with at most a day's notice.

Final Project

The final project is going to be a paper plane contest. Details will be released closer towards the end of the semester.