

<b>Subject Name &amp; Course Code:</b> Grade 11 University Physics SPH3U	<b>Teacher Name:</b> A. Fong
<b>Prerequisite:</b> Grade 10 Science SNC2D	<b>Teacher Website:</b> <a href="#">Google Classroom</a>



## The Woodlands School

### Course Outline

#### Course Description:

This course develops students' understanding of the basic concepts of physics. Students will explore kinematics, with an emphasis on linear motion; different kinds of forces; energy transformations; the properties of mechanical waves and sound; and electricity and magnetism. They will enhance their scientific investigation skills as they test laws of physics. In addition, they will analyse the interrelationships between physics and technology, and consider the impact of technological applications of physics on society and the environment.

#### Course Units & Learning Goals

Unit	Learning Goals / Big Ideas	Summative Evaluations
Kinematics	<ul style="list-style-type: none"> <li>Motion involves a change in the position of an object over time.</li> <li>Motion can be described using mathematical relationships.</li> <li>Many technologies that apply concepts related to kinematics have societal and environmental implications.</li> </ul>	Tests, Quizzes, Assignments, Research projects, labs, presentations, written reports, essays, notebooks, graphing, case studies, making models, observations, discussions, reflections, blogs, computer simulations, debates
Forces	<ul style="list-style-type: none"> <li>Forces can change the motion of an object.</li> <li>Applications of Newton's laws of motion have led to technological developments that affect society and the environment.</li> </ul>	
Energy and Society	<ul style="list-style-type: none"> <li>Energy can be transformed from one type to another.</li> <li>Energy transformation systems often involve thermal energy losses and are never 100% efficient.</li> <li>Although technological applications that involve energy transformations can affect society and the environment in positive ways, they can also have negative effects, and therefore must be used responsibly.</li> </ul>	
Waves and Sound	<ul style="list-style-type: none"> <li>Mechanical waves have specific characteristics and predictable properties.</li> <li>Sound is a mechanical wave.</li> <li>Mechanical waves can affect structures, society, and the environment in positive and negative ways.</li> </ul>	
Electricity and Magnetism	<ul style="list-style-type: none"> <li>Relationships between electricity and magnetism are predictable.</li> <li>Electricity and magnetism have many technological applications.</li> <li>Technological applications that involve electromagnetism and energy transformations can affect society and the environment in positive and negative ways.</li> </ul>	

#### Final Evaluation(s)

Exam  
Lab summative task

## Assessment & Evaluation

Assessments and evaluations are based on the provincial expectations and levels of achievement outlined in the provincial curriculum document for each subject in secondary school. A wide range of assessment and evaluation opportunities allows students to demonstrate their learning in a variety of ways. The final grade will be determined as follows:

- **Seventy percent** of the grade will be based on evaluation conducted throughout the course;
- **Thirty percent** of the grade will be based on final evaluations administered at or towards the end of the course.

## Evidence of Learning

Products, Conversations and Observations inform Final Grade

<b>Knowledge &amp; Understanding 20%</b>	<b>Thinking &amp; Investigation 20%</b>	<b>Communication 10%</b>	<b>Application 20%</b>
Knowledge and understanding of content.	Use of initiating and planning skills and strategies; use of processing skills and strategies; use of critical thinking processes, skills and strategies.	Expression and organization of ideas and information; communication for different audiences and purposes; use of conventions, vocabulary and terminology of the discipline in oral, visual and or written forms	Application of knowledge and skills; transfer of knowledge and skills; making connections between science, technology, society and the environment; proposing courses of practical action to deal with problems relating to STSE

## Learning Skills

The following learning skills will be taught throughout the course and will be shown on the report card. Student performance in these skill areas will not be included in the final numeric mark. It is important to remember, however, that the development and consistent practice of these skills will influence academic achievement. These skills include:

	<b>E – Excellent</b>	<b>G – Good</b>	<b>S – Satisfactory</b>	<b>N – Needs Improvement</b>
<b>Responsibility</b>				
<b>Independent Work</b>				
<b>Initiative</b>				
<b>Organization</b>				
<b>Collaboration</b>				
<b>Self-Regulation</b>				

## Missed Assessments

1. Students who know ahead of time that they will miss an assessment are expected to discuss the situation beforehand with the subject teacher and any group peers that may be affected.
2. Students who miss an in-class summative assessment for an unauthorized reason may lose the opportunity to complete the task.
3. Students who are absent on the day of an assessment for reasons such as illness, field trip, or suspension, are responsible for meeting with the subject teacher to make alternative arrangements to submit/ complete the assessment.
4. Failure to complete compulsory major assessments, including the final assessment, may result in loss of credit.

## Deadlines

Deadlines are realistic in the normal working life outside the school setting. At appropriate times throughout the school year (e.g., at the beginning of the term, when an assignment is given, etc.), teachers will communicate deadlines and the consequences for not completing assignments for evaluation or for submitting those assignments late.

1. Seek assistance from the subject teacher when they feel unable to complete a task/assignment due to insufficient knowledge or skill. Be sure to advise the subject teacher of any difficulty well before a task/assignment is due.
2. Negotiate alternate deadlines well before an established due date.
3. Understand that chronic lateness in submitting tasks/assignments could result in insufficient evidence of learning, and may require him/her to demonstrate his/her knowledge and skills by an alternate manner to successfully achieve his/her credit.

### **Cheating, Academic Integrity, Plagiarism**

Students are expected to demonstrate INTEGRITY and submit assignments that are their own work. Cheating is defined as completing an assignment in a dishonest way through improper access to the answers.

Plagiarism is submitting someone else's words, images, data, and/or ideas as your own original work. Examples include but are not limited to: copying another's project (portions or whole) and copying/paraphrasing parts of a book, website or article without proper reference or citation method as defined by the subject teacher.

If an evaluation is plagiarized, students will:

- Attend a teacher-student interview to determine circumstances of plagiarism;
- Following investigation by the teacher and/or administration, student will accept consequences determined by the investigation;
- Be made aware that any incidents of confirmed plagiarism will be documented by administration.

### **Levels of achievement**

Anchor marks are designated marks for each level of achievement assigned to students during reporting cycles based on evidence of learning from observations, conversations and student products. They support criterion-referenced assessment. Anchor marks are not true midpoints in the mathematical sense. Teachers still use both mathematical calculations and professional judgment to arrive at an anchor mark, combined with the principle of most consistent achievement with special consideration for more recent evidence.

<b>Achievement Level</b>	<b>Anchor Mark</b>
<b>4*</b>	<b>100</b>
<b>4+</b>	<b>98</b>
<b>4</b>	<b>91</b>
<b>4-</b>	<b>84</b>
<b>3+</b>	<b>78</b>
<b>3</b>	<b>75</b>
<b>3-</b>	<b>71</b>
<b>2+</b>	<b>68</b>
<b>2</b>	<b>65</b>
<b>2-</b>	<b>61</b>
<b>1+</b>	<b>58</b>
<b>1</b>	<b>55</b>
<b>1-</b>	<b>51</b>
<b>R</b>	<b>45</b>

### **Students and Parents:**

Please fill out [this electronic form](#) to show that you are aware of the expectations of this course. Students will be asked to refer to this document when necessary.