


Grade 11 Physics (University) SPH3U1

<p>Course Description:</p> <p>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.</p>	<p>Level: University</p>
	<p>Credit Value: 1.00</p>
	<p>Pre-requisite: SNC2D1 or SNC 2D3</p>
	<p>Department: SCIENCE</p>
<p>Course Fees: None</p>	

<p>Textbooks & Resources:</p> <ul style="list-style-type: none"> · Growing Success: Assessment, Evaluation and Reporting in Ontario Schools · The Ontario Curriculum Grades 11 and 12 Science (Revised 2008) · Nelson Physics 11 · Please see pages from and hand-outs including: SATEC student agenda, "SATEC Science Department Evaluation Policy" & "TDSB Science Laboratory Safety Rules and Lab Procedures"

<p>Course Evaluation: Student Evaluation consists of three components...</p>											
<p>1) Learning Skills & Work Habits: Students are evaluated on 6 Learning Skills & Work Habits and are evaluated on a scale of Excellent (E), Good (G), Satisfactory (S) & Needs Improvement (N) and reported on the report card.</p>	<p>The skills and habits consist of:</p> <ul style="list-style-type: none"> · Responsibility · Organization · Independent Work · Collaboration · Initiative · Self-Regulation 										
	<p>Skills and work habits are not included in the student's final mark unless specified in the curriculum expectations.</p>										
<p>2) Term Mark (Assessment of Learning): <i>It is the student's responsibility to submit evidence of the term's learning in a complete and timely manner.</i></p> <p>Student performance standards for knowledge and skills are described in the curriculum Achievement Chart. The curriculum is assessed in four categories:</p>	<p>The term evaluation consists of:</p> <table border="1" style="width: 100%;"> <tr> <td>· Knowledge</td> <td style="text-align: right;">21%</td> <td rowspan="4" style="text-align: center; vertical-align: middle;">70%</td> </tr> <tr> <td>· Inquiry</td> <td style="text-align: right;">21%</td> </tr> <tr> <td>· Communication</td> <td style="text-align: right;">14%</td> </tr> <tr> <td>· STSE</td> <td style="text-align: right;">14%</td> </tr> </table>		· Knowledge	21%	70%	· Inquiry	21%	· Communication	14%	· STSE	14%
	· Knowledge	21%	70%								
· Inquiry	21%										
· Communication	14%										
· STSE	14%										
<p>3) Final Evaluation (Assessment of Learning): The written exam will be administered during the school's final exam schedule. The final evaluation accounts for 30% of the final mark.</p>	<p>The final evaluation consists of:</p> <table border="1" style="width: 100%;"> <tr> <td>· Written Exam</td> <td style="text-align: right;">30%</td> </tr> </table>		· Written Exam	30%							
	· Written Exam	30%									
<p>Final Mark = 70% Term Mark + 30% Final Evaluations</p>											
<p>For a detailed description on Course Evaluation, see "How Did I Get That Mark!" at www.satec.on.ca</p>											
<p>Course Conduct Policies: See Student Agenda.</p>											

Course Outline:			
Unit	Description	Approximate Length	Major Unit Evaluation
Kinematics	Motion involves a change in the position of an object over time. Motion can be described using mathematical relationships. Many technologies that apply concepts related to kinematics have societal and environmental implications.	4 weeks	
Forces	Forces can change the motion of an object. Applications of Newton’s laws of motion have led to technological developments that affect society and the environment	4 weeks	
Energy & Society	Energy can be transformed from one type to another. Energy transformation systems often involve thermal energy losses and are never 100% efficient. 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.	2 weeks	Energy Resources Project
Waves & Sound	Mechanical waves have specific characteristics and predictable properties. Sound is a mechanical wave. Mechanical waves can affect structures, society, and the environment in positive and negative ways.	3 weeks	Instrument Design Project
Electricity & Magnetism	Relationships between electricity and magnetism are predictable. Electricity and magnetism have many technological applications. Technological applications that involve electromagnetism and energy transformations can affect society and the environment in positive and negative ways.	4 weeks	Turbine Development Project
Skills & Careers	Numeracy and Scientific Literacy, Data Analysis Techniques.	1 week	
Note:	At least 2 of the above 3 projects will be assigned. All units will include quizzes, labs, assignments and tests.		
Note: The order of the units of study may change due to student needs and resources available during the course.			

<p>General Information:</p> <p>1 – As per SATEC school policy students are expected to come to class:</p> <ul style="list-style-type: none"> a) in uniform and, b) with cell phones, mp3 players etc... unseen and not in use during class time. <p>2- To be successful in Science, students are expected to:</p> <ul style="list-style-type: none"> a) come to class prepared with pen/pencil, paper binder and resources for your particular Science course, b) demonstrate academic honesty with their own work and when working with others, c) complete assignments in a timely manner and, d) follow necessary safety rules and procedures of a Science Lab. <p>Note: For clarification of any of the above issues please see the SATEC agenda along with our own SATEC Science Department Evaluation Policy and/or the TDSB defined Science Laboratory Safety Rules and Lab Procedures presented the first week of class and stored at the front of your notebooks for future reference.</p> <p>3- To seek extra help:</p> <ul style="list-style-type: none"> a) speak to your Science Teacher and schedule a time to meet, b) use the school’s homework club to access peer tutors and/or, c) speak to your guidance counsellor to arrange for a tutor. 	<p>Science Department deadlines and plagiarism policy.</p> <p>Each assignment will have a due date. Handing in an assignment after the due date may result in a deduction of marks at the discretion of the teacher.</p> <p>Students must be in class on dates of any major assessments. IF you miss a major assessment (i.e. unit test, exam, presentation) you must give your teacher a note written and signed by your doctor or parent stating the health reasons that kept you from class. Without a doctor’s note, you will receive a mark of zero for that missed major assessment.</p> <p>-If you know ahead of time that you will have an appointment, field trip, game, etc at the same time as the major assessment, you must either arrange with your teacher to complete the assessment before the scheduled date, or cancel your other plans so you can attend the evaluation.</p> <p>Plagiarism includes: copying another student’s work, buying essays, copy/paste web info and call it your own work, using information from print or internet media without identifying the source. To avoid plagiarism: Do not cheat; Do not copy. Keep your eyes on your own paper during tests and exams. Do not steal intellectual property. Reference information properly (MLA) We only need to <u>suspect</u> cheating to penalize you. There will be no warnings, only marks of zero.</p>
<p>This course meets ICT SHSM program requirements.</p> 	

Please retain this page in the front of your notebook for future reference.