FOREST HILL CI

SPH3U GRADE 11 UNIVERSITY PHYSICS COURSE OUTLINE

PREREQUISITE: GRADE 10 SCIENCE (SNC2D)

Resources

Textbook: The grade 11 Physics textbook is "Physics 11" by Nelson. The replacement cost of the textbook is **$80.**

Tools for Success/Learning Skills

Responsibility	▪ Understand and follow this course outline and the policies outlined in the **Student Agenda**. ▪ Arrive on time ▪ Come prepared to work with all necessary tools
Organization	▪ Keep an organized notebook ▪ Keep an organized calendar of important dates
Independent Work	▪ Stay on task ▪ Avoid disrupting the learning of others. ▪ Do homework regularly and complete all assigned work ▪ Review/study the work often
Collaboration	▪ Be a responsible group member. ▪ Help your peers succeed by sharing ideas, tutoring and studying together ▪ Prepare for labs as a team with a focus on each other's safety
Initiative	▪ Be active participants in the classroom ▪ Ask questions when unsure of the material & seek extra help when needed. ▪ Ensure that you get any missed handouts and catch up on missed work
Self-Regulation	▪ Set goals and make good choices regarding academic success. ▪ Respect yourself, classmates and teachers.

Academic Honesty: Cheating and Plagiarism

Students are expected to submit only their own original work on evaluations done in class or out of class. Plagiarism is the passing off the ideas or writings of another as one's own. Cases of academic dishonesty (cheating and/or plagiarism) will be dealt with on a case-by-case basis, but each case will involve investigation, communication with the student and his/her parent/guardian, and a mark of zero for plagiarized work. Whether the student has an opportunity to demonstrate his/her learning in another assignment will be at the discretion of the teacher and/or Principal.

Assessment and Evaluation

The primary purpose of assessment and evaluation is to improve student learning. Assessment can take on one of three forms (described below). In accordance with *Growing Success,* a student's most recent and consistent work will be taken into account.

Diagnostic	Assessment **FOR** learning determines how learning should proceed at the beginning of a unit.
Formative	Assessment **AS** learning provides feedback for a student to determine where improvement is needed. An example of this is homework.
Summative	Assessment **OF** learning evaluates what a student has learned at the conclusion of a unit/course. Examples include tests, quizzes, assignments and labs

Evaluation of student achievement will be defined by four broad **Achievement Categories** (described below). The category weighting for semester work is shown.

Semester Work		70%
Knowledge & Understanding	Specific content acquired in the course and the comprehension of its meaning and significance.	25%
Thinking & Investigation	The use of critical and creative thinking skills and inquiry, research, and problem-solving skills.	25%
Communication	The conveying of meaning through various forms.	25%
Application	The use of knowledge and skills to make connections within and between various contexts.	25%
Final Exam		30%

Academic Integrity: Missed Classes, Evaluations and Assignments

It is the **responsibility of the student** to notify **all** appropriate parties (teachers, office, coach, etc) **in advance** where appropriate and in compliance with school policies and procedures as per student agenda if the student will be absent. This allows for both the student and teacher to make alternative arrangements regarding missed assignments or evaluations. In the event that advance notice is not possible, students should seek out the teacher in the morning (before school) with the appropriate documentation (e.g. Doctor's note, photocopied note from the office) in order to ensure that they have the opportunity to make-up the missed evaluation/assignment and course work.

Overall Course Expectations

A. SCIENTIFIC INVESTIGATION SKILLS AND CAREER EXPLORATION

Throughout this course, students will:

- demonstrate scientific investigation skills (related to both inquiry and research) in the four areas of skills (initiating and planning, performing and recording, analyzing and interpreting, and communicating);
- identify and describe a variety of careers related to the fields of science under study, and identify scientists, including Canadians, who have made contributions to those fields.

B. Kinematics

- analyze technologies that apply concepts related to kinematics, and assess the technologies' social and environmental impact
- investigate, in qualitative and quantitative terms, uniform and non-uniform linear motion, and solve related problems
- demonstrate an understanding of uniform and non-uniform motion, in one and two dimensions

C. Forces

- analyze and propose improvements to technologies that apply concepts elated to dynamics and Newton's laws, and assess the technologies' social and environmental impact
- investigate, in qualitative and quantitative terms, net force, acceleration, and mass, and solve related problems
- demonstrate an understanding of the relationship between changes in velocity and unbalanced forces in one dimension

D. Energy and Society

- analyze technologies that apply principles of and concepts related to energy transformations, and assess the technologies' social and environmental impact
- investigate energy transformations and the law of conservation of energy, and solve related problems
- demonstrate an understanding of work, efficiency, power, gravitational potential energy, kinetic energy, nuclear energy, and thermal energy and its transfer (heat)

E. Waves and Sound

- analyze how mechanical waves and sound affect technology, structures, society, and the environment, and assess ways of reducing their negative effects
- investigate, in qualitative and quantitative terms, the properties of mechanical waves and sound, and solve related problems
- demonstrate an understanding of the properties of mechanical waves and sound and of the principles underlying their production, transmission, interaction, and reception

F. Electricity and Magnetism

- Analyze the social, economic, and environmental impact of electrical energy production and technologies related to electromagnetism, and propose ways to improve the sustainability of electrical energy production
- Investigate, in qualitative and quantitative terms, magnetic fields and electric circuits, and solve related problems
- Demonstrate an understanding of the properties of magnetic fields, the principles of current and electron flow, and the operation of selected technologies that use these properties and principles to produce and transmit electrical energy