



Grand River Collegiate Institute COURSE OUTLINE

For students and their families.

Course Name :
Grade 11 University Physics

Course Code :
SPH3UI

Prerequisite:
SNC2DI

Teacher :
Mrs. Young

Contact :
519-576-5100

Textbook:
Physics 11 (Nelson)

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.

Curriculum Document <http://www.edu.gov.on.ca/eng/curriculum/secondary/>

EVALUATION

Students will be evaluated based on four main types of assessment.

Assessment Technique	Purpose
Quizzes	Formative
Laboratory Reports	Formative and Summative
Tests	Summative
Assignments	Summative

Notes:

- Summative assessment will occur near the end of the unit/instruction and demonstrates the student's knowledge to the teacher for the purpose of evaluation and reporting. These assessments will be included in the mark seen on the student's report card.
- Formative assessments are used to give students practice before a summative assessment and by the teacher to evaluate learning and determine next steps for the student's learning. In the case where, due to extenuating circumstances, a student has been unable to complete a summative assessment, formative assessments may also be used to gauge the student's learning for reporting purposes.

Mark Reporting:

Final Grade	
Term Work	
• Tests	35 %
• Lab Reports and Assignments	35 %
Final Written Exam	30 %

Refer to the GRCI Web Site www.grc.wrdsb.ca for Assessment, Evaluation and Reporting Policies as well as Academic Honesty and Late Policies.

UNITS / “Big Ideas”

Data Analysis (Modelling Method)

- There is a logical process to the collection, analysis, and presentation of data.
- Accuracy and precision must be taken into account when reporting data and conclusions.

Kinematics (Constant Velocity & Constant Acceleration)

- 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.

Forces (Free Particle & Constant Force)

- 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.

Energy and 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.

Waves and 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.

Electricity and 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.

Refer to http://www.edu.gov.on.ca/eng/curriculum/secondary/2009science11_12.pdf for all of the Essential Learning Skills and Expectations.

“One thing I have learned in a long life: that all our science, measured against reality, is primitive and childlike and yet it is the most precious thing we have.” ~Albert Einstein

Procedures

Late and Missing Assignments: It is important for students to develop good personal management skills (such as time management and planning). These skills will be reflected in the **learning skills** area of the report card. It is expected that students will complete and submit all essential tasks as they are the opportunity for you to demonstrate your learning to your teacher.

Attendance: Attendance in classes is an important part of learning, and absences should be avoided. When a student is absent, a parent/guardian must call the school's attendance line on the date of absence, or provide a note explaining the absence for the student to submit the following day. Students are responsible for what they missed during their absence.

Cheating and Plagiarism: It is important for students to do their own best work. Most assignments for this class are done within the classroom, observed by the teacher, and this helps to minimize the chances of cheating and plagiarism. In the event that cheating or plagiarism occurs, the following consequences may be implemented, in consultation with administration, depending on the situation:

1. The student may be required to redo all or part of the assignment or assessment.
2. The student may be required to complete an alternate assignment or assessment.
3. The student's work may be treated as a missed assignment.

There may also be other consequences that are determined to be appropriate (e.g. detention, suspension, etc.) as per the school's progressive discipline process. Parents/guardians will be informed about the infraction and the consequences.

Please refer to the school website: <http://grc.wrdsb.ca/about/policies> for more details on these policies and other academic procedures.

Signatures

Please sign below indicating you have read and understand the requirements for successful completion of this course.

Student

Parent/Guardian