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Westside Secondary School

Orangeville, Ontario, Canada

519-938-9355 www.ugdsb.on.ca/westside

Course: SPH3U	**Teacher**	**Phone Extension**	**Email**
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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 analyze the interrelationships between physics and technology, and consider the impact of technological applications of physics on society and the environment .

Prerequisite: Grade 10 Academic Science (SNC2D)

Big Ideas: The curriculum in each unit targets "Big Ideas" that are laid out by Ontario's Ministry of Education and adapted by Westside teachers. The following chart outlines the Big Ideas being explored and evaluated in each unit of this course. For more information on the overall course expectations, visit http://www.edu.gov.on.ca/eng/curriculum/secondary/2009science11_12.pdf.

Unit of Study	Big Ideas
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.
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.
Energy and Society	• Energy can be transformed from one type to another. • Energy transformations 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.

Instructional Strategies: Westside teachers use a variety of instructional strategies to help students develop and improve skills in the following areas: character, citizenship, communication, critical thinking and problem solving, collaboration and teamwork, and creativity and imagination.

Achievement Categories: Student learning is assessed and evaluated in a balanced manner with respect to the following four interrelated categories of knowledge and skills.	**Knowledge and Understanding** **Thinking and Inquiry** **Communication** **Application**

Assessment and Evaluation: Assessments for and as learning are used to improve student success by providing opportunities to demonstrate understanding of course expectations prior to the evaluation of learning. Evaluations of learning are where students demonstrate their understanding of Big Ideas and key expectations. Failure to complete an evaluation of learning may result in the credit not being granted because certain expectations of the course have not been met.

Term Work Evaluation: 70%	Final Evaluation(s): 30%
Kinematics Unit: Test and Lab Assessment Dynamics Unit: Test and Lab Assessment Energy Unit: Test and Inquiry Activity Waves Unit: Test and Research Assignment Electricity and Magnetism: Test and Research Assignment	10% Culminating Project 20% Exam

Late Work

- Students are expected to complete all assigned work and submit it by the teacher's established due date. Every attempt will be made to encourage students to complete all assigned work on time so their grade represent their actual achievement. For late and missed summative assessments, please see the ***Westside Students' Contract for Missing Evidence of Learning***.

Safety Agreement

- All students will receive a safety agreement and will sign and return the UGDSB Student Safety Record.

Textbook

- Nelson Physics 11 – replacement fee for a lost or damaged textbook is $90.

Enhancement Fee

- Voluntary enrichment fees may apply to this course. If a student does not pay, they will not complete the activity but will still be able to meet the course expectations.
- Potentially $5 for field trip to the arena.

Electronic Devices

- The science department at Westside S.S. has a policy that no electronic devices (e.g. cell phones, tablets, iPods, mp3 players, etc.) are allowed during evaluations. For this reason, students are reminded to bring a scientific calculator when needed.

Classroom Rules

- Students are expected to follow the rules of conduct, as referenced on the school's web site: http://www.ugdsb.on.ca/westside/.

In addition to these general rules of Westside Secondary School, the rules for the science classroom are as follows:

- no food or drink of any kind is allowed in a science classroom
- respect the people, equipment, and furnishings of the science classroom
- immediately stop any activity and give your attention to the teacher when asked to do so
- summative evaluations of learning will not leave the classroom, but are available for students to discuss with the teacher