



Superior Collegiate and Vocational Institute

333 N. High Street, Thunder Bay, ON
807-768-7284 www.superiorcvi.ca



Course Name: Grade 12 University Physics / IB

Code: SPH4U1

Course Description:

This course enables students to deepen their understanding of physics concepts and theories. Students will continue their exploration of energy transformations and the forces that affect motion, and will investigate electrical, gravitational, and magnetic fields and electromagnetic radiation. Students will also explore the wave nature of light, quantum mechanics, and special relativity. They will further develop their scientific investigation skills, learning, for example, how to analyze, qualitatively and quantitatively, data related to a variety of physics concepts and principles. Students will also consider the impact of technological applications of physics on society and the environment.

Units:

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| 1. Dynamics (Motion-Forces) | - forces and motion in one and two dimensions |
| 2. Energy and Momentum | - conservation of E and M, interactions in systems |
| 3. Gravitational, Electric, Magnetic Fields | - forces, fields and their interactions |
| 4. Wave Nature of Light | - properties of waves with respect to light |
| 5. Thermal Energy | - thermal energy, HEAT, stellar connections |
| 6. Modern Physics (Nuclear) | - relativity, particle behaviour |

Text(S): Nelson – Physics 12 Text book

Replacement Cost: - \$95.00

Prerequisite: - appropriate skill development in Grade 10 mathematics (applied or academic)

Assessment and Evaluation

Term Work	65%	Tests will incorporate the achievement chart categories. Quizzes will incorporate the achievement chart categories. Assignments, performance investigations, rich tasks. - Study package with study log, other activity, or both
Participation and Attendance	10%	Attending classes, participating in class discussions, engagement and effort (see rubric)
Summative Evaluation	25%	End of semester exam. (25%)

<u>Learning Skills:</u>	Works Independently Work Habits Team Work Organization Initiative	Levels of Achievement	Level 1 Needs Improvement Level 2 Satisfactory Level 3 Good Level 4 Excellent
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ONLINE REFERENCE: <http://www.edu.gov.on.ca/eng/document/curricul/secondary/progplan/progplan.html>

STUDENT RESPONSIBILITIES AND EXPECTATIONS:

Students are expected to come to class on time, prepared (notebook, textbook, PENCIL, and scientific calculator), and ready to put forth their best effort.

Student Code of Conduct is consistent with the information outlined in the Student Handbook.

ONLINE REFERENCE: <http://www.edu.gov.on.ca/eng/document/brochure/conduct/conduct.html>

TEACHER CONTACT:

PHONE: 768-7284 Ext.

STUDENT SIGNATURE

Email: childs_math@yahoo.com

Website: www.mrchilds.com

*A detailed course outline is on record at the main office. It can be viewed at your request. Please keep this as page 1 of your notebook.

Attendance and Participation Criteria

Participation Criteria	Below Level 1 Less than 50%	Level 1 50-59%	Level 2 60-69%	Level 3 70-79%	Level 4 (80-100%)
Participating in class discussions and contributing ideas	Demonstrates limited or no engagement despite accessible opportunities.	Infrequently engages or contributes despite provision of accessible opportunities.	Occasionally engages in and contributes to classroom learning activities.	Generally engages in and contributes to learning through accessible opportunities.	Consistently engages and contributes through accessible formats; fosters positive culture.
Asking Relevant Questions	The student does not ask relevant questions despite provision of accessible opportunities and formats.	The student infrequently asks relevant questions despite accessible opportunities and formats.	The student occasionally asks relevant questions.	The student generally asks relevant questions.	The student consistently asks relevant questions.
Respects contributions of others,	The student does not respect the contributions of others.	The student infrequently respects the contributions of others.	The student occasionally respects the contributions of others.	The student generally respects the contributions of others.	The student consistently respects the contributions of others.
Contributes to fostering a positive environment	Does not contribute to fostering a positive classroom culture.	Infrequently contributes to fostering a positive classroom culture.	Occasionally contributes to fostering a positive classroom culture.	Generally contributes to fostering a positive classroom culture.	Consistently contributes to fostering a positive classroom culture.
Attendance	The student misses more than 10% of classes for unexcused absences (more than 9 classes per semester).	The student misses 7.5% to 10% of classes for unexcused absences (approximately 7.5-9 classes per semester).	The student misses 5% to 7.5% of classes for unexcused absences (approximately 5-7 classes per semester).	The student misses 2.5% to 5% of classes for unexcused absences (approximately 2.5 to 4.5 classes per semester).	The student misses 0% to 2.5% of classes for unexcused absences (approximately 2 or fewer classes per semester).