ALTERNATIVE EDUCATION

COURSE OUTLINE 2026 - 2027

Physics 30

SCN3797

5 Credit Course

Contact Information	Teacher Name: Site Phone Number: Teacher Email:
Prerequisite	A mark of at least 50% in Physics 20.
Required Materials & Resources	• Eight modules and eight assignment books • Textbook: Physics, Pearson, 2009 • Physics 30 Data booklet • Graphing calculator preferred, scientific calculator is acceptable

Course Overview

Physics 30 consists of four units of study, as outlined below. These units emphasize the nature of science, science and technology and science in societal and environmental contexts.

Unit	Topics of Study	Weighting
A. Momentum and Impulse	• impulse • momentum • Newton's laws of motion • elastic collisions • inelastic collisions	15%
B. Forces and Fields	• electric charge • conservation of charge • Coulomb's law • vector fields • electric field • magnetic field • electric potential difference • interaction of charges with electric and magnetic fields • charge quantization—Millikan's experiment • electromagnetic induction	30%
C. Electromagnetic Radiation	• speed of EMR • propagation of EMR • reflection • refraction • diffraction • interference • total internal reflection • Snell's law • photoelectric effect • Compton effect	30%
D. Atomic Physics	• charge-to-mass ratio (Thomson's experiment) • classical model of the atom (Rutherford, Bohr) • spectra: continuous, line emission and line absorption • energy levels (states) • de Broglie hypothesis quantum mechanical model • half-life • nuclear decay • nuclear reactions • Standard Model of matter	25%

<table>
<tr><td>Assessment</td><td>The student’s grade will be calculated based on the following:

<table><tr><td>Coursework</td><td>20%</td></tr><tr><td>Unit Evaluations – quizzes, exams, labs, projects</td><td>80%</td></tr></table>
*Final Grade: 70% School awarded mark + 30% provincial diploma exam mark.

Parents and students are encouraged to keep up to date on PowerSchool and contact their teacher if there are any issues.</td></tr>
<tr><td>Important Note Regarding Assessment</td><td>A wide range of assessment information is used in the development of a student’s final grade. In Edmonton Catholic Schools, individualized assessments provide specific information regarding student progress and overall performance in class. Assessment may vary from student to student, differentiating for various student needs. It should also be noted that not all assignments are used to determine the final grade, and that scale factors may have been used to determine the weight of individual assignments.</td></tr>
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