

Physics 30

ST. FRANCIS XAVIER HIGH SCHOOL



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Science 2021-2022

Physics 30 (5 credits)
Semester 2: February 1, 2022-June 17, 2022

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Google Classroom Code: 2nbz4ov

GENERAL OUTCOMES/ COURSE OVERVIEW

Physics 30 is composed of four units of study: A. Momentum and Impulse, B. Forces and Fields, C. Electromagnetic Radiation, D. Atomic Physics

Prerequisite: Students must have successfully completed Physics 20 with a recommended mark of 60% or better, recommended to have completed Math 20-1 or Math 20-2

Required Materials & Resources: Physics (Pearson) textbook, notebook, pencil, eraser, ruler, graphing calculator

Learning Outcomes: The student will: A. explain how momentum is conserved when objects interact in an isolated system, B. explain the behaviour of electric charges, using the laws that govern electrical interactions, C. describe electrical phenomena, using the electric field theory, D. explain how the properties of electric and magnetic fields are applied in numerous devices, E. explain the nature and behaviour of EMR, using the wave model, F. explain the photoelectric effect, using the quantum model, G. describe the electrical nature of the atom, H. describe the quantization of energy in atoms and nuclei, I. describe nuclear fission and fusion as powerful energy sources in nature, J. describe the ongoing development of models of the structure of matter



ASSESSMENT

The student's grade is determined by the knowledge the student has acquired based on the program of studies and the skills the student is able to show in articulating his or her knowledge.

Course Units:	Approximate Classroom Days	Course Weight by Unit
Unit 1: Momentum and Impulse	15	15%
Unit 2: Forces and Fields	23	30%
Unit 3: Electromagnetic Radiation	23	30%
Unit 4: Atomic Physics	20	25%

The student's grade will be calculated based on the following: Unit Coursework: 20% Unit Exams: 80%
Final Grade: 90% School awarded mark + 10% Provincial Diploma

A wide range of assessment information is used in the development of a student's final grade. At St. Francis Xavier High School, individualized assessments provide specific information regarding student progress and overall performance in class. Student assessment may vary from student to student to adapt for differences in student needs, learning styles, preferences, and paces. 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.

PLAGIARISM

We provide a Catholic education, where the Core Values of dignity, respect, fairness, personal and communal growth, loyalty, and honesty are the framework for all that we do. Within this Catholic education that St. Francis Xavier School provides, one of our main focuses is to encourage and facilitate the pursuit of knowledge and excellence in academics. To ensure that we attain this focus, all students at our school community are expected to meet the standards of individual integrity in the following ways:

Students practice intellectual honesty in the process of acquiring and extending knowledge by improving their own personal academic competence, critical thinking, and self-evaluation. 2. Students are therefore not expected to act in ways that result or could result in unearned academic benefit or advantage for themselves or others (cheating and collusion).

Therefore, students who **submit work not their own, take or copy answers from another student or source (cheating), provide answers to any assessment to another student (collusion), cheat during examinations, or use unauthorized means to obtain answers or complete work**, after investigation by the teacher supervisor, are at risk of the following:

First offense – May receive a zero for the assessment and a two-day suspension.

Second offense – May receive a zero for the assessment and a three-day suspension.

Third offense – May be removed from the class, further suspensions, or possible recommendation for expulsion.

Conditions surrounding the investigation will be considered and each situation will be dealt with on an individual basis.

Review of the incident will first be conducted by the teacher and will then potentially involve additional staff (department head), administration, parents and the student(s) involved.



SCHOOL POLICIES

St. Francis Xavier does not publish report cards. Parents and students are encouraged to keep up to date on Power School and contact their teacher if there are any issues.

At St. Francis Xavier, zeros may be administered for incomplete or absent work with the opportunity to rectify the mark with conversation with their teacher.

CELL PHONE POLICY

Mobile devices are not to be used by students during instructional time. Your phone must be “off and away”. First offense, the phone is forfeited to the teacher for the remainder of class time. Second offense, the phone is forfeited to the grade coordinator for the remainder of the school day. Third offense, the phone is forfeited to the grade coordinator until a parent can pick it up. The teacher/grade coordinator is not responsible for lost/stolen devices.

During assessments, students are not allowed to have mobile devices anywhere on their person. If brought to class, the student agrees that he/she must forfeit his/her device to a secured location. Again, the teacher is not responsible for lost/stolen devices.

MISSED ASSESSMENT POLICY

Evaluation is important and must be fair to everyone, therefore all unwritten tests must be accounted for. Students missing a test will be required to write an alternate exam upon their return. Missed test writes take place Friday after school beginning at 1:00 PM.

“We must not forget that when radium was discovered no one knew that it would prove useful in hospitals. The work was one of pure science. And this is a proof that scientific work must not be considered from the point of view of the direct usefulness of it. It must be done for itself, for the beauty of science, and then there is always the chance that a scientific discovery may become like the radium a benefit for humanity.”

- Marie Curie (1867 - 1934)

