

Science Department
Grade 12Physics College Preparation, SPH4C (1.0 credit)

Course Prerequisite: Grade 10 Science, Academic or Applied
Textbook: Physics 12 College Preparation, Nelson, 2004 (replacement cost: \$100)

Teacher: Dr. Park x418
Subject Head: Mr. Lanziner

Course Description

This course develops students’ understanding of the basic concepts of physics. Students will explore these concepts as they relate to mechanical, electrical, fluid (hydraulic and pneumatic), and communications systems, as well as to the operation of commonly used tools and equipment. They will develop scientific-inquiry skills as they verify accepted laws of physics and solve both assigned problems and those emerging from their investigations. Students will also consider the impact of technological applications of physics on society and the environment.

Course Units

- Mechanical Systems
- Energy Transformations
- Hydraulic and Pneumatic Systems
- Electricity and Electronics
- Communications Technology

Evaluation Breakdown

The student will be provided with numerous and varied opportunities to demonstrate achievement in all four categories of knowledge and skills - *Knowledge/Understanding, Thinking/Investigation, Communication, and Application* as indicated below (±5%):

Knowledge/Understanding.....	40%
Thinking/Investigation.....	10%
Communication.....	10%
Application.....	10%
Final Exam and Culminating Activities.....	20+10%

Knowledge/Understanding

- Understanding concepts, facts and terms, relationship among concepts.
- Primarily assessed from tests and/or quizzes

Thinking/Investigation/Communication

- Design/performance of lab experiments/activities, recording, analysis and interpretation of experimental data, problem solving
- Effective communication using correct scientific terminology, symbols and units, following instructions for communication or written material
- May be assessed during performance labs, lab reports, assignments, test, quizzes, presentations, projects and journals

Application

- Connecting science, technology and the environment
- May be assessed using assignments, tests, quizzes

Culminating Activities

- Usually towards the end of a unit a large assignment/lab will be given which summarizes many key ideas of the unit

Exams

- All categories of assessment may be reflected on the examinations

Learning Skills

In addition students will be assessed on their *learning skills* as listed below. They are NOT included in determining the final percentage grade.

Responsibility	Organization	Independent Work	Collaboration	Initiative	Self-Regulation
• Complete work with care • Submit assignments on time • ;Manage my behaviour • Prepare for test & quizzes	• Come to class prepared • Notebooks tidy & ordered • Plan ahead & manage time to meet deadlines • Use an organizer to achieve goals	• Use time effectively during class • Follow instructions with minimum supervision • Make use of notes to complete tasks • Seek assistance after serious effort	• Complete my share of work • Contribute ideas • Cooperate & participate with others • Listen attentively without interrupting	• Make up missed work • Get work before an absence • Complete work without prompting Demonstrate interest • Participate in discussions • Seek assistance	• Attend class on time • Set goals • Consistent effort to complete work • Correct homework • Persist and do not give up easily on class work

Assessment & Evaluation

Student achievement will be assessed and evaluated based on the provincial standards that are curriculum expectations as outlined in the secondary curriculum policy documents. Evaluation strategies will be implemented that provide numerous and varied opportunities for students to demonstrate the full range of their learning organized by the categories of the Ministry of Education achievement chart for Science indicated below.

I hereby acknowledge that I have read, understand and will follow the policies stated on the Course Outline, and the Student Responsibly For Science Laboratory Safety Sheet.

Student Name (Please Print)

Parent Name (Please Print)

Student Signature

Parent Signature