

PHYSICAL SCIENCE

There are three 50-hour modules which make up the entire Physical Science program. Each of the modules are designed to heighten the awareness of students regarding the interaction between science, technology and society and to help them understand the implications of this interaction for their lives.

Nuclear Energy: Energy in Matter PSC 4010-2

The course on nuclear energy deals with the major scientific principles associated with the fundamental relationship between matter and energy. It focuses on the atomic structure and the classification of elements. Students learn about the evolution of knowledge that enabled human beings to channel nuclear energy. The course also familiarizes students with the various applications of nuclear energy in the energy, medical and military fields. In the social sphere, the course raises the issue of the use of nuclear energy, notably to produce electricity.

Electricity: What's the connection? PSC 4011-2

The course on electricity presents the principles underlying electrical phenomena. It treats the concepts of static electricity, dynamic electricity, magnetism and electromagnetism. It covers electric circuits and the steps involved in the production and use of electricity. In the social sphere, it aims to make students think about the consequences of the use of electricity as well as the implications of the choice of a particular method of producing it. It enables the students to evaluate issues brought about by political choices made to satisfy the growing demand for electricity.

Ionic Phenomena: A Study of an Environmental Problem PSC 4012 - 2

The course on ionic phenomena focuses on the principal concepts and phenomena related to chemistry, which students must know about, for example, to understand the problem of acid rain or that of water pollution caused by fertilizers and pesticides. It presents the atomic model and the periodic table of the elements. It considers the chemical bonds leading to the formation of compounds such as acids, bases and salts. In the social sphere, it enables students to analyze the major factors behind acidification or pollution of bodies of water. After presenting a detailed case study, it calls on the students to assess the value of articles discussing problems arising from the use of chemicals.