

SCIENCE

Grade	Course	Type	Prerequisite	Course Details
10	SNC2DI Science	Academic	SNC1DI or SNC1PI	Students broaden their study in the branches of science that include biology, chemistry, Earth and space science, and physics. They develop an understanding of cells, cell division, cell specialization and the organization of systems in animals. They investigate different types of compounds through chemical reactions and begin to explore natural and human factors that influence Earth's climate. Finally, students develop an understanding of various characteristics and properties of light. This course may involve optional field trips related to course learning with related expenses in the range of \$10.00.
10	SNC2DW	Enhanced	SNC1DW	For students who are enrolled in the PHS Enhanced Program.
10	SNC2PI Science	Applied	SNC1DI or SNC1PI	Students continue with a simplified overview in the areas of biology, chemistry, Earth and space science and physics. Students begin to develop an understanding of the organization of cells, tissues, organs and systems in animals. They investigate the characteristics of simple chemical reactions and begin to understand various natural and human factors that contribute to global warming. Finally, students analyse how properties of light and colour are applied in technology.

Grade	Course	Type	Prerequisite	Course Details
11	SBI3CI Biology	College	SNC2DI or SNC2PI	This course focuses on the processes involved in biological systems such as cellular biology, microbiology, genetics, anatomy of mammals and how plants play a role in the natural environment.
11	SVN3EI Environmental Science	Workplace	SNC1DI or SNC1PI	For those students who <u>do not intend</u> to pursue post-secondary education but are interested in science. Topics may include: the impact of human activities on the environment; human health and the environment; energy conservation; resource science and management; and safety and environmental responsibility in the workplace.

11	SBI3UI Biology	University	SNC2DI	Students will study theory and conduct investigations in the areas of biodiversity, evolution, genetic processes, the structure and function of animals and the anatomy, growth and function of plants. The course focuses on the theoretical aspects of the topics and helps students to refine skills for scientific investigation in future biology courses.
11	SCH3UI Chemistry	University	SNC2DI	The fundamental concepts of chemistry are studied in detail to develop the foundation for future chemistry courses. Students begin to explore the mathematical connection in chemistry. General topics studied include the properties of chemicals and chemical bonds, chemical reactions, solutions and solubility, and atmospheric chemistry.
11	SPH3UI Physics	University	SNC2DI	Students are introduced to the basic concepts of physics via Newton's Laws of Motion and an exploration of different forms of energy. They develop their scientific-inquiry skills as they predict and verify accepted laws and solve problems arising from investigations and everyday life.

Grade 12 Science offering are on the next page

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12	SBI4UI Biology	University	SBI3UI	A very in-depth study of biological systems including homeostasis, molecular biology, metabolic processes, biochemistry and population dynamics through a hands-on approach and investigations. SCH 3UI is an asset but not a prerequisite.
12	SCH4UI Chemistry	University	SCH3UI	Students broaden their knowledge of chemistry through new concepts in organic chemistry and atomic structure. Chemical systems and equilibrium are investigated and electrochemistry is explored. Laboratory skills are further developed in preparation for university.

12	SPH4UI Physics	University	SPH3UI	Students deepen their knowledge and understanding of the basic theories of physics. Students further develop their scientific-inquiry skills as they not only predict and verify accepted laws and solve problems arising from investigations and everyday life; but also learn how the interpretation of experimental data can provide evidence to support the development of a scientific model. This course may involve optional field trips related to course learning with related expenses in the range of \$50.00.
12	SCH4CI Chemistry	College	SNC2DI or SNC2PI	The fundamental concepts of chemistry are studied and investigated. A variety of lab techniques and skills necessary for data collection and scientific analysis are developed through such topics as organic chemistry, electrochemistry, chemical calculations and chemistry's role in the environment.
12	SPH4CI Physics	College	SNC2DI or SNC2PI	Students are introduced to the basic concepts of physics via Newton's Laws of Motion and an exploration of mechanical, electrical, fluid, and communication systems. They develop their scientific-inquiry skills as they predict and verify accepted laws and solve problems arising from many hands-on investigations. This course may involve optional field trips related to course learning with related expenses in the range of \$50.00.
12	SNC4EI Science	Workplace	SNC2PI	For those students who <u>do not intend</u> to pursue post-secondary education but are interested in science. Topics include chemistry at home and work, communication, medical technology, and the environment.