

# Grimsby District Secondary School

## Science

### Science

### SNC1D1

This course enables students to develop their understanding of basic concepts in biology, chemistry, earth and space science, and physics, and to relate science to technology, society, and the environment. Throughout the course, students will develop their skills in the processes of scientific investigation. Students will acquire an understanding of scientific theories and conduct investigations related to sustainable ecosystems; atomic and molecular structures and the properties of elements and compounds; the study of the universe and its properties and components; and the principles of electricity.

**CREDIT:** 1

**TYPE:** Academic

**GRADE:** 9

### Sciences

### SNC1DF

This course is part of the Extended French Package. This course is delivered in French and is the same curriculum as the Grade 9 Science - Academic course. For a more details review SNC1D1's course description.

**COURSE NOTE:** This courses is part of a package for students in the Extended French Program.

**CREDIT:** 1

**TYPE:** Academic

**GRADE:** 9

**COREQUISITES:** If you take this course, you must also take FEF1D1 - Extended French

If you take this course, you must also take CGC1DF - Géographie du Canada

If you take this course, you must also take MPM1DF - Mathématiques

If you take this course, you must also take ENG1D1 - English

### Science

### SNC1P1

This course enables students to develop their understanding of basic concepts in biology, chemistry, earth and space science, and physics, and to apply their knowledge of science to everyday situations. They are also given opportunities to develop practical skills related to scientific investigation. Students will plan and conduct investigations into practical problems and issues related to the impact of human activity on ecosystems; the structure and properties of elements and compounds; space exploration and the components of the universe; and static and current electricity.

**CREDIT:** 1

**TYPE:** Applied

**GRADE:** 9

### Science

### SNC2D1

This course enables students to enhance their understanding of concepts in biology, chemistry, earth and space science, and physics, and of the interrelationships between science, technology, society, and the environment. Students are also given opportunities to further develop their scientific investigation skills. Students will plan and conduct investigations and develop their understanding of scientific theories related to the connections between cells and systems in animals and plants; chemical reactions, with a particular focus on acid–base reactions; forces that affect climate and climate change; and the interaction of light and matter.

**CREDIT:** 1

**TYPE:** Academic

**GRADE:** 10

**PREREQUISITE:** SNC1D1 - Science **or** SNC1P1 - Science

### Sciences

### SNC2DF

This course is part of the Extended French Package. This course is delivered in French and is the same curriculum as the Grade 10 Science - Academic course. For a more details review SNC2D1's course description.

**COURSE NOTE:** This courses is part of a package for students in the Extended French Program.

**CREDIT:** 1

**TYPE:** Academic

**GRADE:** 10

**PREREQUISITE:** SNC1DF - Sciences

**COREQUISITES:** If you take this course, you must also take FEF2D1 - Extended French

If you take this course, you must also take MPM2DF - Mathématiques

If you take this course, you must also take CHC2DF - Histoire du Canada au XXe siècle

If you take this course, you must also take ENG2D1 - English

If you take this course, you must also take CHV2OH - Civics

If you take this course, you must also take GLC2OH - Career Studies

---

## Science

**SNC2P1**

This course enables students to develop a deeper understanding of concepts in biology, chemistry, earth and space science, and physics, and to apply their knowledge of science in real-world situations. Students are given opportunities to develop further practical skills in scientific investigation. Students will plan and conduct investigations into everyday problems and issues related to human cells and body systems; chemical reactions; factors affecting climate change; and the interaction of light and matter.

**CREDIT:** 1

**TYPE:** Applied

**GRADE:** 10

**PREREQUISITE:** SNC1D1 - Science **or** SNC1P1 - Science

---

## Biology

**SBI3C1**

This course focuses on the processes that occur in biological systems. Students will learn concepts and theories as they conduct investigations in the areas of cellular biology, microbiology, genetics, the anatomy of mammals, and the structure of plants and their role in the natural environment. Emphasis will be placed on the practical application of concepts, and on the skills needed for further study in various branches of the life sciences and related fields.

**CREDIT:** 1

**TYPE:** College

**GRADE:** 11

**PREREQUISITE:** SNC2D1 - Science **or** SNC2P1 - Science **or** SNC2DF - Sciences

---

## Biology

**SBI3U1**

This course furthers students' understanding of the processes that occur in biological systems. 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 under study, and helps students refine skills related to scientific investigation. If planning on taking Grade 12 Biology (SBI4U1) in the future Grade 11 Chemistry (SCH3U1) is recommended.

**CREDIT:** 1

**TYPE:** University

**GRADE:** 11

**PREREQUISITE:** SNC2D1 - Science **or** SNC2DF - Sciences

---

## Chemistry

**SCH3U1**

This course enables students to deepen their understanding of chemistry through the study of the properties of chemicals and chemical bonds; chemical reactions and quantitative relationships in those reactions; solutions and solubility; and atmospheric chemistry and the behaviour of gases. Students will further develop their analytical skills and investigate the qualitative and quantitative properties of matter, as well as the impact of some common chemical reactions on society and the environment.

**CREDIT:** 1

**TYPE:** University

**GRADE:** 11

**PREREQUISITE:** SNC2D1 - Science **or** SNC2DF - Sciences

---

## Physics

**SPH3U1**

This course develops students' understanding of the basic concepts of physics. Students will explore kinematics, with an emphasis on linear motion; different kinds of forces; energy transformations; the properties of mechanical waves and sound; and electricity and magnetism. They will enhance their scientific investigation skills as they test laws of physics. In addition, they will analyse the interrelationships between physics and technology, and consider the impact of technological applications of physics on society and the environment.

**COURSE NOTE:** It is recommended that students studying Grade 11 Physics (SPH3U1) would have achieved B+ in Grade 10 Academic Mathematics (MPM2D1).

**CREDIT:** 1

**TYPE:** University

**GRADE:** 11

**PREREQUISITE:** SNC2D1 - Science **or** SNC2DF - Sciences

---

## **Biology**

**SBI4U1**

This course provides students with the opportunity for in-depth study of the concepts and processes that occur in biological systems. Students will study theory and conduct investigations in the areas of biochemistry, metabolic processes, molecular genetics, homeostasis, and population dynamics. Emphasis will be placed on the achievement of detailed knowledge and the refinement of skills needed for further study in various branches of the life sciences and related fields.

**CREDIT:** 1

**TYPE:** University

**GRADE:** 12

**PREREQUISITE:** SBI3U1 - Biology

---

## **Chemistry**

**SCH4C1**

This course enables students to develop an understanding of chemistry through the study of matter and qualitative analysis, organic chemistry, electrochemistry, chemical calculations, and chemistry as it relates to the quality of the environment. Students will use a variety of laboratory techniques, develop skills in data collection and scientific analysis, and communicate scientific information using appropriate terminology. Emphasis will be placed on the role of chemistry in daily life and the effects of technological applications and processes on society and the environment.

**CREDIT:** 1

**TYPE:** College

**GRADE:** 12

**PREREQUISITE:** SNC2D1 - Science **or** SNC2P1 - Science **or** SNC2DF - Sciences

---

## **Chemistry**

**SCH4U1**

This course enables students to deepen their understanding of chemistry through the study of organic chemistry, the structure and properties of matter, energy changes and rates of reaction, equilibrium in chemical systems, and electrochemistry. Students will further develop their problem-solving and investigation skills as they investigate chemical processes, and will refine their ability to communicate scientific information. Emphasis will be placed on the importance of chemistry in everyday life and on evaluating the impact of chemical technology on the environment.

**CREDIT:** 1

**TYPE:** University

**GRADE:** 12

**PREREQUISITE:** SCH3U1 - Chemistry

---

## **Physics**

**SPH4C1**

This course develops students' understanding of the basic concepts of physics. Students will explore these concepts with respect to motion; mechanical, electrical, electromagnetic, energy transformation, hydraulic, and pneumatic systems; and the operation of commonly used tools and machines. They will develop their scientific investigation skills as they test 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.

**CREDIT:** 1

**TYPE:** College

**GRADE:** 12

**PREREQUISITE:** SNC2D1 - Science **or** SNC2P1 - Science **or** SNC2DF - Sciences

---

## **Physics**

**SPH4U1**

This course enables students to deepen their understanding of physics concepts and theories. Students will continue their exploration of energy transformations and the forces that affect motion, and will investigate electrical, gravitational, and magnetic fields and electromagnetic radiation. Students will also explore the wave nature of light, quantum mechanics, and special relativity. They will further develop their scientific investigation skills, learning, for example, how to analyse, qualitatively and quantitatively, data relating to a variety of physics concepts and principles. Students will also consider the impact of technological applications of physics on society and the environment.

**CREDIT:** 1

**TYPE:** University

**GRADE:** 12

**PREREQUISITE:** SPH3U1 - Physics