



BCI Science Department

Biology, Grade 11, University Preparation (SBI3UI)

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.

Prerequisite: Science, Grade 10, Academic

Biology, Grade 11, College Preparation (SBI3CI)

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.

Prerequisite: Science, Grade 10, Academic or Applied

Chemistry, Grade 11, University Preparation (SCH3UI)

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 behavior 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.

Prerequisite: Science, Grade 10, Academic

Environmental Science, Grade 11, University/College Preparation (SVN3MI)

This course provides students with the fundamental knowledge of and skills relating to environmental science that will help them succeed in life after secondary school. Students will explore a range of topics, including the role of science in addressing contemporary environmental challenges; the impact of the environment on human health; sustainable agriculture and forestry; the reduction and management of waste; and the conservation of energy. Students will increase their scientific and environmental literacy and examine the interrelationships between science, the environment, and society in a variety of areas.

Prerequisite: Science, Grade 10, Applied or Academic

Environmental Science, Grade 11, Workplace Preparation (SVN3EI)

This course provides students with the fundamental knowledge of and skills relating to environmental science that will help them succeed in work and life after secondary school. Students will explore a range of topics, including 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.

Prerequisite: Science, Grade 9, Academic or Applied, or a Grade 9 or 10 locally developed compulsory credit (LDCC) course in science

Physics, Grade 11, University Preparation (SPH3UI)

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.

Prerequisite: Science, Grade 10, Academic

Advanced Placement Courses (SBI 4UX, SCH 4UX, SPH 4UX)

An Advanced Placement program is offered in Biology, Chemistry and Physics at the Grade 12 level. Students must take the Grade 11 University Level prerequisites in order to register for these courses.

The content of each AP course is an enrichment of the Ontario curriculum offered at Bluevale.

Any student registered in University Level Biology, Chemistry or Physics can also choose to write an AP exam.

To prepare for the AP exam a student workbook must be purchased.

A student may purchase the workbook while in Grade 11 or Grade 12.

