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Science Program 200.B0

Science Options - Health Science or Pure & Applied Science

About the program:

The two-year pre-university Science Program prepares you for university admission to various Science Programs. At Champlain, we have found that the best way for students to succeed is by making them part of their courses and studying scientific problems the way professional scientists do. The Biology Department offers courses that will allow you to develop traditional laboratory skills while also experiencing scientific investigations in the field. In Chemistry, you will practice what you learn thanks to a significant lab component in each course. In Physics, you will be exposed to a variety of teaching techniques (demonstrations, interactive computer programs and videos, use of telescopes, etc.) to illustrate and show applications of the concepts being learnt and to actively engage you in the classroom and at home. In Mathematics, you will delve into advanced concepts and problem-solving techniques, honing your analytical skills and logical reasoning abilities.

Science Options – Health Science or Pure & Applied

Champlain offers two distinct streams of scientific study: Health Science and Pure & Applied Science. Each stream gives students a solid foundation in biology, chemistry, mathematics, and physics. Health Science includes additional instruction in biology and chemistry to better prepare graduates for university study in medicine and health science research programs. Students in Pure & Applied Science have more flexibility in their studies and can choose from additional science credits to better suit their academic ambitions.

Application Deadline:	March 1^{st} for the Fall Semester November 1^{st} for the Winter Semester
Minimum Admission Requirements:	Quebec Secondary School Diploma or a level of education that is deemed equivalent by the College. Even if applicants meet the requirement of the Réglement sur le régime des études collégiale, they may be refused admission due to lack of space.
Prerequisites:	Mathematics TS 5 or SN 5, Secondary 5 Chemistry, Secondary 5 Physics

Science Options

Health Science - The Possibilities

Dietetics, Pharmacy, Optometry, Biology, Forensics, Nursing, Nutrition, Biochemistry, Education, Dentistry, Microbiology & Immunology, Biotechnology, Chemistry, Occupational Therapy, Veterinary Medicine, Psychology (B.Sc.), Physiotherapy, Experimental Medicine.

Pure & Applied - The Possibilities

Agronomy, Chemical Engineering, Architecture, Mathematics (B.Sc.), Agricukytre, Chemistry, Forestry, Physics (B.Sc.), Engineering, Computer Science, Geology.

Facilities

The Chemistry Department has four well equipped labs furnished with tools for classical chemical measurements and sophisticated technological analysis. In their chemistry courses, students will master valuable classical techniques such as titration, distillation, and solvent extraction as well as modern analyses such as spectrophotometry, gas chromatography and computer aided measurements. A hands-on approach in the chemistry lab allows students to directly observe concepts studied in the classroom and see immediate results.

The Physics Department has four fully equipped labs, three used by students for standard experiments, and one for special projects. The labs are equipped with the latest computerized data collection and analysis tools to enhance your experimental skills. Each lab workstation has a computer and sophisticated sensors and data acquisition devices that allow you to see the outcome of your work immediately.

Students in the Biology Department have hands-on experience with new equipment such as compound and stereo-

microscopes, gel electrophoresis units, and thermocyclers for gene amplification techniques. Labs provide the opportunity to handle live specimens such as fruit flies in genetic studies, pond microbes in ecological assessments, mammalian dissections to explore and compare other forms of life to the human body, and delicate manipulations using an aseptic technique of plant tissue while exploring tissue culture methods.

Off-Campus Activities

Studying and understanding the various ecological systems in our environment is an essential aspect of our Biology labs. Environmental studies at Champlain College Saint-Lambert provide students with the benefits of experiencing light fieldwork during their studies, focusing on water analysis from the St. Lawrence River. Students will become aware of and understand problems dealing with pollution and sustainability. Students have other opportunities to observe life outside of the lab during structured activities and data collection at the Botanical Gardens and the Biodôme, opening their eyes to the similarities and differences observed in the diverse living world.

For off-campus astronomical observations, the physics department has more than forty portable telescopes that can be borrowed by students.