# Science

# **ENRICHED PURE AND APPLIED SCIENCE**



# www.dawsoncollege.qc.ca/enriched-pure-applied

## If you would like to:

- Be part of a small and super committed learning community
- Go beyond the Pure and Applied Science curriculum and challenge yourself
- Learn outside the classroom through extracurricular activities
- Participate in field trips to world-class research facilities
- Conduct original research with Dawson teachers
- Be well prepared for university studies in life sciences, medicine, ecology or environmental sciences

Then the Enriched Pure and Applied Science Profile could be for you. Explore, research and discover what interests you most in the vast world of science. The Pure and Applied Science Profile offers exposure to many disciplines in the first year. In the second year, students can go deeper into topics of particular interest, such as ecology and the environment, engineering, and computer science. The Integrative Project is another opportunity to choose what you wish to learn.

#### What will you learn?

- To think like a scientist
- To employ a scientific method
- To read and analyze scientific publications
- To choose and appropriately use digital technologies to support learning, to present content, to model, to simulate and to program
- To design and implement a scientific project
- To collect, analyze and communicate experimental data
- To solve complex problems

The program exposes students to another side of science not usually covered in the curriculum, such as aspects of Research and Development and applications of science in solving real-world problems.

— Lucas C.

#### Where will this program lead you?

Graduates of this profile are well prepared for a wide variety of university studies, such as engineering, physics, mathematics, or computer science.

#### What do you need to apply?

- Secondary V Chemistry
- Secondary V Physics
- Secondary V Mathematics: Technical & Scientific option (TS) or Science option (SN)

#### **Application Deadline**

March 1

## Selection of Science Option Courses

Pure and Applied Science students will choose two option courses from this list. Please note that not all courses are offered every year.

- Human Anatomy and Physiology
- Field and Community Ecology
- Biotechnology
- Topics in Biology
- Multivariable Calculus
- Discrete Mathematics
- Linear Algebra 2
- Topics in Mathematics
- Organic Chemistry
- Environmental Chemistry
- Forensic Chemistry
- Organic Chemistry 2
- Topics in Chemistry
- Astrophysics
- Engineering Physics
- Medical Physics
- Topics in Physics
- Physical Geology
- Topics in Geology
- Programming in Science 2
- Programming for Data Science
- Algorithms: Real World Applications
- Topics in Computer Science
- Applied Mathematics in Science
- Topics in Science

## LIST OF SPECIFIC COURSES

All students must also take General Education courses such as English, French, Humanities and Physical Education, in addition to complementary courses.

Year 1 • Term 1	Year 2 • Term 3
<ul> <li>Calculus I</li> <li>Mechanics</li> <li>Programming in Science</li> <li>Ecology and Evolution</li> </ul>	<ul> <li>Probability and Statistics</li> <li>Waves and Modern Physics</li> <li>Choice (2): Linear Algebra, Cellular Biology, Chemistry of Solutions, Option Course</li> </ul>
Year 1 • Term 2	Year 2 • Term 4
<ul> <li>General Chemistry</li> <li>Calculus II</li> <li>Electricity and Magnetism</li> </ul>	<ul> <li>Choice (2): Linear Algebra, Cellular Biology, Chemistry of Solutions, Option Course</li> <li>Choice (1): Option Course</li> <li>Integrative Project</li> </ul>



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The information contained in this document was accurate and complete at the time of printing.

