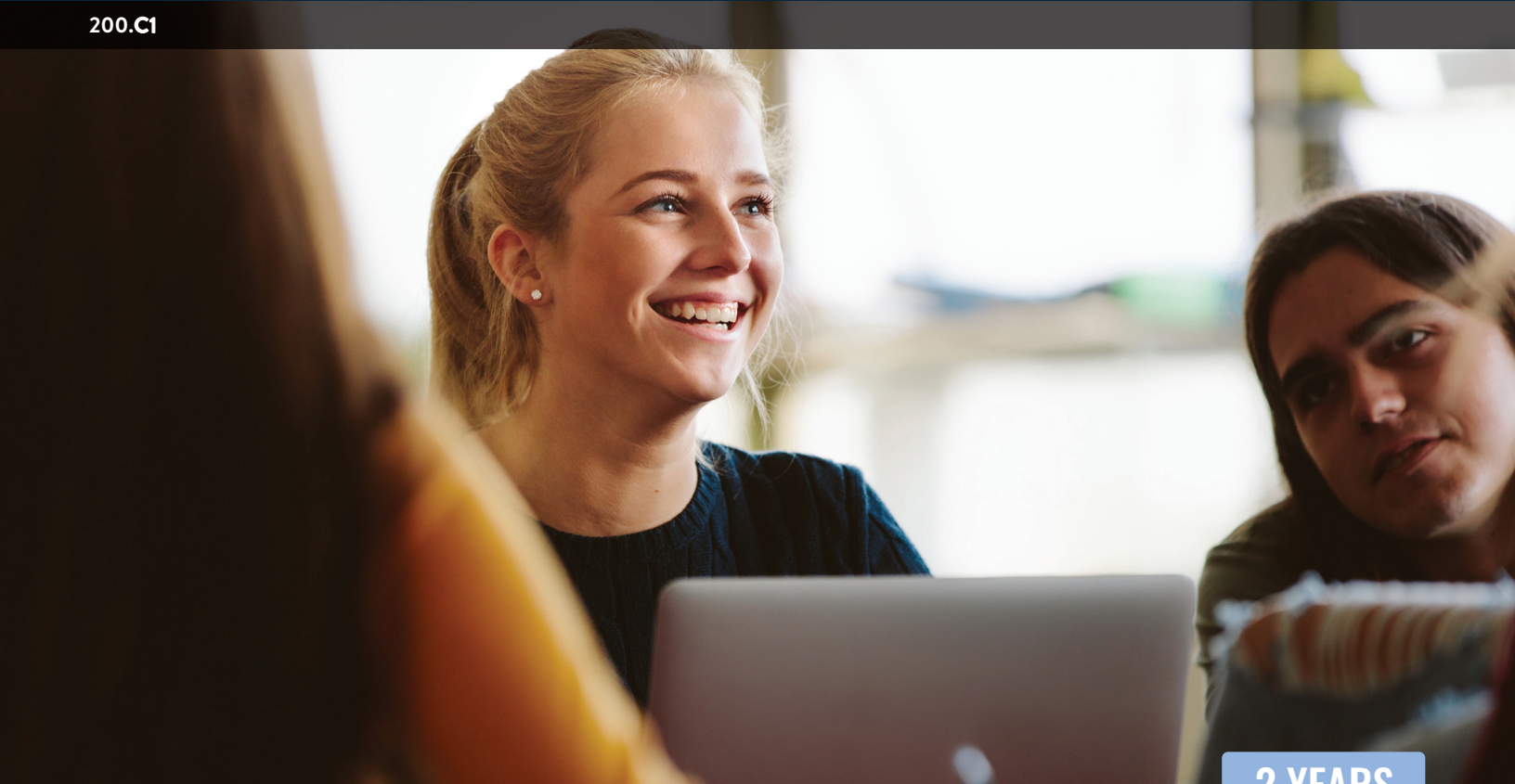


**NEW**

# SCIENCE, COMPUTER SCIENCE AND MATHEMATICS

200.C1

**2 YEARS**

[www.dawsoncollege.qc.ca/science-computer-science-and-math](http://www.dawsoncollege.qc.ca/science-computer-science-and-math)

## If you would like to:

- Have an excellent preparation for university studies in computer science, mathematics, engineering or related field
- Learn about science while developing programming skills
- Explore various disciplines in science and have courses in computer science every semester
- Belong to a learning community of students who are just as passionate about programming and scientific research as you
- Be part of something brand new at Dawson

**Then the Science, Computer Science and Mathematics Program could be for you.**



Scientists in today's world need to be agile problem solvers who can work collaboratively and adapt to changing needs. This pre-university program provides a tight-knit community for students passionate about computer science, mathematics, and engineering, offering them the opportunity to cultivate these essential skills.

— Ben Seamone, Program Coordinator

This brand-new two-year pre-university program at Dawson is designed for students who do not want to choose between their two passions of science and computer science. The disciplines of math and physics are emphasized and there are four courses in computer science, including a Integrative Project course combining computer science with another science discipline.

## What will you learn?

- To integrate and synthesize appropriate disciplinary knowledge to identify and analyze questions in a scientific context
- To employ a scientific method, demonstrating structured thinking, academic rigour, and critical judgment
- To read and analyze scientific publications and technical documentation
- To apply computational skills and computer programming to explore and solve scientific problems, perform experiments, analyze data, and present results
- To choose and appropriately use digital technologies to support their learning, including tools for research, presenting content and processing information, as well as specialized applications to model and simulate in a scientific context
- To design and implement a scientific project

### Where will this program lead you?

This program prepares students for university studies in computer science and mathematics as well as in several fields in engineering and pure and applied sciences.

### 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

### What else should you know?

All students in the second year will complete a 75-hour course, Integrative Project in Computer Science and Mathematics (IP), taught by Computer Science. Students will need to design, implement, and present the results of a programming project, including concepts learned in another Science discipline (mathematics, physics, or chemistry). Projects are to be completed by groups but student assessment must be done for each individual student.



### 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  | Term 3  |
|---|---|
| <ul style="list-style-type: none"><li>▪ Differential Calculus</li><li>▪ Discrete Mathematics</li><li>▪ Introduction to Programming</li></ul>        | <ul style="list-style-type: none"><li>▪ Probability and Statistics</li><li>▪ Electricity and Magnetism</li><li>▪ General Chemistry</li><li>▪ Program Development in a Graphical Environment</li></ul> |
| Term 2  | Term 4  |
| <ul style="list-style-type: none"><li>▪ Integral Calculus</li><li>▪ Mechanics</li><li>▪ Data Structures and Objected Oriented Programming</li></ul> | <ul style="list-style-type: none"><li>▪ Linear Algebra and Vector Geometry</li><li>▪ Waves and Modern Physics</li><li>▪ Integrative Project in Computer Science and Mathematics</li></ul>             |

#### YEAR 2