

# Bachelor of Computer Science (BCMS)

Version 7

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## **Program Overview:**

The Bachelor of Computer Science degree program will prepare you to become a resilient, flexible and agile professional who thrives in an increasingly evolving technology environment.

This innovative three-year degree program offers a unique focus on inclusion (including equity, diversity and accessibility), and blends comprehensive technical studies with experiential career-focused learning opportunities. You will explore various areas of computer science, including user interface design, cybersecurity, cloud computing, machine learning, infrastructures, application development and more.

In addition to technical skills and theoretical knowledge in computer science, this program will provide you with core transferable, cross-functional skills, such as creative problem solving and business and technical writing through case analysis and industry projects. You will have the opportunity to gain further industry experience through the program's mandatory work term, which is designed to connect theoretical understanding with practical experience across various computer science disciplines. This degree program's unique focus on inclusion and accessibility will also help you leverage diverse perspectives to develop innovative solutions and work within different team settings.

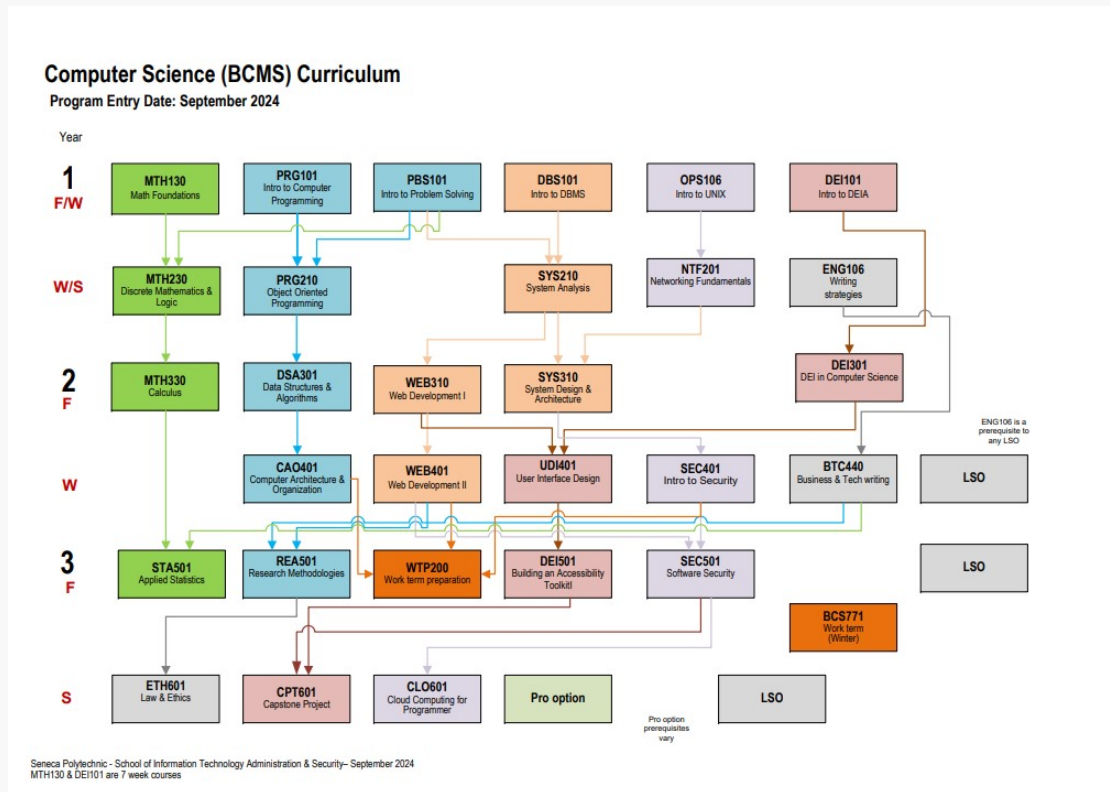
### **Mandatory Degree Co-op:**

A work experience that includes at least one term in a formal work environment. In most cases the work term(s) is a paid position that is completed between two academic semesters and requires a minimum of 420 hours of work. Students must be in good standing and meet all identified requirements prior to participating in the work experience. The successful completion of the co-op work term(s) is required for graduation. Eligibility for participation does not guarantee that a work position will be secured. Additional fees are required for those participating in the mandatory co-op stream regardless of success in securing a work position.

|                     |                              |
|---------------------|------------------------------|
| Program Code:       | BCMS                         |
| Credential Awarded: | Bachelor of Computer Science |
| Campus:             | Newnham                      |

|              |                                |
|--------------|--------------------------------|
| Duration:    | 3 years (6 academic semesters) |
| Start Dates: | Winter/Fall                    |

## Program Map



## Curriculum

### Map

#### Program Curriculum and Pre-Requisite Planner

#### Program Learning Outcomes:

As a graduate, you will be prepared to reliably demonstrate the ability to:

- Apply professional ethics, accountability, and equity to computer science principles to promote diversity and cultivate inclusion within global and social contexts.
- Design and implement secure solutions to support the virtual infrastructure and application development needs for the project.
- Analyze problems to create and implement solutions within the limitations of computer science.
- Design and develop robust software systems that meet functional and non-functional requirements for multiple industries and technical ecosystems.

- Design and build human-centred applications that enhance user experience and support clients in achieving business goals.
- Create and validate business solutions using mathematical foundations, algorithmic principles, and critical thinking skills.
- Demonstrate interpersonal, team building and leadership skills, while participating in a variety of work environments.
- Develop critical thinking and research practices to facilitate lifelong learning for personal and professional development.
- Apply knowledge of database design and management to support software development processes.
- Communicate complex information using a variety of formats to audiences with different levels of technical knowledge.

#### Pathway options

As a Seneca student, explore pathway options from your current program to the Bachelor of Computer Science program.

[Computer Engineering Technology](#)

[Computer Programming & Analysis](#)

[Computer Programming](#)

#### Related Programs

[Honours Bachelor of Information Technology – Cybersecurity](#)

[Honours Bachelor of Information Technology Design and Management](#)

**To learn more about the program, please visit the school's page.** [School of Computer Programming & Analysis](#)

tags : bcms, scpa