BACHELOR OF APPLIED COMPUTING (BAAC)

Step confidently into the future of technology

If you enjoy digging into both why and how things work in the fast-paced world of tech, a career in applied computing may be for you. As the only program of its kind in northern Ontario, the Bachelor of Applied Computing offers a unique opportunity to gain the industry skills and experience employers are seeking to stand out in a competitive industry.

In your first two years, you'll build a strong foundation in computer science principles while gaining hands-on experience through applied learning. By your third year, you'll choose one of three specializations that aligns with your interests and career goals: Artificial Intelligence, Cybersecurity, or Data Analytics.

A paid internship will round out your studies and put your research and#analysis skills to work while you form valuable industry connections that can help launch your career.

Program highlights

- First and only college in northern Ontario to offer a degree in applied computing
- Specializations are unique to our program – choose to gain a deeper understanding of artificial intelligence, cybersecurity, or data analytics
- Hands-on applied learning will make you career-ready
- One semester paid internship
- Entrance scholarships – up to $2,000
- Ability to pursue a master's degree upon graduation

Program of study for the 2026-27 Academic Year

After a common first 2 years, students will select a specialized stream according to their desired areas of interest. Students will choose to deepen their understanding of Artificial Intelligence, Cybersecurity or Data Analytics. The program of study for semesters 5 on-ward are outlined under Program Streams.

First Year		
Semester 1		**Credits**
ANA 3720	Discrete Math	3
CMP 1301	IT Essentials	3
CMP 1311	Principles of Programming	3
CMP 1360	Technical Writing	3
CMP 1361	Professional Ethics	3
NET 1311	Fundamentals of Networking	3
	Credits	**18**
Semester 2		
CMP 2312	Object Oriented Programming	3
CMP 2331	Intro to Software Engineering	3
CMP 2341	Database Systems	3
CMP 4301	Computer Systems Architecture	3
MTH 3301	Statistics	3
NET 2312	IoT Fundamentals	3
	Credits	**18**
Second Year		
Semester 3		
ANA 3301	Intro to Data Analysis	3
CMP 3321	Web Development I	3
CMP 3332	System Analysis and Design	3
CMP 3351	Data Structures and Algorithms	3
MTH 2302	Applied Mathematics	3
NET 3313	Intro to Cybersecurity	3
	Credits	**18**
Semester 4		
CMP 2301	Operating Systems	3
CMP 4322	Web Development II	3
AIE 4301	Intro to AI	3
CMP 4333	Modern Software Testing	3
NET 4314	Cloud Computing	3
One Degree Breadth Elective Course [1]		3
	Credits	**18**
	Total Credits	**72**

[1] Students must select a total of two (2) degree breadth electives from at least two (2) different categories as part of the Bachelor Applied Computing program. One (1) breadth elective must be an advanced/upper-level course (represented by course codes beginning in 39xx). These upper-level courses are only available in Year 3 of the program.
For more information regarding degree breadth electives, click here (https://catalog.cambriancollege.ca/degreeelectives/).

Specializations

After a common first 2 years, students will select a specialized stream according to their desired areas of interest. Students will choose to deepen their understanding of Artificial Intelligence, Cybersecurity or Data Analytics.

Artificial Intelligence

Program of study for semesters 5-7

Third Year		
Semester 5		**Credits**
CMP 5334	Project Management	3
CMP 5371	Project Proposal	3
AIE 1005	Full Stack Data Science	3
AIE 1006	Deep Learning	3
AIE 1009	Machine Learning	3
One Degree Breadth Elective Course [1]		3
	Credits	**18**
Semester 6		
CMP 6362	Business Essentials	3
CMP 6372	Project Implementation	3
AIE 1007	Natural Language Processing	3
AIE 1008	Image Recognition	3
AIE 1011	AI Ethics	3
AIE 1017	Generative AI and Large Language Models	3
	Credits	**18**

Semester 7		
CMP 7373	Applied Computing Internship	12
	Credits	**12**
	Total Credits	**48**

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Cybersecurity

Program of study for semesters 5-7

Third Year		
Semester 5		**Credits**
CMP 5334	Project Management	3
CMP 5371	Project Proposal	3
CSC 7303	Network Defense	3
CSC 7304	Business Contingency Planning	3
CSC 7305	CSEC Policies and Compliance	3
One Degree Breadth Elective Course [1]		3
	Credits	**18**
Semester 6		
CMP 6362	Business Essentials	3
CMP 6372	Project Implementation	3
CSC 7310	IT Security Forensics	3
CSC 7311	Ethical Hacking	3
CSC 7314	Cloud Security and Prevention	3
CSC 7315	Security Operations Centre	3
	Credits	**18**
Semester 7		
CMP 7373	Applied Computing Internship	12
	Credits	**12**
	Total Credits	**48**

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Data Analytics

Program of study for semesters 5-7

Third Year		
Semester 5		**Credits**
CMP 5334	Project Management	3
CMP 5371	Project Proposal	3
AIE 1009	Machine Learning	3
ANA 7303	Data Collection and Ethics	3
ANA 7312	GIS and Data Visualization	3
One Degree Breadth Elective Course [1]		3
	Credits	**18**
Semester 6		
CMP 6362	Business Essentials	3
CMP 6372	Project Implementation	3
ANA 7304	Dashboards and Data Modelling	3
ANA 7311	Storytelling with Data	3
MKT 7300	Data Mining and Mkt Analytics	3
QMM 7311	Advanced Stats for Analytics	3
	Credits	**18**
Semester 7		
CMP 7373	Applied Computing Internship	12
	Credits	**12**
	Total Credits	**48**

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Admission requirements

To be eligible to enter the Bachelor of Applied Computing program, applicants must be graduates of the Ontario Secondary School Diploma (OSSD; 30 credits) (or equivalent), must complete at least six grade 12 U/M courses (or equivalent) with a minimum overall average of 65%, including two (2) required U-level courses and four (4) additional U or M-level courses. Alternatively, applicants must meet mature student status.

The following are the program-specific prerequisite requirements:

- Any grade 12 English (U) (minimum 65%)
- One (1) Grade 12 Mathematics course from the following: Calculus and Vectors (MCV4U) OR Advanced Functions (MHF4U) OR Mathematics of Data Management (MDM4U) (minimum 65%)
- Four (4) other Grade 12 U or M courses

Program delivery

2026-2027

Fall term start

SEMESTER 1: Fall 2026
SEMESTER 2: Winter 2027
SEMESTER 3: Fall 2027
SEMESTER 4: Winter 2028
SEMESTER 5: Fall 2028
SEMESTER 6: Winter 2029
SEMESTER 7: Spring 2029

Specific program pathways

College/university degree opportunities

Graduates from this program may continue their studies at college/university and may receive credit for their prior College education.

Refer to (https://cambriancollege.ca/supports-services/articulation-agreements/universities-in-canada/)College/University Agreements for further information.

Employment opportunities

Potential employment opportunities include:

- Application developer
- Full-stack developer
- Software engineer or designer
- IT project coordinator
- Information systems analyst/consultant
- Information security specialist
- SOC analyst/security analyst
- Malware analyst
- Cloud security specialist
- Machine learning engineer
- Data scientist
- Data or business analyst
- Data miner
- Networking administrator
- Database administrator or analyst

Contacts

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