

APPLIED ARTIFICIAL INTELLIGENCE

Program: AIAI

Credential: Ontario College Diploma

Delivery: Full-time

Length: 4 Semesters

Duration: 2 Years

Effective: Fall 2027

Location: Barrie Downtown

Description

The Applied Artificial Intelligence diploma provides a comprehensive foundation in the principles and practices that enable intelligent systems to support data-driven innovation. As a student in this program, you'll learn to collect, interpret, and analyze data, design and deploy AI solutions, and evaluate outcomes for performance, reliability, and ethical compliance. You'll focus on integrating analytical reasoning, communication, and decision-making to address real-world business and societal challenges such as innovation, resource optimization, efficiency, and sustainability.

As a graduate, you'll be an adaptable problem-solver capable of applying AI responsibly and ethically within dynamic organizations and technological contexts. You'll apply your skills across the AI lifecycle from data preparation, model design, deployment, governance, and continuous improvement while maintaining transparency, accountability, and inclusivity in all aspects of intelligent system development.

Career Opportunities

Graduates of the Applied Artificial Intelligence diploma will be well-prepared to pursue a range of high-demand roles at an entry-level. These roles may involve the design, training, and deployment of AI and machine learning models, as well as the development of intelligent applications that solve real-world problems using automation and algorithmic reasoning. Job types may include:

- Applied AI Developer (Junior)
- Data Science Analyst (Junior)
- Machine Learning Developer
- AI Data Integration Specialist
- Intelligent Systems Integrator
- AI Application Developer

Program Learning Outcomes

The graduate has reliably demonstrated the ability to:

1. prepare and evaluate data sets to propose and automate solutions in industry-specific applications;
2. use the results of statistical and analytical techniques to support decision making;
3. clean and preprocess data to support the development and deployment of machine learning models;
4. create data visualizations to communicate analytical findings to diverse audiences for the purposes of organizational planning and decision-making;

5. select data architecture and storage solutions to support the deployment and scalability of AI-driven analytics in organizational projects;
6. manage AI project lifecycles to meet client timelines and budget requirements;
7. safeguard privacy, confidentiality, and data integrity of user information when implementing AI solutions in organizational settings;
8. collect and record requirements from clients and users to guide the development of artificial intelligence systems;
9. implement and maintain AI and data archiving systems to support business process efficiency and compliance;
10. design and train AI models to address client or project requirements and to evaluate results against objectives;
11. create and deploy intelligent systems to support data-driven decision-making;
12. interpret system performance data to propose actionable solutions that enhance the accuracy and reliability of AI-driven processes.

Program Progression

The following reflects the planned progression for full-time offerings of the program.

Fall Intake

- **Sem 1:** Fall 2027
- **Sem 2:** Winter 2028
- **Sem 3:** Fall 2028
- **Sem 4:** Winter 2029

Admission Requirements

- Ontario Secondary School Diploma (OSSD) or equivalent, mature student status
- Grade 12 English (C or U)
- Grade 12 Mathematics (C or U)

Mature students, non-secondary school applicants (19 years or older), and home school applicants may also be considered for admission. Eligibility may be met by applicants who have taken equivalent courses, upgrading, completed their GED, and equivalency testing. For complete details refer to: www.georgiancollege.ca/admissions/academic-regulations/ (<https://www.georgiancollege.ca/admissions/academic-regulations/>)

Applicants who have taken courses from a recognized and accredited post-secondary institution and/or have relevant life/learning experience may also be considered for admission; refer to the Credit for Prior Learning website for details: www.georgiancollege.ca/admissions/credit-transfer/ (<https://www.georgiancollege.ca/admissions/credit-transfer/>)

Additional Information

To be successful in this program, students are required to have a Windows-based personal notebook computer prior to the start of the program that meets or exceeds the following hardware specifications:

- Intel i7 processor or AMD A 10 processor or better (GPU processor)
- 16 GB of memory (32GB recommended)

- 1 TB hard drive (SSD recommended)
- Ethernet Network Card (Can be USB)
- Wireless Network Card
- 2 USB 3.0 ports

Bring Your Own Device (BYOD) requirements

All Georgian College students are required to bring their own device (BYOD) (<https://georgiancollege.ca/byod/>) that meets the technology requirements (<https://georgiancollege.ca/byod/>) for their program. Having access to a personal laptop that meets your program's technical requirements will ensure you're prepared for in-class, online and hybrid learning activities. Students are responsible for the cost, software installation, maintenance and repair of their device.

Graduation Requirements

22 Core Courses

1 Communication Course

3 General Education Courses

1 Capstone Project

Graduation Eligibility

To graduate from this program, the passing weighted average for promotion through each semester, from year to year, and to graduate is 60%. Additionally, a student must attain a minimum of 50% or a letter grade of P (Pass) or S (Satisfactory) in each course in each semester unless otherwise stated on the course outline.

Program Tracking

The following reflects the planned course sequence for full-time offerings of the Fall intake of the program. Where more than one intake is offered contact the program co-ordinator for the program tracking.

Semester 1		Hours
Program Courses		
AIAI 1000	AI Ethics	28
COMP 1127	Data Management for AI	42
COMP 1128	Data Visualization	42
COMP 1129	Principles of AI Programming	42
MATH 1054	Mathematics and Statistics for AI	56
Communications Course		
COMM 1016	Communication Essentials	42
Hours		252
Semester 2		
Program Courses		
AIAI 1001	AI Business Processes	42
AIAI 1002	AI for Business	42
AIAI 1003	AI Deployment and Integration	42
AIAI 1004	AI Model Optimization	42
AIAI 1005	Deep Learning Frameworks	42
COMP 1130	AI Infrastructure and Data Systems	42
General Education		
Select 1 course from the General Education list during registration.		42
Hours		294
Semester 3		
Program Courses		
AIAI 2000	Conversational Intelligence	42
AIAI 2001	Generative AI and Foundation Models	42
AIAI 2002	Interdisciplinary AI	42
AIAI 2003	Project Management for AI	42

AIAI 2004	Visual Intelligence	42
BUSI 2026	Business and Social Analytics	42
General Education		
Select 1 course from the General Education list during registration.		42
Hours		294
Semester 4		
Program Courses		
AIAI 2005	AI and Robotics Applications	42
AIAI 2006	AI Security	28
AIAI 2007	Applied AI Agents	42
AIAI 2008	Cloud Solutions for AI	28
AIAI 2009	Emerging AI	42
Capstone Project		
AIAI 2010	Capstone Project	56
General Education		
Select 1 course from the General Education list during registration.		42
Hours		280
Total Hours		1120

Graduation Window

Students unable to adhere to the program duration of two years (as stated above) may take a maximum of four years to complete their credential. After this time, students must be re-admitted into the program, and follow the curriculum in place at the time of re-admission.

Disclaimer. *The information in this document is correct at the time of publication. Academic content of programs and courses is revised on an ongoing basis to ensure relevance to changing educational objectives and employment market needs.*

Program outlines may be subject to change in response to emerging situations, in order to facilitate student achievement of the learning outcomes required for graduation. Components such as courses, progression, coop work terms, placements, internships and other requirements may be delivered differently than published.