ARCHITECTURAL TECHNOLOGY

Program: ARTE
Credential: Ontario College Advanced Diploma, Co-op
Delivery: Full-time
Work Integrated Learning: 2 Co-op Work Terms
Length: 6 Semesters, plus 2 work terms
Duration: 3 Years
Effective: Fall 2023, Winter 2024
Location: Barrie

Description

Students in this program prepare for work with architects, engineers, designers, and project managers as an integral part of the team developing, presenting, and executing building designs. The program equips a student with comprehensive understanding of current competitive architectural and construction environments that challenge professionals in the field, including traditional and emerging construction technologies and materials, the current codes and standards, and business and entrepreneurial essential strategies. Various aspects of architectural design are present in a continuous stream throughout the curriculum, starting from design fundamentals and ending in the third year with the two-semester major architectural project. These projects are supported by courses dedicated to industry-standard computer applications, such as Autodesk® AutoCAD® and Revit®, and leading-edge technologies related to Building Information Modeling, such as virtual reality and building scanning.

Career Opportunities

Graduates may find work in the private sector as assistants in architectural design offices, construction engineering or construction site offices. They may also find employment as estimators, purchasers, quantity surveyors or architectural / structural modelers, drafters, or detailers, using the latest CAD technology. In the public sector, they may find employment in many government agencies, as building inspectors, plans examiners, chief building officials, zoning examiners, and building code advisors.

Program Learning Outcomes

The graduate has reliably demonstrated the ability to:

1. communicate with clients, contractors, other building professionals, and approval authorities;
2. prepare, read, interpret, and revise drawings, and other graphical representations used in building projects;
3. obtain, analyze, prepare, and revise specifications and other project documents used in design and construction;
4. prepare estimates of time, costs, and quantity, and participate in the tendering process;
5. solve technical problems related to building projects through the application of principles of building science and mathematics;
6. collaborate with and coordinate information from structural, mechanical, and electrical building systems professionals;
7. contribute to the design of architectural projects;
8. contribute to the analysis, planning, and preparation of site planning documents;
9. comply with the legal and ethical requirements of an architectural technologist in the practice of building design and construction;
10. assess buildings and their interiors, and make recommendations for their repurposing and renovation;
11. ensure personal safety and contribute to the safety of others in the workplace;
12. participate in sustainable design and building practices;
13. use and evaluate current and emerging technology to support building projects;
14. assist in the planning, scheduling, and monitoring of building projects;
15. apply business principles to design and building practices;
16. apply basic entrepreneurial strategies to identify and respond to new opportunities.

Practical Experience

All co-operative education programs at Georgian contain mandatory work term experiences aligned with program learning outcomes. Co-op work terms are designed to integrate academic learning with work experience, supporting the development of industry specific competencies and employability skills.

Georgian College holds membership with, and endeavours to follow, the co-operative education guidelines set out by the Co-operative Education and Work Integrated Learning Canada (CEWIL) and Experiential and Work-Integrated Ontario (EWO) as supported by the Ministry of Colleges and Universities.

Co-op is facilitated as a supported, competitive job search process. Students are required to complete a Co-op and Career Preparation course scheduled prior to their first co-op work term. Students engage in an active co-op job search that includes applying to positions posted by Co-op Consultants, and personal networking. Co-op work terms are scheduled according to a formal sequence that alternates academic and co-op semesters as shown in the program progression below.

Programs may have additional requirements such as a valid driver's license, strong communication skills, industry specific certifications, and ability to travel. Under exceptional circumstances, a student may be unable to complete the program progression as shown below. Please refer to Georgian College Academic Regulations for details.

International co-op work terms are supported and encouraged, when aligned with program requirements.

Further information on co-op services can be found at www.GeorgianCollege.ca/co-op (https://www.georgiancollege.ca/co-op/)

External Recognition

This program is accredited by the Canadian Association for Co-operative Education.

Program Progression

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

Fall Intake

- **Sem 1:** Fall 2023
- **Sem 2:** Winter 2024
- **Work Term 1:** Summer 2024
- **Sem 3:** Fall 2024
- **Sem 4:** Summer 2025
- **Work Term 2:** Fall 2025
- **Sem 5:** Winter 2026
- **Sem 6:** Summer 2026

Winter Intake

- **Sem 1:** Winter 2024
- **Sem 2:** Summer 2024
- **Sem 3:** Fall 2024
- **Work Term 1:** Winter 2025
- **Sem 4:** Summer 2025
- **Work Term 2:** Fall 2025
- **Sem 5:** Winter 2026
- **Sem 6:** Summer 2026

Articulation

A number of articulation agreements have been negotiated with universities and other institutions across Canada, North America and internationally. These agreements are assessed, revised and updated on a regular basis. Please contact the program co-ordinator for specific details if you are interested in pursuing such an option. Additional information can be found on our website at https://www.georgiancollege.ca/admissions/credit-transfer/ (http://www.georgiancollege.ca/admissions/credit-transfer/)

Admission Requirements

OSSD or equivalent with

- 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/)

Graduation Requirements

43 Program Courses
2 Communications Courses
3 General Education Courses
2 Co-op Work Terms

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		
ARCH 1000	Architectural Design - Fundamentals	42
ARCH 1001	Quantity Surveying 1	42
ARCH 1005	Architectural Drafting 1	42
CONS 1005	Construction Technology - Structures	42
ENVR 1008	Architecture and the Environment	42
MATH 1028	Mathematics for Constructions	42
SURV 1002	Surveying	42
Communications Course		
Select 1 course from the communications list during registration.		42
	Hours	**336**
Semester 2		
Program Courses		
ARCH 1002	Architectural Design - Residential	42
ARCH 1003	Quantity Surveying 2	42
ARCH 1006	Architectural Drafting 2	42
ARCH 1007	Drawing for Architecture	42
ARCH 2002	Architectural Codes and Standards 1	42
CONS 1006	Construction Technology: Interiors	42
MGMT 1002	Productivity Tools	42
Communications Course		
Select 1 course from the communications list during registration.		42
	Hours	**336**
Semester 3		
Program Courses		
ARCH 2000	Architectural Design - Commercial	42
ARCH 2004	Architectural Drafting 3	42
ARCH 2005	Architectural Codes and Standards 2	42
CONS 2005	Construction Technology: Building Envelope	42
CONS 3005	Building Services	42
MENG 2016	Statics	42
General Education Courses		
Select 2 courses from the general education list during registration.		84
	Hours	**336**
Semester 4		
Program Courses		
ARCH 2003	History of Architecture	42
ARCH 2006	Architectural Design - Sustainable Solutions	42
ARCH 2008	Building Information Modeling 1	42
BLDG 2000	Ontario Building Code and Provincial Standards	42
CONS 2006	Building and Materials Reuse	42
MENG 2017	Strength of Materials	42
MGMT 2025	Project Management	42
General Education Course		
Select 1 course from the general education list during registration.		42
	Hours	**336**

Semester 5		
Program Courses		
ARCH 3000	Architectural Project 1	42
ARCH 3002	Building Information Modelling 2	42
BLDG 3000	Legal Processes and Responsibilities in the Ontario Building Code Act	42
CONS 3000	Structural Analysis - Beams and Columns	42
CONS 3011	Construction Materials	42
CONS 3015	Site Planning	42
MGMT 3006	Contract Management	42
MGMT 3012	Site Management and Specifications	42
	Hours	**336**
Semester 6		
Program Courses		
ARCH 3001	Architectural Project 2	42
ARCH 3003	Building Information Modelling 3	42
ARCH 3004	Landscape Design Essentials	42
CONS 3003	Structural Analysis: Design	42
CONS 3010	Occupational Health and Safety Act Regulations	42
ENTR 1002	Introduction to Entrepreneurship	42
MGMT 3011	Business Management	42
MGMT 3015	Project Costing	42
	Hours	**336**
	Total Hours	**2016**

Co-op Work Terms		**Hours**
COOP 1013	Technology Work Term 1 (Fall intake - occurs after Semester 2, Winter intake - occurs after Semester 3)	640
COOP 2009	Technology Work Term 2 (occurs after Semester 4 - Fall and Winter intakes)	560
	Hours	**1200**
	Total Hours	**1200**

Graduation Window

Students unable to adhere to the program duration of three years (as stated above) may take a maximum of six 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.