

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 2019, Winter 2020

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

Co-operative Education is a mandatory component of all Co-op programs at Georgian College; it has been designed as a process by which students integrate their academic education with work experience related to their programs of study. This integration affects much more than simply earning a salary, including the adjustment to the work environment and the development of professionalism. It also reinforces skills and theory learned during academic semesters, develops professional contacts, job knowledge and career path, improves human relations and communication skills, and promotes personal maturity and financial independence.

Students are requested to register, attend and participate in their scheduled co-operative education classes. These classes are scheduled for all first year students and are expected to be completed in order for students to proceed successfully to their first co-op work experiences. To ensure students are eligible to proceed onto any co-op work experience, students should refer to Promotional Status and Eligibility for Co-op as outlined in the College Calendar. Co-op policies and procedures can be located on our website:

www.georgiancollege.ca/student-services/co-op-and-career-services/students-tab/ (<http://www.georgiancollege.ca/student-services/co-op-and-career-services/students-tab/>)

Georgian College follows the Co-operative Education guidelines set out by the Canadian Association for Co-operative Education (CAFCE) and Education at Work Ontario (EWO) by supporting the learning outcomes designed for the program specific graduate profile and curriculum as set out by the Ministry of Advanced Education and Skills Development.

External Recognition

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

The Program Progression

Fall Intake

- **Sem 1:** Fall 2019
- **Sem 2:** Winter 2020
- **Work Term 1:** Summer 2020
- **Sem 3:** Fall 2020

- **Sem 4:** Summer 2021
- **Work Term 2:** Fall 2021
- **Sem 5:** Winter 2022
- **Sem 6:** Summer 2022

Winter Intake

- **Sem 1:** Winter 2020
- **Sem 2:** Summer 2020
- **Sem 3:** Fall 2020
- **Work Term 1:** Winter 2021
- **Sem 4:** Summer 2021
- **Work Term 2:** Fall 2021
- **Sem 5:** Winter 2022
- **Sem 6:** Summer 2022

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 <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/policies-procedures/ (<http://www.georgiancollege.ca/admissions/policies-procedures/>)

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 Transfer Centre website for details: www.georgiancollege.ca/admissions/credit-transfer/ (<http://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

Course	Title	Hours
Semester 1		
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	Sustainable Design (new title 2019-20: 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 Modeling 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 Modeling 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

Course	Title	Hours
Co-op Work Terms		
COOP 1013	Technology Work Term 1	640
COOP 2009	Technology Work Term 2	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.

Information contained in College documents respecting programs 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. The college reserves the right to add or delete programs, options, courses, timetables or campus locations subject to sufficient enrolment, and the availability of courses.