

COMPUTER SYSTEMS TECHNICIAN - CLOUD TECHNOLOGIES

Program: CSTC

Credential: Ontario College Diploma, Co-op

Delivery: Full-time + Part-time

Work Integrated Learning: 1 Co-op Work Term

Length: 4 Semesters, plus 1 work term

Duration: 2 Years

Effective: Fall 2027, Winter 2028

Location: Barrie

Description

In this program, students focus on cloud infrastructure, automation, and computer networking, alongside operating systems, system administration, and modern security protocols. The curriculum prioritizes the architecture and deployment of scalable services within the cloud, preparing students for industry-recognized certifications, such as AWS Certified Solutions Architect.

Through an in-depth examination of current industry trends, students gain hands-on experience in problem solving and critical thinking. The program equips students with the technical skills necessary for corporate roles complemented by practical experience gained during a co-op work term.

Career Opportunities

Graduates can choose to work independently or as a member of a team to support the development, implementation, and maintenance of computer systems and networks. Graduates with networking interests/skills generally can find employment as information technology analysts and network technical support specialists or network administrators. Graduates with operations and administration interests/skills generally can find employment as system administrators and technical support specialists.

Program Learning Outcomes

The graduate has reliably demonstrated the ability to:

1. identify, analyze, develop, implement, verify and document the requirements for a computing environment;
2. contribute to the diagnostics, troubleshooting, documenting and monitoring of technical problems using appropriate methodologies and tools;
3. implement and maintain secure computing environments;
4. implement robust computing system solutions through validation testing that aligns with industry best practices;
5. communicate and collaborate with team members and stakeholders to ensure effective working relationships;
6. select and apply strategies for personal and professional development to enhance work performance;
7. apply project management principles and tools when working on projects within a computing environment;

8. adhere to ethical, legal, and regulatory requirements and/or principles in the development and management of computing solutions and systems;
9. assist with the implementation of computer systems and cloud solutions;
10. install, configure, troubleshoot, maintain, upgrade and decommission computing system infrastructures;
11. automate routine tasks using scripting tools and programming languages;
12. install and monitor a database management system in response to specified requirements;
13. provide technical support for computing system infrastructures that aligns with industry best practice;
14. deploy and manage cloud-based computing environments to support organizational operations and scalability;
15. monitor, optimize, and automate cloud infrastructure to ensure reliable, scalable, and cost-effective operation;
16. describe technologies and techniques that can be used to reduce the impact of information technology on the environment.

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, Universities Research Excellence and Security.

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 on the internal job posting site and external job posting sites, accessing their personal network, researching companies of interest, preparing targeted and customized resumes and cover letters, participating in interviews, and using professional communication strategies with employers.

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](https://www.georgiancollege.ca/admissions/academic-regulations/) (<https://www.georgiancollege.ca/admissions/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/>)

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
- **Work Term 1:** Summer 2028
- **Sem 3:** Fall 2028
- **Sem 4:** Winter 2029

Winter Intake

- **Sem 1:** Winter 2028
- **Sem 2:** Summer 2028
- **Work Term 1:** Fall 2028
- **Sem 3:** Winter 2029
- **Sem 4:** Summer 2029

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

- Ontario Secondary School Diploma (OSSD), or equivalent, or mature student status
- Grade 12 English (C or U)
- Grade 11 Mathematics (C, M or U) or 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 personal notebook computer prior to the start of the program that meets or exceeds the following hardware specifications:

- An x86_64 processor, with at least 4 cores is required; 6 or more is recommended (number of "Performance" cores for heterogeneous processor architectures)

- Minimum 32GB of RAM
- 1080p display
- At least 500GB SSD

Additional operating systems, tools, and software used in the program are provided to the student upon commencement of the program.

Bring Your Own Device (BYOD) requirements

All Georgian College students are required to [bring their own device \(BYOD\)](https://georgiancollege.ca/byod/) (<https://georgiancollege.ca/byod/>) that meets the [technology requirements](https://georgiancollege.ca/byod/) (<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

18 Program Courses
2 Communications Courses
1 Program Option Course
3 General Education Courses
1 Co-op Work Term

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		
COMP 1035	Networking Essentials	42
COMP 1046	Windows System Administration	42
COMP 1070	Computer Virtualization	42
COMP 2018	Linux System Administration	42
Communications Course		
COMM 1016	Communication Essentials	42
General Education Course		
Select 1 course from the General Education list during registration.		42
Hours		252
Semester 2		
Program Courses		
COMP 1071	Linux Network Administration	42
COMP 1086	Routing and Switching Essentials	42
COMP 1111	Foundations of Scripting using Python	42
COMP 2017	Windows Server Administration	42
COMP 2139	Cloud Computing Services	42
Communications Course		
Select 1 course from the Communications list during registration.		42
Hours		252
Semester 3		
Program Courses		
COMP 2003	Relational Database 1	42

COMP 2075	Wireless Networking	42
COMP 2103	Introduction to Information Security	42
COMP 2131	Cloud Computing	42
COMP 2137	Linux Automation	42
General Education Course		
Select 1 course from the General Education list during registration.		42
Hours		252
Semester 4		
Program Courses		
COMP 2077	Network Security	42
COMP 2138	Windows Server and PowerShell	42
COMP 2157	Cloud Development and Operations	42
MGMT 2008	Project Management for Information Technology	42
General Education Course		
Select 1 course from the General Education list during registration.		42
Program Option Course		
Select 1 course from the available list during registration.		42
Hours		252
Total Hours		1008
Co-op Work Terms		
		Hours
COOP 1058	Computer Systems Technician Work Term 1	490
Hours		490
Total Hours		490

Code Title

Program options may include:

COMP 1009	The Mainframe Environment
COMP 1045	Internet of Things
COMP 2104	Data Centre Technologies
COMP 3002	Relational Databases 2

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.