

# COMPUTER SYSTEMS TECHNICIAN - NETWORKING

**Program:** CSTN

**Credential:** Ontario College Diploma, Co-op

**Delivery:** Full-time

**Work Integrated Learning:** 2 Co-op Work Terms

**Length:** 4 Semesters, plus 2 work terms

**Duration:** 2 Years

**Effective:** Fall 2019, Winter 2020, Summer 2020

**Location:** Barrie

## Description

In this program, students focus on networking, operating systems, system administration, virtualization, and security related to new computer networks and the maintenance of existing computer networks. As an official Cisco Networking Academy partner, certified instructors assist students preparing for industry recognized certifications such as the Cisco Certified Network Associate (CCNA) Routing and Switching. Students gain experience in problem solving, and effective oral and written communications through examination of current industry trends and requirements. Students acquire professional and entrepreneurial skills for industry and self-employment, as well as real life experience through participation in co-op work terms.

## 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 data communications and network technical support specialists or network administrators. Graduates with hardware interests/skills generally can find employment as computer operations specialists in many types of businesses and government.

## Program Learning Outcomes

The graduate has reliably demonstrated the ability to:

1. analyze and resolve information technology problems through the application of systematic approaches and diagnostic tools;
2. support the implementation and administration of computer systems;
3. support the implementation and administration of networking solutions;
4. install, configure, troubleshoot, maintain, and upgrade components of computer systems;
5. install, configure, troubleshoot, maintain, and upgrade components of networks;
6. follow, monitor, and document data storage procedures designed to ensure the integrity of information;
7. apply knowledge of security issues to the implementation of information technology solutions;
8. provide efficient and effective technical support to clients in a manner that promotes safe computing practices and reduces the risk of the issue recurring;

9. conform to workplace expectations found in information technology (IT) environments;
10. contribute to the successful completion of the project applying the project management principles in use;
11. use a variety of scripting tools and languages to automate routine tasks;
12. describe technologies and techniques that can be used to reduce the impact of information technology on the environment;
13. 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/) (<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.

## The Program Progression

### Fall Intake

- **Sem 1:** Fall 2019
- **Sem 2:** Winter 2020
- **Work Term 1:** Summer 2020
- **Sem 3:** Fall 2020
- **Work Term 2:** Winter 2021
- **Sem 4:** Summer 2021

### Winter Intake

- **Sem 1:** Winter 2020
- **Sem 2:** Summer 2020
- **Work Term 1:** Fall 2020
- **Sem 3:** Winter 2021

- **Sem 4:** Summer 2021
- **Work Term 2:** Fall 2021

## Summer Intake

- **Sem 1:** Summer 2020
- **Sem 2:** Fall 2020
- **Work Term 1:** Winter 2021
- **Sem 3:** Summer 2021
- **Sem 4:** Fall 2021
- **Work Term 2:** Winter 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/) (<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/) (<http://www.georgiancollege.ca/admissions/credit-transfer/>)

## Additional Information

To be successful in this program, students are required to have a personal notebook computer (either PC or Mac architecture) prior to the start of the program that meets or exceeds the following hardware specifications:

- Intel i5 processor or AMD equivalent
- 12GB of memory (16 GB recommended)
- 250GB hard drive (SSD recommended)

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

## Graduation Requirements

18 Program Courses  
2 Communications Courses  
1 Program Option Course

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

Semester 1		Hours
Program Courses		
COMP 1035	Networking Essentials	42
COMP 1046	Windows System Administration	42
COMP 2018	Linux System Administration	42
MATH 1003	Math for the Computer Industry	42
Communications Course		
Select 1 course from the communications list during registration.		42
General Education Course		
Select 1 course from the general education list during registration.		42
Hours		252

Semester 2		Hours
Program Courses		
COMP 1070	Computer Virtualization	42
COMP 1071	Linux Network Administration	42
COMP 1086	Routing and Switching Essentials	42
COMP 1099	Introduction to Python Programming	42
COMP 2017	Windows Server Administration	42
Communications Course		
Select 1 course from the communications list during registration.		42
Hours		252

Semester 3		Hours
Program Courses		
COMP 2078	Emerging Technology and Innovation	42
COMP 2101	Administrative Scripting	42
COMP 2103	Introduction to Information Security	42
COMP 2122	Scaling Networks	42
COMP 2126	Windows Server Administration 2	42
General Education Course		
Select 1 course from the general education list during registration.		42
Hours		252

Semester 4		Hours
Program Courses		
COMP 2057	Wide Area Networks	42
COMP 2075	Wireless Networking	42
COMP 2102	Windows Service Administration	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 1007	Computer Systems Technician Work Term 1 (occurs after Semester 2)	560

COOP 2004	Computer Systems Technician Work Term 2 (Fall Intake occurs after Semester 3, Winter Intake occurs after Semester 4)	560
	Hours	1120
	Total Hours	1120

## Code Title

### Program options may include:

COMP 1009	The Mainframe Environment
COMP 1045	Internet of Things using Arduino
COMP 2003	Relational Database
COMP 2104	Data Centre Technologies
COMP 2131	Cloud Computing

## 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.

*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.*