

COMPUTER SYSTEMS TECHNICIAN (CSN)

About the Program

This two-year Computer Systems Technician diploma program offers you the skills and knowledge needed to meet the challenges of the ever-changing field of information technology administration. In Seneca's modern labs, you will enhance your abilities by completing practical, hands-on training in networking, operating systems, security and cloud computing.

Your studies will teach you to design and implement wireless, local/wide area and software-defined networks; how to work with and configure open source and proprietary operating systems; and how to work on premises and in the cloud taking you into the future of IT administration.

Computer Requirements

- 16 GB RAM minimum
- 256 GB SSD Hard Drive (500+ GB would be better)
- Quad-core i7 2.4GHz or better
- Video card (2GB RAM minimum/4GB RAM recommended)
- Webcam

Part-time option is available > (http://www.senecapolytechnic.ca/ce/technology/network-database-system/computer_cns.html)

Credential Awarded

Ontario College Diploma

Duration

4 Semesters (2 Years)

Starts

January, May, September

Program and Course Delivery

This program is offered in Seneca's hybrid delivery format. Some coursework is online and some must be completed in person. Students will need to come on campus to complete in-person learning requirements.

Skills

Throughout this program you will develop the following skills:

- Internet of Things
- Linux/UNIX administration
- Microsoft administration
- wireless networks
- software-defined networks
- cloud services
- maintenance and security
- analyze and resolve information technology problems
- system design and installation

Optional Co-op

This program offers the option to complete a co-op work term, providing valuable hands-on experience in your field of study.

Students who select the co-op stream will have the opportunity to participate in a co-op term(s) if eligibility requirements are maintained. Students will have the flexibility to transfer to the non co-op stream at any time. The co-op term(s) is typically a full-time paid position completed between two academic semesters. The co-op search is student-driven and participation in the co-op stream does not guarantee that a work position will be secured. However, students will receive guidance and support through in-class career workshops and one-on-one coaching to help prepare for the co-op term.

Review eligibility requirements for work-integrated learning (<https://www.senecapolytechnic.ca/employers/seneca-works/work-integrated-learning/eligibility.html>)

Students interested in completing a co-op work term should apply to the **Computer Systems Technician (Co-op) (CSNC)** program.

Your Career

When you graduate from this program, these are the types of career options you can explore:

- Technical support specialist
- Network administrator
- Local-area network/Personal computer technician
- Computer network technician
- Helpdesk support

Professional Certification

To demonstrate expertise in the cybersecurity field, graduates of this program can pursue certification through the International Information Systems Security Certifications Consortium (ISC2), a global leader in cybersecurity certification. Seneca has partnered with ISC2 to offer preparation courses (<https://www.senecapolytechnic.ca/ce/technology/network-database-system/cybersecurity-certification-prep-courses-isc2.html#Courses>) that prepare students to write the ISC2 certification exams.

Program of Study

Effective January 2024

Course Code	Course Name	Weekly Hours
Semester 1		
COM101 or COM111	Communicating Across Contexts Communicating Across Contexts (Enriched)	3
CSN115	Introduction to Computers and Networks	4
MST100	Introduction to Microsoft Services	4
OPS145	Introduction to Linux	4
SPS120	Strategic Problem Solving	3
Semester 2		
CSN205	Static Networks	6
MST200	Microsoft Server Administration	4
OPS245	Open Systems Server	4

SEC220	Introduction to System Security	4
plus: General Education Course (2)		6
Semester 3		
CSN305	Software Defined Networks	4
DAT330	Introduction to Databases	4
MST300	Introduction to Microsoft Cloud Technologies	4
OPS345	Open System Application Server	4
SEC320	Security Incident Response	4
WTP100	Work Term Preparation *	1
plus: General Education Course (1)		3
Work-Integrated Learning Term		
CSN331	Computer Systems Technician, Co-op *	30
Semester 4		
CSN405	Wireless Networks	4
CSP450	Computer Systems Projects: On Premises Networking and Server Administration	4
EAC594	Business Communication for the Digital Workplace	3
MST400	MS Cloud Administration	4
OPS445	Open System Administration	4
plus: Professional Options (1)		3-4

Professional Options

Course Code	Course Name	Weekly Hours
CSP451	Computer Systems Projects: Cloud Environments	4
CYT145	IT Security: Ethical and Legal Issues	3
CYT160	Security for Cloud and Internet of Things	4
PMC115	IT Project Mgmt. Fundamentals, Tools and Techniques	4
SRT211	Introduction to Programming	4
TEC701	Technical Support for Network Administrators	4
TEC702	Technician as an Entrepreneur	4
WIN500	Windows Server Scripting	4
WIN700	Windows Active Directory Services	4

* Work-Integrated Learning option only

Program Learning Outcomes

This Seneca program has been validated by the Credential Validation Service as an Ontario College Credential as required by the Ministry of Colleges and Universities.

As a graduate, you will be prepared to reliably demonstrate the ability to:

- identify, analyze, develop, implement, verify and document the requirements for a computing environment.
- contribute to the diagnostics, troubleshooting, documenting and monitoring of technical problems using appropriate methodologies and tools.

- implement and maintain secure computing environments.
- implement robust computing system solutions through validation testing that aligns with industry best practices.
- communicate and collaborate with team members and stakeholders to ensure effective working relationships.
- select and apply strategies for personal and professional development to enhance work performance.
- apply project management principles and tools when working on projects within a computing environment.
- adhere to ethical, legal, and regulatory requirements and/or principles in the development and management of computing solutions and systems.
- assist with the implementation of computer systems and cloud solutions.
- install, configure, troubleshoot, maintain, upgrade and decommission computing system infrastructures.
- automate routine tasks using scripting tools and programming languages.
- install and monitor a database management system in response to specified requirements.
- provide technical support for computing system infrastructures that aligns with industry best practice.

Admission Requirements

- Ontario Secondary School Diploma (OSSD), or equivalent, or a mature applicant (<https://www.senecapolytechnic.ca/registrar/canadian-applicants/admission-requirements/mature-applicants.html>)
- English: Grade 12 C or U, or equivalent course
- Mathematics: Grade 12 C or U, or Grade 11 U or M, or equivalent course

Canadian citizens and permanent residents may satisfy the English and/or mathematics requirements for this program through successful Seneca pre-admission testing. (<https://www.senecapolytechnic.ca/registrar/canadian-applicants/admission-requirements/mature-applicants.html>)

Recommended upgrading for applicants who do not meet academic subject requirements (<https://www.senecapolytechnic.ca/registrar/canadian-applicants/admission-requirements/upgrading-options.html>).

International Student Information

International admissions requirements vary by program and in addition to English requirements (<https://www.senecapolytechnic.ca/international/apply/how-to-apply/admission-requirements/english-requirements.html>), programs may require credits in mathematics, biology, and chemistry at a level equivalent to Ontario's curriculum, or a postsecondary degree or diploma, equivalent to an Ontario university or college. Program-specific pre-requisite courses and credentials are listed with the admission requirements on each program page. To review the academic requirements please visit: Academic Requirements - Seneca, Toronto, Canada ([senecapolytechnic.ca](https://www.senecapolytechnic.ca)) (<https://www.senecapolytechnic.ca/international/apply/how-to-apply/admission-requirements/academic-requirements.html>).

Pathways

As a leader in academic pathways, we offer a range of options that will allow you to take your credential further in another Seneca program or a program at a partner institution.

To learn more about your eligibility, visit the Academic Pathways (<https://www.senecapolytechnic.ca/pathways.html>) web page.

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