

Computer Science Technology



Specialization in Cybersecurity and Cloud computing

DCS 420.BO

Offered on campus

3-year program

New

Offered in English



The government of Quebec funds a portion of the tuition fees for students in the field of Computer Science and Networks, which started in the Fall of 2022. For more details, visit the Department of Higher Education website, under the Quebec Perspective Scholarship Program section. (PBPO).

This specialized six-semester program (3 years - 2 670 hours) includes an eight-week internship (270 hours) in a company. The program aims to prepare students to develop the knowledge and skill required to design, configure, and manage a network's infrastructure and its security, as well as maintain all IT-related operations.

Our program empowers students to stay ahead and equip themselves for a rewarding career in network administration and cybersecurity. Our program covers various aspects of the specialization with a focus

on network management, cybersecurity, and cloud computing. The program is built to ensure that students qualify for many in-demand networking and cybersecurity jobs through a well-planned curriculum that makes it easy to follow even for someone with no experience.

Professional Opportunities:

As a person working in Network Management and Cybersecurity, you will be able to practice your profession in small, medium, or large-sized companies and in all sectors and domains, including high technology industries, such as:

- Local Network Administrator
- System Administrator
- Computer Network Technician
- Networking and system administrator
- IT consultant
- User Support and IT Specialist
- Network Security Technician

Acquired skills:

- Network Interconnections and Cloud computing (Exchange, Cloud (IaaS, SaaS, PaaS), Azure, Network implementation and IP Telephony)
- Operating Systems (Windows, Linux, Server, DNS, DHCP, Active Directory, Virtualisation,
- CISCO (CCNA, CCNP)
- Network and IT Security (Databases and SQL injections and hacking tools)
- Development, Scripting and Object-Oriented Programming (Bash, PowerShell, and Python)

Software:

Microsoft Windows, Windows Server, VMware, Hyper-V, Linux, and antivirus

Programming languages:

Python, JavaScript, and PowerShell

Protocols:

DHCP, DNS, TCP/UDP, IPv4, IPv6, Proxy, VPN, CCNA/CCNP (OSPF, EIGRP et BGP)

Certifications, an added bonus:

The program content, hands-on learning activities and industry standard technologies prepare the students for various highly in-demand certifications such as CCNA (Cisco Certified Network Associate), CCNP (Cisco Certified Network Professional), CompTIA (A+), LPIC (Linux essentials and security essentials), Azure, IBM and many more.

The college is a member of the prestigious Cisco Networking Academy. Cisco is a global networking equipment company that has developed several training courses used in networking around the world.

The program offered at the college prepares students for the certification exams and will help you increase your chances of becoming a certified professional.

Required Equipment

Students must have a laptop with the following characteristics:

- Windows 10 ou 11
- Processor: Intel I7 or AMD Ryzen 7 or Intel I5 or AMD Ryzen 5 latest generation with VT-X virtualization
- Memory: 32 GB recommended
- Hard drive SSD: size 500 GB or higher
- Screen: 14 inches minimum
- Connectivity: USB 3.0, Wi-Fi and NIC LAN
- You will need a USB-RJ45 adaptor if your laptop doesn't have a network jack.

* Windows 10 S (limited version of Windows 10), MAC and Chromebook are not compatible. The College does not loan laptops to students. These requirements are based on our current curriculum needs. A laptop cannot be replaced by a smartphone.

Please consult our website for any changes.

Course Curriculum

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| 75 hrs | Applied Mathematics |
| 75 hrs | Client based operating system |
| 75 hrs | Open-source operating system |
| 60 hrs | Professional integration |
| 60 hrs | Technical support |
| 75 hrs | Server based operating systems |
| 60 hrs | Cloud-based computing |
| 75 hrs | Advanced Open-source operating systems |
| 75 hrs | Implementation of directory services |
| 60 hrs | Introduction to Networking |
| 75 hrs | Programming Languages I |
| 75 hrs | Cloud-based architecture and services |
| 60 hrs | Introduction to Security |
| 75 hrs | Network Services |
| 75 hrs | Email Server |
| 75 hrs | Switching, routing and wireless essentials |
| 75 hrs | Network security |
| 75 hrs | Programming Languages II |
| 75 hrs | Implementing an enterprise network I |
| 75 hrs | Enterprise networking, security, and automation |
| 60 hrs | Network monitoring |
| 75 hrs | Voice over IP |
| 75 hrs | Implementing an enterprise network II |
| 105 hrs | Project |
| 270 hrs | Internship |

***Within the program of study, students will complete an 8-week (270 hours) internship in the industry. The college assists each student with their internship search.**

General Education

The general education includes 2 courses in French as a second language, as well as the mandatory courses which are 3 courses in Humanities, 4 courses in Literature, 3 courses in Physical Education and 2 complementary courses.

N.B.: The College reserves the right to modify this program without advance notice.



We are recognized as a member of the distinguished Cisco Networking Academy. Cisco is a worldwide Networking equipment company that has developed network training that is used globally.

The program leads to several certifications that are highly recognized and required by the job market including but not limited to: CISCO and CompTIA (A+).