

INFORMATION SYSTEMS SECURITY

Program: INSS

Credential: Ontario College Graduate Certificate

Delivery: Full-time

Work Integrated Learning: 1 Co-op Work Term

Length: 2 Semesters, plus 1 work term

Duration: 1 Year

Effective: Fall 2019, Summer 2020

Location: Barrie

Description

This program prepares students for careers involving the development, evaluation, and support of IT security solutions. Building on previous educational experience, students learn to create cost effective and secure computing environments. Graduates are able to categorize, design, implement, and integrate technical and managerial safeguards to ensure the security of networked computer systems. An emphasis will be placed on interpersonal, organizational, technical, communication, and problem-solving skills applied to enhance the effective implementation of security in a business environment.

Career Opportunities

The need for organizations to build and maintain secure network and information systems has created demand for skilled computer and network systems security specialists. Chief Information Officers and Information Technology Managers charged with the need to plan and implement security controls and infrastructure to protect corporate information systems will increasingly require the skills of security specialists. Career opportunities will be available in both public and private sector organizations. Graduates may gain employment as administrators, technicians or security analysts.

Program Learning Outcomes

The graduate has reliably demonstrated the ability to:

1. deploy and manage desktop and server operating systems and optimize system settings in order to 'harden' information systems;
2. establish best practices to protect business resources from vulnerabilities and exploits;
3. develop security strategies for the deployment of network security procedures and network security devices;
4. establish security plans and strategies for proper use and protection of information assets including contingency and disaster plans in compliance with best practices, standards, and regulations;
5. create acceptable use policies for business information systems;
6. apply project management tools and principles in the building and deployment of security policies and strategies;
7. perform security audits using log management software and log analysis to ensure compliance with security plans, policies, standards, and regulations and present results to senior management;
8. deliver an effective security awareness and training program to ensure compliance with security policies;

9. apply basic entrepreneurial strategies to identify and respond to new opportunities in the information security field;
10. investigate and employ environmentally sustainable practices within the information security field.

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.

The Program Progression

Fall Intake

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

Summer Intake

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

Admission Requirements

- Post-secondary diploma or degree with a focus in computer studies, or equivalent work experience in computer networks and operating systems.

Selection Process

Applicants will be asked to submit a current resume and letter of interest to the Program Coordinator. Academic and experiential learning of all applicants will be assessed.

Criminal Reference/Vulnerable Sector Check

Placement agencies require an up-to-date clear criminal reference check and vulnerable sector check prior to going out on placement. Students should obtain their criminal reference three months prior to placement; checks conducted earlier may not be considered current. As some jurisdictions require longer lead-time for processing, please check with the program coordinator to ensure you allow for sufficient turn-around time. It is the student's responsibility to provide the completed document prior to placement start.

NOTE: A record of criminal offences, for which a pardon has not been granted, may prevent students from completing their placements, thereby affecting their ability to graduate.

Additional Information

To be successful in this program, you 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, security tools, and software used in the program will be provided to the student upon commencement of the program.

Graduation Requirements

12 Program Courses

1 Co-op Work Term

Graduation Eligibility

To graduate from this program, a student must attain a minimum of 60% or a letter grade of P (Pass) or S (Satisfactory) in each course in each semester. The passing weighted average for promotion through each semester and to graduate is 60%.

Program Tracking

Semester 1		Hours
Program Courses		
NETS 1015	Security Management	42
NETS 1025	Network Security 1	42
NETS 1026	Windows Systems Security	42
NETS 1028	Linux Systems Security	42
NETS 1035	Applied Cryptography	42
NETS 1036	Information Security	42
Hours		252
Semester 2		
Program Courses		
NETS 1006	Contingency Planning and Disaster Recovery	42
NETS 1030	Networks Security 2	42
NETS 1032	Digital Forensics	42
NETS 1034	Hacking Techniques and Exploits	42
NETS 1037	Monitoring and Log Management	42

NETS 1038	Application Security	42
Hours		252
Total Hours		504

Code Title

Co-op Work Term

COOP 1050 Information Systems Security Work Term

Graduation Window

Students unable to adhere to the program duration of one year (as stated above) may take a maximum of two 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.