## Security

**Duration** | 10 months

Delivery Methodology | Online / In-class

# MONTREAL COLLEGE IT

Collège des technologies de l'information de Montréal

Ministère de l'Éducation et de l'Enseignement supérieur Permit No. 693570



#### Designated learning institute(DLI) 019338447682

#### **Program Overview**

This certificate program offers a thorough grasp of protecting data, applications, and infrastructure in both cloud and non-cloud settings. It explores fundamental risk assessment concepts, highlighting the identification of vulnerabilities and compliance necessities.

The curriculum spans essential security domains such as firewalls, critical protocols for resource security, and in-depth knowledge of specific cloud components through web application deployment. Students engage in hands-on training, utilizing cutting-edge tools and technologies. The course fosters practical skills by guiding students in crafting incident response plans and navigating security challenges specific to cloud environments.

#### Course Outline

- 1 | Introduction to Cloud Computing Fundamentals
  - ☑ Cloud Computing: Definition and Key features
  - Computing Core Concepts
- 2 | Networking and Operating System Fundamentals
  - ✓ Solutions and Management Tools
  - Network Security, Governance and Compliance Capabilities
- 3 | Cloud I : Design, Plan, Architect and configure 3-tier Architecture solutions
  - ☑ AWS Development
- 4 | Cloud I : Implement, Deploy, Ensuring Successful operations of a 3-tier Web application
  - ☑ Basic to advanced cloud principles, services, solutions, management tools, and general security
- 5 | Capstone Project on Cloud
- 6 | Security I: Security +
  - ✓ Foundational cybersecurity skills (Network security, threat detection, risk management)
  - ☑ Understanding and preparing to identify and respond to security incidents
- 7 | Security II : Cloud Security
  - ☑ Implementing security for cloud applications by Encryption, access controls.
  - ☐ Challenges of cloud-based systems, safeguarding against unauthorized access and data breaches
- 8 | Career Development
- 9 | Capstone Project on Security

### **Career Options**

Security Analyst	Administrator	Security Operations Center (SOC) Analyst	Cloud Security Engineer
Security Architect	Cloud Security Consultant	Cloud Developer	Cloud Tester

### Skills you Acquire

- Understand the fundamentals of cloud computing, security, networking and OS
- Explore the implementation of AWS Cloud
- Ensure that systems are safe and secure against cybersecurity threats
- Proficiency in utilizing cloud-native security tools and services
- Acquiring skills to manage user identities, permissions, roles, and access controls within a cloud environment to ensure secure access to resources
- Understanding techniques to secure applications deployed in the cloud, including secure coding practices, application security testing, and secure deployment strategies
- Learning how to implement monitoring tools, analyze logs, and perform regular audits to ensure compliance

### **Industry Overview**

U.S. Bureau of Labor Statistics (BLS) and industry reports, have projected a 31% increase in employment for information security analysts from 2019 to 2029, significantly faster than the average for other occupations.

A report from McKinsey, at the current rate of growth, damage from cyberattacks will amount to about \$10.5 trillion annually by 2025, a 300 percent increase from 2015 levels. In the face of this cyber onslaught, organizations around the world spent around \$150 billion in 2021 on cybersecurity, growing by 12.4 percent annually and is projected to reach \$2.0 trillion economy in the future.

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# Why Choose MCIT?

Industry Focus

Our curriculum is solely based on the latest industry trends to make sure you are equipped with the right skillsets.

Project Based Learning

Your learning is solidified with a project at the end of the course to make you job ready. This project is implemented under the guidance of your instructor

Get trained by **Domain Experts** 

The courses are taught by industry experts who have got years of experience in respective domains. This way you shall be learning key concepts from people who have already solved similar problems

State of the Art Infrastructure

Every student gets a dedicated VM (Virtual machine) as they join this program to serve their needs in terms of intense computation, access

Strong Alumni Network

You are not alone for you have a 5000-member strong Alumni network as you study at MCIT

Learn while you work | Earn while you learn

Learn new skills to take your career to next level while continuing your work due to our flexible schedules.

#### Financial Aid

from anywhere.

**AFE Loan** 

Full tuition fee could be covered under AFE loans provided by Quebec Government.

Scholarship

On a case-by-case basis, local students can reach out to private bursaries to receive anywhere between \$500 CAD - \$2000 CAD.

Note: For further information about financial aid, please speak to any of our advisors.

### **Career Support Services**

The Career Center at MCIT is designed to offer students and alumni the opportunity to learn about the Canadian job market and how to sell their skills and experience to successfully find job opportunities. You shall be assisted in learning:

Canadian Customs

The art of 2 Networking How to build a

professional network

Cover Letters 3 Writing

CV & Resume Writing

Internship Preparation Job Search Checklist

Exploration, Preparation, Implementation

LinkedIn Profile

Interview Preparation You'll be Job-ready!

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### Learning Methodology

Learning Methodology is the central mechanism for learning advancement. It's the core that drives all your expertise and knowledge to attain professional success.

