

Master of Science in Cybersecurity (M.S) - Online

The **Master of Science in Cybersecurity (M.S.)** program at New York Institute of Technology - Vancouver (New York Tech) is internationally acclaimed for its multi-faceted education and student success rate. **Exclusively available to Canadian citizens and permanent residents**, our program offers a unique blend of theoretical and practical learning experiences. Students will learn to critically evaluate various technical and architectural solutions in order to limit risk and mitigate the effects of hostile action, while studying algorithm concepts, risk management, and incidence response. The program covers the design, implementation, and maintenance of software tools to support network security across multiple operating systems.



Highlights

- The program offers an innovative, technology-oriented, and interdisciplinary curriculum taught by qualified and experienced faculty.
- M.S.- Cybersecurity is an applied degree and can be completed in less than two (2) years.
- Students have the opportunity to transfer between New York and Vancouver campuses.
- Financial aid is available.
- Career planning services are available on campus to all students.

The New York Tech Vancouver M.S.-Cybersecurity Program

The program is ideally suited for students with a computer science, electrical engineering, or related backgrounds who intend to play a leading role in the implementation and management of computer and network security systems. It is offered in two curriculum options: thesis-based and course-based.

Career Options

- Cybersecurity Engineers
- Cyber Threat Analysts
- Security Analysts
- Network Administrators
- Information Systems Managers

Industry Prospects

- Telecommunications
- Information Technology
- Healthcare
- Manufacturing
- Finance and Insurance

More Information →

<https://vancouver.nyit.edu/academics/degrees/master-of-science-cybersecurity-ms/>

Apply Now →

<https://vancouver.nyit.edu/admissions/apply/>

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Career Outlook

- **High Demand:** There is a growing need for professionals in Information technology, finance and banking, government, manufacturing, retail and E-commerce and consulting Services.
- **Job Growth:** According to the Canadian Center for Cybersecurity, the Cybersecurity market in Canada is expected to grow by 11.13% between 2023 – 2027. In addition, the average salary of cybersecurity professional in Canada was \$122,340 in 2023.

Accreditation/Consent

The College of Engineering and Computing Sciences at New York Tech is accredited in the U.S. by the **Engineering Accreditation (EAC) of the Accreditation Board Engineering and Technology, Inc. (ABET)**. This program is offered under the written consent of the Minister effective March 26, 2025, having undergone a quality assessment process and been found to meet the criteria established by the Minister. Nevertheless, prospective students are responsible for satisfying themselves that the program and the degree will be appropriate to their needs (for example, acceptable to potential employers, professional licensing bodies, or other educational institutions). In the United States, New York Institute of Technology is accredited by the Middle States Commission on Higher Education.

See here: <https://admin.bceqa.gov.bc.ca/report/> →

Intakes & Duration

There are three (3) terms in every academic year; Fall (15 wks, Sep.–Dec.), Spring (15 wks, Jan.–Apr.), and Summer (8 wks, May–Jul.). M.S.-Cybersecurity is a two (2) year program, but strong students can complete it in less than two years.

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Admission Requirements¹

You must possess the following qualifications in order to be **considered** for the M.S.- Cybersecurity program at New York Tech Vancouver:

**A FOUR (4) - YEAR BACHELOR'S DEGREE OR EQUIVALENT
IN COMPUTER SCIENCE, IT, MANAGEMENT OR RELATED FIELD¹**

from an accredited college or university

A MINIMUM UNDERGRADUATE GPA OF 2.85

(on a 4.0 scale) or equivalent

DEMONSTRATED ENGLISH PROFICIENCY²

The International English Language Testing System (IELTS - Academic or Online)

Test of English as a Foreign Language (TOEFL - iBT or Home Edition)

Pearson Test of English (PTE - Academic)

The Canadian Academic English Language (CAEL)

Cambridge English Qualifications

Please Review the Table Below for the Minimum English Requirements for a Direct Entry

TEST	OVERALL	READING	LISTENING	SPEAKING	WRITING
IELTS	6.5	6.0	6.0	6.5	6.0
TOEFL	88	13	12	20	21
PTE	65	60	60	65	60
CAEL	60	50	50	50	50
CAMBRIDGE	176	169	169	169	169

Duolingo English Test (DET) Requirement:

Effective March 3, 2025, New York Institute of Technology – Vancouver campus accepts the Duolingo English Test (DET) with a minimum overall score of 135 with no band less than 125. Official DET results must be submitted electronically to New York Tech Vancouver. Please note that after your DET results are verified, you will be required to complete and pass the New York Tech Internal English Test to meet the English language requirement.

^[1] Minimum requirements. The M.S.-Cybersecurity program has a limited number of seats and only the best applicants will be admitted to the program.

^[2] This is not required if you have completed your Bachelor's degree from an English speaking country. Please visit <https://vancouver.nyit.edu/admissions/apply/english-requirement-exemption/> to see the list of countries from which an English language proficiency test is not required. IELTS indicator test is not accepted for admission.

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Conditional Admission – Prerequisites

For applicants without a bachelor's degree in computer science, IT, or a related field.

New York Institute of Technology Vancouver is committed to empowering students to achieve their academic and professional goals while maintaining high standards of excellence. Aspiring students interested in our computing-based graduate programs who do not yet meet the admission criteria may be eligible for conditional admission. If an academic background lacks a bachelor's degree in computer science, IT engineering, or sufficient coverage of the necessary math courses, a letter will be sent from the Associate Dean outlining the specific foundation courses required for admission. Students may be required to take between 1-4 additional on-campus prerequisite courses.

Required Mathematical Foundation Courses

Students may be required to complete the following essential math foundation courses for admission into our computing-based graduate programs:

- **CSCI 505: Elements of Discrete Structures (3 credits)**
- **MATH 170: Calculus I (4 credits)**
- **MATH 180: Calculus II (4 credits)**
- **MATH 310: Linear Algebra (3 credits)**

To help bridge any additional gaps in the academic background, New York Tech Vancouver offers a flexible and affordable pathway to complete the necessary mathematical foundation courses. These courses can be completed through third-party education providers, such as Coursera, allowing students to fulfill the requirements at their own pace and at a lower cost. The recommended equivalent courses include:

NEW YORK TECH COURSE	OPTION 1	OPTION 2
CSCI 505	Discrete Mathematics	Introduction to Discrete Mathematics for Computer Science Specialization
MATH 170, MATH 180	Mathematics for Machine Learning: Multivariate Calculus	N/A
MATH 310	Mathematics for Machine Learning: Linear Algebra	Linear Algebra from Elementary to Advanced Specialization

New York Tech Vancouver welcomes students from diverse backgrounds. While a background in computer science, IT engineering, or science is desirable, it is not required. The institution is dedicated to supporting the educational journey and promoting student success.

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Discretionary Admission

Applicants with an overall GPA between 2.85 and 2.99 may, at the discretion of the Vancouver program dean, be admitted into the program.

Reasons for discretionary admission include but are not limited to:

- Submission of official GRE test scores of a minimum of 295, with a minimum percentile rank of 75% in quantitative reasoning
- Completion of a relevant master's degree with a minimum GPA of 3.0
- Prior work experience (minimum 2 years in the related field)
- Applicants potential to contribute to the diversity of the student body (New York Tech Vancouver has identified a list of countries as diversity countries)

How to Apply

All New York Tech Vancouver applications are submitted online and require a non-refundable \$50 USD application fee. The application process begins here: vancouver.nyit.edu/admissions/apply/ →

Once you have paid the fee, upload the following documents:

- Four (4)-year Bachelor's degree certificate
- Transcripts from **each semester** of your four (4)-year Bachelor's degree
- Any transcripts or certificates received beyond your Bachelor's degree program
- Proof of English proficiency²
- Copy of official GRE score (*may be required on a case-by-case basis*)
- Statement of Purpose (*recommended*)
- A copy of your passport
- 1–2 page résumé or C.V.
- Two (2) letters of recommendation from professors who are familiar with your undergraduate work (*recommended*)

[2] This is not required if you have completed your Bachelor's degree from an English speaking country. Please visit <https://vancouver.nyit.edu/admissions/apply/english-requirement-exemption/> to see the list of countries from which an English language proficiency test is not required. IELTS indicator test is not accepted for admission.

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Course-Based Curriculum Tuition Estimates

For two (2) years 30 CREDITS³	\$22,950 USD³
7 Required Courses (21) + 2 Electives (6) + 1 Project (3) + Professional Practice (0)	
Tuition per credit: \$765 USD Application Fee: \$50 USD (non-refundable) Professional Practice: \$0 USD College Fee: \$150 USD (per semester)	

Thesis-Based Curriculum Tuition Estimates

For two (2) years 30 CREDITS	\$22,950 USD³
4 Required Courses (12) + 2 Electives (6) + 4 Thesis (12) + Professional Practice (0)	
Tuition per credit: \$765 USD Application Fee: \$50 USD (non-refundable) Professional Practice: \$0 USD College Fee: \$150 USD (per semester)	

Tuition, Fees, and Student Aid

Financial Aid is available to Canadian Citizens and Permanent Residents of Canada.

Intake Dates for 2025-2026

SEMESTER	START DATE
FALL 2025	Sept 2, 2025
SPRING 2026	Jan 19, 2026
SUMMER 2026	TBD

For application opening dates and deadlines, please visit <https://vancouver.nyit.edu/admissions/apply/>.

[3] For two (2) years. Amount does not include other fees or tuition fees for any waivable courses or bridge courses that may be required. Two-year tuition fee calculated based on: Fall 2025 USD\$1,260/credit. Please note tuition is calculated at USD\$1,260/credit as an estimate from Fall 2025 onward. The actual tuition rate per credit will be determined later. Tuition charges may change during study period without prior notice. See <https://vancouver.nyit.edu/student-life/accounts/> for updates.

[4] Applications may close earlier than the deadline dates. See <https://vancouver.nyit.edu/admissions/apply/> for updates.

Master of Science in Cybersecurity (M.S) - Online***Program Overview***

The M.S.-Cybersecurity course-based curriculum includes 30 credits, which consist of seven required courses (21 credits), two electives (6 credits), one supervised project (3 credits), and one professional practice course (0 credits). In contrast, the thesis-based curriculum also consists of 30 credits, which include four required courses (12 credits), two electives (6 credits), four thesis courses (12 credits), and one professional practice course (0 credits).

In addition, for thesis-based students, a maximum of 6-credits of required course credits can be substituted for elective courses based on research interests and supervisor consent.

The professional practice course requires three intensive face-to-face weekends in Vancouver.

Core Courses

All courses are **three (3) credit hours** unless otherwise specified.

REQUIRED COURSES	
INCS 615	Advanced Network and Internet Security
CSCI 620	Operating System Security
CSCI 651	Algorithm Concepts
INCS 741	Cryptography
INCS 870	Project I
ETCS 600	Professional Practice (0 credits)

ADDITIONAL REQUIREMENTS FOR THESIS-BASED OPTION	
INCS 880	Project II
INCS 890	Master's Thesis I
INCS 891	Master's Thesis II

ADDITIONAL REQUIREMENTS FOR COURSE-BASED OPTION	
INCS 618	Computer Security Risk Management and Legal Issues
INCS 712	Digital Forensics
INCS 745	Intrusion Detection and Hacker Exploits

Master of Science in Cybersecurity (M.S) - Online***Selection of Elective Courses***

Students are required to choose two (2) elective courses. All courses are three (3) credit hours. Students can choose two from the additional course-based requirement courses or from the following courses:

ELECTIVE COURSES	
CSCI 690	Computer Networks
CSCI 657	Data Mining
INCS 735	Secure Software Engineering
INCS 775	Data Center Security
INCS 810	Special Topics in Computer Security

For a list of elective courses, please see:

<https://site.nyit.edu/curriculum/cybersecurity-ms>

Prerequisite Courses

Students who are admitted to the program with insufficient background in mathematics or computer science may be required to take one or more of the following undergraduate prerequisite courses. All courses are **three (3) credit hours**.

PREREQUISITE COURSES	
CSCI 502	Computer Programming I
CSCI 504	Computer Programming II
CSCI 503	Computer Organization and Architecture
CSCI 507	Data Structures
CSCI 509	Operating Systems

Master of Science in Cybersecurity (M.S) - Online***Application Checklist***

To be **considered**¹ for the program, you must have:

- ☐ \$50 USD **non-refundable** application fee
- ☐ A four (4)-year Bachelor's degree (or equivalent) from an accredited college or university
- ☐ A minimum cumulative GPA of 3.0 (on a 4.0 scale) or equivalent
- ☐ Bachelor's degree completion certificate
- ☐ Semester-by-semester transcripts for **all four (4)-years** of your Bachelor's degree
- ☐ Any transcripts or certificates received beyond your Bachelor's degree program
- ☐ Proof of English proficiency²
- ☐ Copy of official GRE score (may be required on a case-by-case basis)
- ☐ Statement of Purpose (recommended)
- ☐ A copy of your passport
- ☐ 1–2 page résumé or C.V.
- ☐ Two (2) letters of recommendation from professors who are familiar with your undergraduate work (recommended)

If you have met all of these qualifications, submit your application online and upload the following documents to: <https://vancouver.nyit.edu/admissions/apply/> →

Once you apply, you can notify our Admissions department by emailing vancouver.admissions@nyit.edu

^[2] This is not required if you have completed your Bachelor's degree from an English speaking country. Please visit <https://vancouver.nyit.edu/admissions/apply/english-requirement-exemption/> to see the list of countries from which an English language proficiency test is not required. IELTS indicator test is not accepted for admission.

ACADEMIC POLICY

Policy on submission of fraudulent academic documents for admission:

Students found to have submitted fraudulent academic documents, i.e., transcripts, for the purpose of admission to a degree program at New York Institute of Technology Vancouver, will have their admission cancelled and may be disciplined or expelled upon confirming that the documents submitted were forged. It is the responsibility of the applicant/agent to make sure the documents submitted during application process are not forged.

Clear understanding about the program

Before submitting the application for admission, applicants must understand they have an in-depth knowledge about the program they are applying to. They must also have clear understanding of the curriculum structure and future prospect of this program they are applying to.