

ITM 825– Enterprise Information Security

COURSE OUTLINE FOR 2026-2027

Semester, Section
Classroom, Class Time

Prerequisite(s): ITM 820 or ITM 210

Antirequisite(s): ITM 805

Faculty/Contract Lecturer Information

- **Faculty/Contract Lecturer Name:**
- **Office Location:**
- **Office Hours:**
- **Phone:** (416) 979 – 5000, ext.
- **Course Website:** my.torontomu.ca (for courses using D2L)
- **Email Address:** youremail@torontomu.ca

Mode of Course Delivery: In-person

Academic Program Advising Contacts

Chair/Director for this Course: Sameh Al Natour

Email Policy

Students are expected to monitor and retrieve messages and information sent through D2L and TMU email on a frequent and consistent basis. In accordance with the Policy on TMU Student E-mail Accounts ([Policy 157](#)), Toronto Metropolitan University (TMU) requires that any electronic communication by students to TMU faculty or staff be sent from their official university email account. Communications sent from other accounts may be disregarded.

Course Description

This course takes a deep dive into Information Security from an enterprise perspective including the technology, operational procedures, and management practices needed for a successful implementation of cybersecurity. It covers the standards and best practices mandated in information security design, engineering and operations as well as in-depth topics on implementation and integration of cybersecurity in a unified enterprise framework including application, system and network management, governance, threat and incident management, and business continuity.

Course Details

Teaching Methods

If you are registered in an in-person or a virtual classroom, instruction will take place at scheduled hours, following the approach outlined in D2L Brightspace. If you are registered in a Chang School Distance Education course, please follow the schedule, course outline and learning modules as outlined in D2L Brightspace.

Note: All assessments in this course, regardless of its delivery format, will be held in-person on campus. This applies to in-person, virtual, and online courses, including sections/courses delivered through the Chang School.

This course will incorporate the following teaching and learning methods:

- Regular lectures, prescribed weekly readings, group project work, and discussions are the main teaching activities that occur in this course.
- The quizzes are designed to provide the students practice and progressive skill building that they can apply in the group-based project.
- The group project work allows the students to apply the analytical techniques that group interaction and individual and group presentation skills.
- The instructor will establish an active learning environment by engaging the students in an exchange of relevant questions and ideas. Students should expect a frequent and substantive interaction between the instructor and students and among students in every class.

Course Materials

Textbook and Other Learning Materials:

Title: Effective Cybersecurity: A Guide to Using Best Practices and Standards (2019)

Author: William Stallings

Publisher: Addison-Wesley Professional

ISBN: 978-0134772806

Price: \$75

Additional readings will be provided in pdf format through D2L.

Course Learning Outcomes

Academic Upon successful completion of this course, students will be able to:

1. Explain the structure and components of an enterprise information security framework, including asset security, protection strategies, governance, and oversight mechanisms.
2. Demonstrate an understanding of Information Security Governance and its role in aligning security initiatives with organizational objectives.
3. Describe the principles and methodologies of Information Security Risk Assessment, and apply them in evaluating enterprise-level security risks.
4. Analyze the core functions of Cybersecurity, including the management of people, systems, and assets within an organizational context.
5. Demonstrate knowledge of Technical Security Management, including tools, controls, and best practices for securing enterprise IT infrastructure.
6. Explain the purpose and functions of an Information Security Operations Centre (ISOC) and its role in monitoring and responding to security incidents.
7. Evaluate the implications of emerging technologies, such as Quantum Information Technologies, on enterprise information security strategies and practices.

Academic Integrity

Academic integrity is integral to your learning, the credibility of your degree or certification, and the integrity of the university as a whole. [Senate Policy 60: Academic Integrity](#) defines academic misconduct, provides a non-exhaustive list of examples of behaviours that may be considered as academic misconduct, and explains how academic misconduct concerns are evaluated and decided. The entirety of the policy applies in this course. As well, please note that submitting work created in whole or in part by artificial intelligence tools unless expressly permitted by the faculty/contract lecturer, is considered a violation of Policy 60.

Generative AI Course Policy, and Plagiarism Detection

Generative AI Course Policy

Use of Generative AI (e.g. ChatGPT, Grammarly, Perplexity, DeepL Translator) to develop or assist with any ideas or material submitted for coursework is expressly prohibited in this course. Use of Generative AI in this manner will be considered a breach of Policy 60.

Turnitin or another originality detection software

Turnitin is a plagiarism prevention and detection service to which TMU subscribes. It is a tool to assist faculty/contract lecturers in determining the similarity between students' work and the work of other students who have submitted papers to the site (at any university), internet sources, and a wide range of books, journals and other publications. While it does not contain all possible sources, it gives faculty/contract lecturers some assurance that students' work is their own. No decisions are made by the service; it generates an "originality report," which faculty/contract lecturers must evaluate to judge if something is plagiarized.

Students agree by taking this course that their written work will be subject to submission for textual similarity review to Turnitin. We strongly recommend that faculty/contract lecturers can opt to have student's papers included in TMU's institutional repository rather than the default Turnitin repository. Use of the Turnitin service is subject to the terms-of-use agreement posted on the Turnitin website. Students who do not want their work submitted to this plagiarism detection service must, by the end of the second week of class, consult with their faculty/contract lecturer to make alternate arrangements. Students who choose not to have their papers screened for textual similarity review by turnitin may be required to submit additional work with their research essay. For example:

- an annotated bibliography of each source used in your paper; and/or
- the first few pages of each cited source used in your paper

Even when a faculty/contract lecturer has not indicated that a plagiarism detection service will be used, or when a student has opted out of the plagiarism detection service, if the faculty/contract lecturer has reason to suspect that an individual piece of work has been plagiarized, the faculty/contract lecturer is permitted to submit that work in a non-identifying way to Turnitin.

Copyright

The course materials provided to you are copyrighted, and may not be shared without my express written permission. Do not share these materials (e.g. course outline, lecture slides, assignment instructions) with others and do not post them on the internet during the course, or at any time after. If you do so, Policy 60 will apply.

Academic Integrity Resources

To learn more about Policy 60 and how to avoid academic misconduct, please review and take advantage of these resources:

- Policy 60: Academic Integrity: www.torontomu.ca/senate/policies/academic-integrity-policy-60/
- Academic Integrity Office website: www.torontomu.ca/academicintegrity
- “Academic Integrity in Space” game: <https://games.de.torontomu.ca/aio/#/>
- “Academic Integrity in Cyberspace!” game: <https://www.torontomu.ca/aic/#/>
- Student Life and Learning Support: www.torontomu.ca/student-life-and-learning/learning-support

If you are a student registered with Academic Accommodation Support (AAS):

Please inform your faculty/contract lecturer if you have test accommodation needs that include the use of assistive technology (including text-to-speech, dictation, or literacy software). Some software may require additional configurations by the faculty/contract lecturer, so it is important you inform them in advance and leverage the sample quiz to ensure the tools are compatible with the Brightspace Quiz in LockDown Browser.

However, not all Assistive Technology tools approved by AAS work well with Respondus' software; if your experience of the sample quiz does not function as expected, please notify your faculty/contract lecturer and/or Accommodation Facilitator.

Topics and Course Schedule

Week	Topic	Readings
1	Enterprise Information Security Best Practices • Explain the foundations of Information security CIA Triad and tools providing confidentiality, authenticity, and integrity. • Understanding the Standard of Good Practice for Information Security. Explaining NIST • Cybersecurity Framework and Security, COBIT 5 for Information Security, and Payment Card Industry Data Security Standards.	Chapter 1 Lecture Notes and Weekly Reading (available in D2L after the lecture)
2	Security Governance & Information Risk Assessment • Describing security Governance and Security Management. • Explaining Security Governance Principles and Desired Outcomes and Security Governance Components. • Explaining System Assessment Approaches. Describing Asset, Threat, Control, Vulnerability and Consequences Identifications. • Explaining Risk Analysis, Evaluation, Treatment and Risk Assessment Best Practices.	Chapter 2 Chapter 3 Lecture Notes and Weekly Reading (available in D2L after the lecture)

3	Security Management & People Management - Describing the Security Management Function, Security Policy, and Acceptable Use Policy. - Explaining Security Management Best Practices. - Understanding Human Resource Security and Security Awareness and Education.	Chapter 4 Chapter 5 Lecture Notes and Weekly Reading (available in D2L after the lecture)
4	Information Management & Physical Asset Management - Describing Information Management and Information Classification and Handling. - Understanding Document and Records Management and Sensitive Physical Information handling. - Explaining Hardware Life Cycle Management. Describing Industrial Control Systems and Mobile Device Security.	Chapter 6 Chapter 7 Lecture Notes and Weekly Reading (available in D2L after the lecture)
5	System Development & Business Application Management - Describing System Development Life Cycle. - Understanding System Development Management. - Explaining System Development Best Practices. - Describing Application Management Concepts and Corporate Business Application Security. - Explaining End User Developed Application Security and Business Application Management Best Practices.	Chapter 8 Chapter 9 Lecture Notes and Weekly Reading (available in D2L after the lecture)
6	Midterm Examination	
7	System Access & System Management - Explaining System Access Concepts, such as User Authentication, Risk Assessment for User Authentication, Access Control, Customer Access. - Describing Server Configuration, Virtual Servers, Network Storage Systems, Service Level Agreements. - Understanding Performance and Capacity Management, Backup and Change Management.	Chapter 10 Chapter 11 Lecture Notes and Weekly Reading (available in D2L after the lecture)
8	Network and Communications & Supply Chain Management - Explaining Network Management Concepts, Firewalls, Virtual Private Networks and IP Security. - Understanding Security Considerations for Network Management and Electronic Communications. - Explaining Supply Chain Management Concepts. - Understanding Supply Chain Risk Management, Cloud Computing and Cloud Security.	Chapter 12 Chapter 13 Lecture Notes and Weekly Reading (available in D2L after

		the lecture)
9	Technical Security Management - Understanding Security Architecture principles. - Understanding different security protections and their roles such as malware protection, Identity and Access Management, Intrusion Detection, Information Leakage Protection, Digital Rights Management, Cryptographic Solutions and Cryptographic Key Management.	Chapter 14 Lecture Notes and Weekly Reading (available in D2L after the lecture)
10	Threat and Incident Management & Local Environment Management - Understanding Technical Vulnerability Management, Security Event Logging, and Security Event Management. - Describing how Threat Intelligence works. - Understanding the Security Incident Management Framework and the Security Incident Management Process. - Describing the Emergency Fixes, Forensic Investigations, and Physical Security.	Chapter 15 Chapter 16 Lecture Notes and Weekly Reading (available in D2L after the lecture)
11	Business Continuity Security & Security Monitoring and Improvement - Understanding the Business Continuity Concepts, elaborate on Business Continuity Program, Business Continuity Readiness, and Business Continuity Operations. - Describe Business Continuity Best Practices. - Describing of Security Audit. - Understanding Security Performance and Describing Security Monitoring and Improvement Best Practices	Chapter 17 Chapter 18 Lecture Notes and Weekly Reading (available in D2L after the lecture)
12	Project Presentations Project Deliverables: slides, written report, presentations.	D2L

Evaluation

The grade for this course is composed of the mark received for each of the following components:

Evaluation Component	Due Date	Percentage of Final Grade	Anticipated Return Date
Online Quiz (best 4 of 5)	Weeks 3, 4, 5, 8, 9	40%	Weeks 4, 5, 6, 9, 10
Project	Week 11	20%	Within a week
Midterm Examination	Week 6	20%	Within a week
Final Examination	TBA	20%	TBA
Final Grade		100%	

Note: Students must achieve a course grade of at least 50% to pass this course. At least 20% of the grade based on individual work will be returned to students prior to the last date to drop a course in good academic standing. For Fall 2026 this must be before Friday, November 20, 2026 and for Winter 2027 before Friday, April 2, 2027.

- No unscheduled evaluations will be used as part of the grading scheme.
- Late work will be evaluated with a 20% markdown.

University Policies

Students must be reminded that they are required to adhere to all relevant university policies found in their online course shell in D2L and/or on [the Senate website](#).

Important Resources Available at Toronto Metropolitan University

- **Addressing Academic Concerns:** Students are expected to address any questions or concerns through open and timely communication with the course faculty/contract lecturer, as soon as they arise. If a concern cannot be resolved through this initial communication or if additional support is required, students are encouraged to reach out to their program advisor or the chair/director of the teaching department for further guidance. These individuals can help provide clarity, facilitate next steps, and ensure that matters are reviewed in a fair and appropriate manner.

- [The University Libraries](#) provide research [workshops](#) and individual consultation appointments. There is a drop-in Research Help desk on the second floor of the library, and students can use the [Library's virtual research help service](#) to speak with a librarian, or [book an appointment](#) to meet in person or online.
- [Student Life and Learning Support](#) offers group-based and individual help with writing, math, study skills, and transition support, as well as [resources and checklists to support students as online learners](#).
- You can submit an [Academic Consideration Request](#) when an extenuating circumstance has occurred that has significantly impacted your ability to fulfill an academic requirement. You may always visit the [Senate website](#) and select the blue radio button on the top right hand side entitled: Academic Consideration Request (ACR) to submit this request.

For Extenuating Circumstances, [Policy 167: Academic Consideration](#) allows for a once per semester ACR request without supporting documentation if the absence is less than 3 days in duration and is not for a final exam/final assessment. Absences more than 3 days in duration and those that involve a final exam/final assessment, always require documentation. Students must notify their faculty/contract lecturer once a request for academic consideration is submitted. See Senate [Policy 167: Academic Consideration](#).

Longer absences are not addressed through Policy 167 and should be discussed with your Chair/Director/Program to be advised on next steps.

- [FAQs Academic Considerations and Appeals](#)
- Information on Copyright:
 - [Copyright FAQs for Faculty/Contract Lecturers](#)
 - [Copyright FAQs for Students](#)
- Information on Academic Integrity:
 - [Academic Integrity for Faculty/Contract Lecturers](#)
 - [Academic Integrity for Students](#)

Accessibility

- At Toronto Metropolitan University, we are committed to ensuring that all courses are accessible to everyone and to removing barriers that may prevent some individuals from enrolling in courses.
- All technologies and tools used in this course are accessible.
- Students who discover an accessibility barrier with any of the course materials or technologies should contact their faculty/contract lecturer.
- As outlined in [Policy 159: Academic Accommodation of Students with Disabilities](#), students are required to proactively consult with AAS, the faculty/contract lecturer, Department or Faculty, as soon as feasible, including prior to enrolling in a course or program, on any concerns they may have about their ability to meet the essential academic requirements of a course/program.

Academic Accommodation Support

[Academic Accommodation Support](#) (AAS) is the university's accessibility services office, supporting students with disabilities. AAS works with students, faculty, and staff to create inclusive learning environments, reduce barriers, and promote accessibility across the university.

If you have (or suspect you may have) a disability, AAS can provide consultation, guide you through registration, develop accommodation plans where appropriate, and connect you with supports and services. For information about eligibility, documentation requirements, registration, deadlines, and available services, visit [AAS](#).

Academic Accommodations (for students with disabilities) and Academic Consideration (for short-term extenuating circumstances) are governed by **different university policies**. [Learn more about each process](#) and how to access support. Students registered with AAS may request academic consideration (related or unrelated to their disability) if they experience extenuating circumstances that impact their ability to meet their shorter term academic obligations. This includes short term physical or mental health issues that are sudden/acute (e.g, the flu), unexpected illness or injury, hospitalization or treatment, and significant aggravation of a pre-existing condition. Please see [Policy 167: Academic Consideration](#) for more information and details.

Please note that there is no accommodation for missing/rescheduling or reweighting of tests - this is considered an alternate arrangement. Any student who misses a test/exam will be directed to submit an ACR to explore if possible alternate arrangements under [Policy 167: Academic Consideration](#) can apply .

Wellbeing Support

At Toronto Metropolitan University, we recognize that things can come up throughout the term that may interfere with a student's ability to succeed in their coursework. These circumstances are outside of one's control and can have a serious impact on physical and mental well-being. Seeking help can be a challenge, especially in those times of crisis.

If you are experiencing a mental health crisis, please call 911 and go to the nearest hospital emergency room. You can also access these outside resources at anytime:

- **Distress Line:** 24/7 line for if you are in crisis, feeling suicidal or in need of emotional support (phone: 416–408–4357)
- **[Good2Talk](#):** 24/7-hour line for postsecondary students (phone: 1-866-925-5454)
- **[GuardMe Student Support Program \(GMSSP\)](#):** 24/7 access to confidential support through counsellors via the [Student Support app](#) or 1-844-451-9700

If non-crisis support is needed, you can access these campus resources:

- **[Centre for Student Development and Counselling](#):** 416-979-5195 or email csdc@torontomu.ca
- **[Consent Comes First – Office of Sexual Violence Support and Education](#):** 416-919-5000 ext 3596 or email osvse@torontomu.ca
- **[Medical Centre](#):** call (416) 979-5070 to book an appointment

We encourage all Toronto Metropolitan University community members to access available resources to ensure support is reachable. You can find more resources available through the [Toronto Metropolitan University's Wellbeing Central](#) website.