Toronto Metropolitan University

The Chang School of Continuing Education

TED ROGERS SCHOOL Information Technology Management

ITM 745 – Generative AI in Business

COURSE OUTLINE FOR 2026-2027
Semester, Section
Classroom, Class Time

Prerequisite(s): ITM 618
Antirequisite(s): None

Faculty/Contract Lecturer Information

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

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 explores the application of Generative Artificial Intelligence (GenAI) within a business context, focusing on how GenAI technologies can drive innovation, enhance decision-making, and create new value across various industries. Students will gain a foundational understanding of the underlying principles, models, and techniques used in GenAI. The course will also address the ethical considerations that businesses must

navigate when integrating GenAI into their operations and the impact of GenAI on society. Through hands-on projects, students will develop the skills necessary to critically evaluate and implement GenAI models that align with business objectives.

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.

Teaching Methods

The class is delivered in person. Students are required to bring their laptops to each session to complete lab exercises and in-class assignments. Course content is shared and available through the D2L Brightspace course shell.

Variations within a Course

This course is offered as a single section; a common outline applies to all enrolled students.

Course Materials

Textbook and Other Learning Materials:

Title: Generative AI in Action
Author(s): Amit Bahree
Publisher: Manning Publications
ISBN: 9781633436947
Price: $79.99 CAD

Additional lecture notes and resources will be provided to students during class as deemed appropriate by the instructor.

Course Learning Outcomes

This course emphasizes active, hands-on learning that integrates conceptual foundations with practical application. Students engage with contemporary Generative AI tools and techniques through lectures, lab exercises, and case studies, building the technical and critical-thinking skills needed to apply GenAI responsibly and effectively in real business settings.

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

1. Explain the fundamentals of GenAI and its key models, such as GANs and Transformers.
2. Identify the various domains within business where GenAI can be effectively utilized.
3. Develop and train generative models using Python and relevant libraries.
4. Evaluate the performance of generative models using quantitative metrics.
5. Explore how GenAI is being utilized in industries, and discuss emerging trends and potential future developments in GenAI.
6. Develop and implement GenAI-based solutions to address specific business needs, such as creating personalized marketing content, automating customer service interactions, or generating innovative product designs.
7. Analyze the ethical concerns associated with GenAI (e.g., bias, misinformation, and intellectual property), and propose solutions and best practices for the responsible deployment of GenAI.

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, Plagiarism Detection, and Virtual Proctoring

Generative AI Course Policy

Students may use Generative AI (e.g. ChatGPT, Grammarly, Perplexity, DeepL Translator) only for minor grammar correction. This includes translating individual words and correcting spelling, punctuation and basic grammar issues. AI tools may not be used to make substantial revisions such as edits to style, tone, content nor rewrite phrases. Failure to stay within these limits will be considered a breach of Policy 60.

Students may use Generative AI (e.g. ChatGPT, Grammarly, Perplexity, DeepL Translator) for ideation and brainstorming but not for research or for writing anything that will be submitted for credit. Failure to stay within these limits 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.

Virtual Proctoring Information

Online exam(s) within this course use a virtual proctoring system. Please note that your completion of the exam will be recorded via the virtual platform and subsequently reviewed by your faculty/contract lecturer. The virtual proctoring system provides recording of flags where possible indications of suspicious behaviour are identified only.

Recordings will be held for a limited period of time in order to ensure academic integrity is maintained.

Respondus Lockdown Browser with Monitor is currently the only virtual proctoring solution covered by Policy 135: Final Examinations Policy. Access to a device that can support the virtual proctoring tools is your responsibility as a student; the Student Respondus Guide identifies current technical requirements, as well as additional considerations for your use including data privacy, accessibility, and how to prepare.

Please note that you will be required to show your TMU OneCard prior to beginning to write the exam. Should a student not have a OneCard, government issued ID can be displayed to the camera, showing only the picture and name (all other information can be covered by the student).

Information will be provided prior to the exam date by your faculty/contract lecturer who may provide an opportunity to test your set-up or provide additional information about online proctoring. Since videos of you and your environment will be recorded while writing the exam, please consider preparing the background (room/walls) so that personal details are not visible, or move to a room that you are comfortable showing on camera.

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.

Digital Learning Tools used in this course

This course uses D2L Brightspace for course content, announcements, submissions, and assessments. Students use Python, Colab, generative AI tools and relevant open-source libraries for hands-on lab exercises completed on their own laptops. Where digital learning tools are used for assessment, there is no additional cost to students beyond the required course materials. Any student who encounters an accessibility barrier with a tool used in this course should contact the instructor to arrange an alternative means of participation.

Topics and Course Schedule

Week	Date	Topic	Readings
Week 1		Lecture: Overview of Artificial Intelligence, Machine Learning, and the Evolution of AI Technology • Get familiarized with key AI and machine learning concepts and terminology. • Understand the evolution and milestones of AI technology. Lab: Hands-on practice with the topic covered.	Lecture Notes
Week 2		Lecture: Foundations of Generative AI and Language Models • Understand the core concepts and capabilities of Generative AI. • Explore different types of language models and their applications. Lab: Hands-on practice with the topic covered.	B1-Part 01-01, B1-Part 01-02
Week 3		Lecture: What Can Generative AI Generate? • Explore and understand the capabilities of different Generative AI architectures and their business use cases. Lab: Hands-on practice with the topic covered.	B1-Part 01-03, B1-Part 01-04, B1-Part 01-05
Week 4		Lecture: Prompt Engineering Fundamentals • Learn techniques for crafting effective prompts for generative models. • Practice generating precise and targeted outputs from generative models. Lab: Hands-on practice with the topic covered.	B1-Part 02-06

Week	Date	Topic	Readings
Week 5		Lecture: How Generative AI Works — Fine-tuning and Benchmarking • Understand the fine-tuning process and its role in customizing AI models. • Best practices for evaluation criteria and metrics for fine-tuned LLMs. Lab: Hands-on practice with the topic covered.	B1-Part 02-09, B1-Part 03-12
Week 6		Midterm Week	
Week 7		Lecture: Retrieval-Augmented Generation (RAG) • Learn the concepts and implementation of Retrieval-Augmented Generation (RAG). Lab: Hands-on practice with the topic covered.	B1-Part 02-07
Week 8		Lecture: Limitations, Attacks, Bias, Ethics, and Responsible AI in Generative Models • Understand GenAI attacks, ethical considerations, potential biases, and limitations of generative AI. • Explore best practices for responsible AI usage. Lab: Hands-on practice with the topic covered.	B1-Part 03-13
Week 9		Lecture: Applications of Generative AI in Business Analytics — Part 1 • Identify the role of Generative AI in the Business Intelligence lifecycle. Lab: Hands-on practice with the topic covered.	Lecture Notes
Week 10		Lecture: Applications of Generative AI in Business Analytics — Part 2	Lecture Notes

Week	Date	Topic	Readings
		• Understand advanced data analytics solutions, visualization, and reporting using Generative AI. Lab: Hands-on practice with the topic covered.	
Week 11		Lecture: Applications of Generative AI in Cybersecurity, Finance, and Healthcare • Understand cybersecurity applications and threats empowered by Generative AI. • Explore financial services and healthcare-specific applications of Generative AI. Lab: Hands-on practice with the topic covered.	Lecture Notes
Week 12		Review	-

Evaluation

- No unscheduled evaluations (e.g., pop quizzes) will be used as part of the grading scheme in this course.
- Late work: Unless an accommodation has been arranged in advance or an approved Academic Consideration Request applies, late submissions will be penalized at 10% per day. Work submitted after graded assignments have been returned or solutions discussed will not be accepted.

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
Lab	Weekly	20%	Same day
Course Project	Week 10	20%	TBA
Midterm Exam	Week 6	30%	Week 8
Final Exam	TBA	30%	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.			

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.