

I am pleased to post the final report on the use of generative Artificial Intelligence (AI) in teaching and learning, which was developed over the summer of 2023. I appreciate the dedication shown by task force members as they explored the implications of this fast-evolving technology and produced a comprehensive report and usage guidelines for the classroom.

When the use of generative Artificial Intelligence became widespread in the spring of 2023, educators and learners alike sought guidance on its potential for enhancing teaching and learning, as well as the challenges associated with its use.

That McMaster's Task Force on Generative Artificial Intelligence on Teaching and Learning came together quickly is a testament to the leadership of its co-chairs, Kim Dej, vice-provost, Teaching and Learning, and Matheus Grasselli, deputy provost, and to the coordination of Erin Aspenlieder, associate director, Central Programming, at the MacPherson Institute.

The work produced by the task force's 35 members between May 1 and Sept. 6 positioned McMaster as a leader on this issue among peers in the post-secondary sector. Several universities and colleges have since adopted our provisional guidelines for the use of generative AI in Teaching and Learning.

In addition to drafting the provisional guidelines, the task force's final report provides a roadmap for the ongoing use of generative AI in the classroom through seven recommendations.

I am also pleased to see the three additional recommendations to continue exploring the use of generative AI in teaching and learning and to broaden the scope to also include its use in research and in the workplace.

The Office of the Provost will continue to support work to better understand generative AI and other emerging technologies with the potential to enhance teaching and learning.



Susan Tighe
Provost and Vice-President (Academic)

Task Force on Generative Artificial Intelligence in Teaching and Learning: Final Report

September 6, 2023

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Executive Summary

Launched May 1, 2023 the Task Force on Generative Artificial Intelligence in Teaching and Learning, hereafter “Task Force,” was co-chaired by Kim Dej, Vice-Provost, Teaching and Learning, and Matheus Grasselli, Deputy Provost.

The Task Force had 35 members with expertise in generative artificial intelligence and/or teaching and learning, including faculty representatives from all six faculties, administrators, student representatives, including both the MSU and GSA presidents, and staff. A full membership list can be found [here](#).

Charged with addressing several areas of overlapping need – including drafting and endorsing guidelines and resources for educators and students, compiling recommendations for the Senate Committee on Academic Integrity, and recommending proactive teaching strategies to mitigate risks to academic integrity caused by generative AI – Task Force members met between May and August to do this work. The complete Terms of Reference, meeting schedule and meeting materials are available [here](#).

Within three weeks of forming the Task Force released provisional guidelines on the use of generative AI in teaching and learning and dedicated the remainder of the summer to recommendations on policy and resources for the campus community all of which were complete by August 29, 2023.

Meeting Topics and Delivered Outcomes

The Task Force met four times between May and August, with each meeting focused on a specific topic and task. Each Task Force meeting included an agenda and briefing package to provide a shared understanding of the topic of discussion.

Meeting One: Introduction to Generative AI in Teaching and Learning, May 16, 2023

- [Agenda](#)
- [Briefing package](#): Current State of Generative AI in Teaching and Learning – Reading time 7 min
- Outcomes:
 - Developed and endorsed [Provisional Principles and Provisional Guidelines for the Use of Generative AI in Teaching and Learning \(see Appendix A\)](#)
 - Launched Provisional Guidelines on June 7 with institutional communications through Daily News, instructor letter, Avenue posts and messages to CUPE 3906;
 - Provincial and national press coverage resulted in several institutions (Trent University, University of Guelph, Humber College) adopting McMaster's guidelines

Meeting Two: Academic Integrity and Generative AI, June 26, 2023

- [Agenda](#)
- [Briefing package](#): Conversations on Academic Integrity and Generative AI – Reading time 8 min
- Outcome:
 - Drafted recommendations for consideration by the Senate Subcommittee on Academic Integrity with respect to updates to the Academic Integrity Policy (**see Appendix B**)

Meeting Three: Student Perceptions of Generative AI, July 18, 2023

- [Agenda](#)
- [Briefing package](#): Student Perceptions of Generative AI - Reading time 5 min
- Outcomes:
 - Reviewed and endorsed a [student facing resource](#) sharing the institutional approach to generative AI, as well as basic AI literacy information (**see Appendix C**);
 - Added guidelines related to assessment, teaching assistant use and student-opt out

Meeting Four: Faculty Perceptions of Generative AI, August 29, 2023

- [Agenda](#)
- [Briefing package](#): Generative AI Supports for Faculty – Reading time 4 min
- Outcomes:
 - Reviewed [considerations for the undergraduate course management policy](#) for consideration by Undergraduate Council (**see Appendix D**)
 - Reviewed and endorsed a [faculty facing Guidebook](#) focused on pedagogical considerations and assessment in the context of generative AI (**see Appendix E**)

Beyond the stated Terms of Reference, Task Force members also provided guidance to the Vice-Provost, Teaching and Learning and Deputy Provost on the adoption of AI-detection tools provided by Turnitin.com, and made suggestions for consideration by Undergraduate Council for the Undergraduate Course Management Policy.

Recommendations for Generative AI in Teaching and Learning

1. **Further engage students** in shaping guidelines and recommendations for policy with respect to generative AI through surveys, focus groups, town halls and course-based conversations.
 - Fall 2023: Develop strategy for student engagement with student partners
 - Winter 2024: Implement strategy with student partners
 - **Resource needs:** Ongoing coordination of student engagement; budget for four student partners
2. Establish a temporary, **two-year grant program** for instructors to research teaching and learning in the context of generative AI.
 - Fall 2023: Develop budget, grant terms and call, and evaluation process. Launch call for submissions, evaluate and award
 - Winter 2023: Grants awarded
 - **Resource needs:** Grant coordination, grant budget of \$200 000
3. **Endorsement of generative AI tools:** Review and endorse a limited set of generative AI tools to guide campus community in selection of tools. Review should include assessment of cost, privacy impact and security impact, with particular attention to developing a process for iterative privacy impact assessment; create resources to guide campus community in decision-making on generative AI tools; complete privacy impact assessments and security assessments for core set of generative AI tools.
 - Fall 2023: For ChatGPT and Turnitin AI Detection a privacy impact assessment (PIA), which evaluates how the technology collects, uses, stores and disseminates personal information in order to mitigate risks to user privacy and data security; Cost/benefit analysis of GPT-4 integration; process for iterative privacy impact assessments, as new versions are made available
 - **Resource needs:** Ongoing coordination; potential budget for enterprise licenses
4. **Plan for the implementation of Turnitin's AI Detector** by completing a PIA and security assessment, developing resources and communications for educators and students to understand the capabilities and limitations of the detector, as well as how to make use of the AI Detector reports in conversations with students.
 - Fall 2023: Complete privacy impact assessment and security assessment for Turnitin's AI Detector, develop resources and communications on use of this tool, continually review available literature on functionality of the tool.
 - **Resource needs:** Ongoing coordination, support for developing resources and communications

5. **Share recommendations for policy revisions** with relevant governance bodies; **identify additional university policies impacted by generative AI** and make recommendations for consideration by relevant governance bodies
 - Fall 2023: recommendations to the Senate Subcommittee on Academic Integrity for Academic Integrity Policy; recommendations to Undergraduate Council for the Undergraduate Course Management Policy; consideration of policies impacting graduate students and research integrity.
 - **Resource needs:** Ongoing coordination and consultation on recommendations

6. In partnership with the MacPherson Institute, **further develop assessment and teaching resources for faculty, sessional instructors and teaching assistants**, specifically assessment exemplars and solution-focused assessment redesign aimed at maintaining academic rigor and academic integrity.
 - Fall 2023: offer Assessment Development Workshop; offer panel discussions with faculty currently experimenting with generative AI; plan additional programming based on input from campus community
 - Winter 2023: Develop an online assessment hub with design principles and exemplars
 - **Resource needs:** Postdoctoral fellow at MI researching assessment design; ongoing coordination and facilitation of assessment hub and panel series

7. In partnership with the library, **further develop AI literacy resources for students**.
 - Fall 2023: Consult with students, faculty, administrators and staff on needs for AI literacy resources.
 - **Resource needs:** staff time for development of AI literacy resources

Additional Recommendations

8. Establish an ongoing **Advisory Committee on Generative AI** with a mandate covering teaching, research and work to coordinate institution-wide responses to the impacts of Gen AI in these on these three broad areas.
 - Fall 2023: Develop Terms of Reference, structure, governance, membership and objectives
 - Winter 2024: Launch Advisory Committee
 - **Resource needs:** Ongoing coordination and committee support

9. Establish ongoing **Communities of Experts** in three areas: teaching and learning, research, work, with mandate to advise the Advisory Committee on Generative AI and to operationalize recommendations from the Advisory Committee
 - Winter 2024: Develop Terms of Reference, membership and objectives
 - Spring 2024: Launch Communities of Experts
 - **Resource needs:** Ongoing coordination and committee support

10. To support many of these recommendations, **envision a temporary** staff role with a mandate to centrally coordinate, develop, and implement

strategies related to generative AI across academic, research, and community facets of the university. Core functions could include

- Community building: Establish and maintain a university-wide advisory committee and community of AI experts; coordinate opportunities for campus community to discuss and share experiences with generative AI.
- Strategic advising: Offer guidance to senior leaders about the implications and opportunities of generative AI in teaching, learning, and research.
- Stakeholder coordination: Act as the primary liaison for provincial dialogues, engaging with post-secondary leaders and making sector-wide recommendations.
- Research awareness: Build awareness of generative AI research activities, from granting programs to post-doctoral research initiatives.
- Grant coordination: for granting program in generative AI
- Technology evaluation: coordination of iterative process of technology privacy and security review, capabilities updates, and campus-wide communications and coordination, including Turnitin's AI Detector
- Employer and workforce engagement: Partnering with student success center and faculty-based co-op and career offices, engage employers and students in dialogues about the changing world of work and the role generative AI plays.
- Education and outreach: Drive the development and delivery of micro-credentials, certificates, and AI literacy programs.
- Teaching and learning: Partnering with teaching and learning experts (e.g. the MacPherson Institute) in developing and delivering faculty and TA development programming; Partnering with learning experts (e.g. Library, Student Success Center) in developing and delivering AI literacy programming
- Continuous program improvement: Support the (re)development of program learning outcomes and course assessments related to generative AI.

Resource Note

The Task Force on Generative AI in Teaching and Learning was coordinated by Dr. Erin Aspenlieder of the MacPherson Institute with one-time funding from the Paul R. MacPherson Institute trust and the MacPherson Institute with funding limited to March, 2024.

Appendix A: Provisional Guidelines

Provisional Guidelines: The Use of Generative Artificial Intelligence (AI) in Teaching and Learning at McMaster University – August, 2023



Provisional Guidelines: The Use of Generative Artificial Intelligence (AI) in Teaching and Learning at McMaster University – June, 2023 by McMaster University is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/).

Preamble

The intention of these guidelines is to offer a starting point for instructors to consider the potential uses of generative AI in teaching and learning prior to the start of the fall term at McMaster University.

These guidelines were developed by the [Task Force on Generative AI in Teaching and Learning](#) and will continue to be updated as the Task Force explores additional topics and as technology rapidly changes.

Members of the Task Force also invite feedback and suggestions on these guidelines through [this form](#). It is expected these guidelines will be updated again in time for winter course preparation.

Potential policy changes implied by these guidelines will be addressed by the relevant governance bodies.

Staff at the MacPherson Institute are available to consult with instructors regarding these guidelines; further resources for instructors and students are being developed and will be available by the fall. Instructors can email mi@mcmaster.ca for support.

An overview of Generative AI, the listed appendixes, additional resources, and known next steps are available at [this website](#)

Provisional Principles

These overarching provisional principles have guided the work of the Task Force on Generative AI in Teaching and Learning and will continue to be updated through conversations with our campus community.

- Students want to learn, and instructors want to support their learning.
- Participatory learning – learning which happens in relationships and community – continues to be a valuable and vital way for students to learn.
- Assessments that require students to document the process of learning continue to be meaningful for student learning.

- Generative AI poses risks, as well as opportunities. Individuals will have different reactions and different expectations for the technology.
- Disciplinary differences and departmental cultures will vary around the use of generative AI.

Provisional Guidelines

1. Instructors are not required to use generative AI tools for teaching.
2. McMaster's existing [academic integrity policy](#) applies when using generative AI. Its overall definition of academic dishonesty, which is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage, allows for allegations related to generative AI. The policy states under item 18(c) that "It shall be an offence knowingly to ... submit academic work for assessment that was purchased or acquired from another source".
 - a. Unless otherwise stated, students should assume use of generative AI is prohibited.
 - b. Instructors who incorporate generative AI into courses should explain to students in writing and verbally in-class how generative AI material should be acknowledged or cited (see Appendix A for examples).
 - c. Updated guidance on instructor use of generative AI for feedback and grading will be provided by the fall.
3. Individual instructors should determine if generative AI will be incorporated into course design, activities, and assessments based on course learning outcomes, individual interest, and conventions and expectations of the discipline.
4. Individual instructors should clearly communicate to students if and to what extent generative AI is acceptable in the course in the course outline, verbally in-class and in assessment descriptions (see Appendix B for examples).
5. If instructors use generative AI in their teaching materials instructors should explain in the course outline the extent to which generative AI has been, or will be, used.
 - a. Instructors should fact-check any generative AI produced materials.
 - b. Instructors should not submit student work to generative AI tools for feedback without students' consent and ability to opt-out.
6. Instructors incorporating generative AI should be aware of the privacy policies and user agreements of each generative AI tool and alert students to these policies in the course outline.
7. Where possible, courses that incorporate generative AI should rely on free versions of generative AI tools (e.g. Microsoft Bing, ChatGPT 3) for student use.
 - a. Alternatives should be provided for Generative AI tools that are restricted to users 18+ (e.g. ChatGPT).

8. Generative AI plagiarism detection software is currently unavailable or not recommended at McMaster. This software will continue to be reviewed and may be used in the future.
 - a. These detectors will produce false positives and are not approved for use through the University's policy. Students have not consented to the sharing of their intellectual work through these tools. It is also unclear how the material submitted to the third-party detectors is retained or used.
 - b. Until more is understood about generative AI detection tools, instructors should not submit student work to generative AI detection tools.
 - c. McMaster has an institutional membership to Turnitin, a plagiarism detection software. Turnitin [announced an update](#) aimed at detecting writing produced by generative AI. McMaster, like many other institutions, has not yet turned on this feature as there is a need to understand the functionality of the tool, assess the security and privacy considerations for student work and determine whether it aligns with existing policies.
 - d. If you do suspect student work may have violated the academic integrity policy, [please review the steps to take](#).

9. Instructors with courses that incorporate generative AI should:
 - a. Consider the course learning outcomes and ensure the incorporation of generative AI will support core learning outcomes; and ensure incorporation offers meaningful learning, rather than inclusion for the sake of novelty.
 - b. Describe or discuss with students the strengths, limitations and ethical considerations of the technology, including factual inaccuracies or 'hallucinations', societal biases present in the training data and the rationale for using generative AI in assignments. (see Appendix A for examples).
 - c. Resources for faculty to talk with students about generative AI are in development and will be available by late August.

10. Instructors who include assessments that incorporate generative AI should:
 - a. Consider including reflective components that invite students to comment on the use of/experience with generative AI in the assessment
 - b. Explicitly review criteria and/or rubrics in ways that demonstrate how the use of generative AI is being assessed (see Appendix C for example).

11. Assessment alternatives that may be less susceptible to the use of generative AI include oral exams, presentations followed by a Q and A, invigilated/in-class assessments, practical tests, assessments that incorporate class discussion/activities, and process-based work.

12. Instructor may consider adding an honour pledge (see Appendix D for example) to assessments.

13. The MacPherson Institute will continue to provide training and resources for instructors and students on how to use generative AI effectively. See mi.mcmaster.ca for current workshops, resources and to schedule a consultation.

14. McMaster will explore an annual donation to carbon offsetting programs to address the environmental impact of training large AI models.
15. The MacPherson Institute will collect feedback from instructors and students this fall on their experiences, questions and concerns about using generative AI in teaching and learning in an effort to update and improve these guidelines.
16. These guidelines will be regularly reviewed and revised with the aim of updating them before winter course outlines are due.

Additional Guidelines – July 31, 2023

17. Course instructors have three options for directing teaching assistant use of generative AI:
 - a. Permitting teaching assistants to use generative AI for any aspect of teaching assistant work, with the exception of summative evaluation, with no expectation that they use generative AI and no training specific to generative AI required. TAs must inform the instructor of the intended use of generative AI, and receive approval, before implementation.
 - Summative evaluations are those which significantly impact a student's grade or progress in a course. This includes providing a quantitative grade (number or letter grade).
 - b. Requiring teaching assistants to use generative AI for specified teaching tasks as outlined in the hours of work form and with training provided
 - i. In the instance of required use: As directed by the course instructor explicitly in the hours of work form, teaching assistants will use generative AI for the specific teaching tasks. Course instructors will provide teaching assistants with the necessary training to use generative AI for the specified teaching purpose(s) with this training included in the hours of work. Teaching assistants will evaluate all teaching materials/formative feedback developed with generative AI for accuracy before use with students. Any planned use of generative AI by teaching assistants will be shared with students in the course outline.
 - c. Prohibiting teaching assistants from using generative AI for teaching tasks
18. Generative AI tools can be used to provide formative feedback on student work; generative AI tools cannot be used to provide summative evaluation of student work.
 - AI-generated formative feedback is intended to guide learning and improve understanding, by pointing out strengths and areas for improvement in student work.
 - Summative evaluations are those which significantly impact a student's grade or progress in a course. This includes providing a quantitative grade (number or letter grade).

19. Instructors, or teaching assistants when directed, should review AI-generated formative feedback to ensure it aligns with the learning objectives and course materials, and add their own insights where necessary. Formative feedback that uses AI should not be given a quantitative grade by the AI tool. A “pass/fail” or “completion” may be applied.

20. Instructors, or teaching assistants when directed, are responsible for summative evaluations to ensure appropriateness and accuracy.
 - a. Data collection should be turned off on generative AI tools when used for providing formative feedback.
 - b. Ongoing work to complete privacy impact assessment and security evaluation on recommended generative AI tools will be communicated with the campus community.

21. When providing AI-generated formative feedback, students should be made aware that it is generated by AI explicitly in the course syllabus.

22. Students may opt-out of assessments that require the use of generative AI only in exceptional circumstances as approved by the course instructor. If approved to opt-out of an assessment that requires the use of generative AI based on an exceptional circumstance, students will not face academic penalty, but will be required to provide alternative and equivalent evidence of their learning as proposed to, and agreed to by, the course instructor.

Appendix B: Considerations for Senate Subcommittee on Academic Integrity

Consider revising paragraph 18 to state:

It shall be an offence knowingly to a) plagiarize, i.e., submit academic work that has been, entirely or in part, copied from or written by another person or by a non-human agent; b) submit the same academic work to more than one course (see Appendix 3); c) submit academic work for assessment that was purchased or acquired from other sources; d) use generative AI entirely or in part for submitted academic work without the explicit permission of the course instructor; e) fail to cite or acknowledge the use of generative AI in submitted work, when explicitly permitted by the course instructor, according to the citation guidelines outlined by the instructor or normally used within the discipline.

Consider revising Appendix C to include as part of the statement on Generative Artificial Intelligence:

Academic dishonesty related to the use of Generative AI can take several forms:

Using AI-generated content in academic work without the explicit permission of the instructor.

When generative AI is permitted, failing to properly cite or acknowledge the use of generative AI according to the guidelines provided by the instructor or normally used within the discipline.

Appendix C: Student Facing Resource

Thinking about using **generative AI** like **ChatGPT** or **Bing** for your coursework?

Here are **5 essential tips** you need to know!



1. Ask first:

Don't use generative AI unless your course syllabus or professor explicitly allows it. Remember, different courses have different rules. Unsure? Ask your instructor or consult McMaster's [Academic Integrity Policy](https://www.mcmaster.ca/academic-integrity-policy) - [u.mcmaster.ca/acint](https://www.mcmaster.ca/academic-integrity-policy).



2. Generative AI 101:

Generative AI, like [ChatGPT](https://www.openai.com/), uses machine learning to create new content. While generative AI tools can help explore new ideas, write text, and get feedback, there are important limitations to these tools to keep in mind.



3. Generative AI has its Limits:

Remember, even though generative AI can produce compelling content, it doesn't have human judgement or understanding. It can't provide personal insights or contextual awareness, has biases, and it can't replace the value of your own critical thinking. Plus: it sometimes makes things up or "hallucinates." Stay sharp and use a reliable source (i.e. not another generative AI tool!) to fact-check any content produced by AI before incorporating it into your work. Need help identifying a reliable source? Ask the [McMaster University Library](https://www.library.mcmaster.ca/) - [library.mcmaster.ca!](https://www.library.mcmaster.ca/)



4. Be Transparent:

If you're allowed to use AI, make sure you disclose how and where. Don't forget to correctly cite all your sources, including any AI-generated content. Your instructor will explain to you how to share your use of generative AI. Need help with citation? Visit the [McMaster University Library Generative AI Citation Guide](https://www.library.mcmaster.ca/genai-citation-guide) - [libguides.mcmaster.ca/cite-gen-ai](https://www.library.mcmaster.ca/genai-citation-guide) for guidance.



5. Learning Matters:

While AI can be a helpful tool, it should support your work, skill development and understanding, not replace it. What you learn in your courses matters for your program *and* also for your future! Struggling with the course material and/or academic skills needed for assessments? Reach out to your instructor or TA – they're here to help.

If you are looking for more information or support, please check out:

- Your own faculty or department
- [Generative AI at McMaster - u.mcmaster.ca/genai-atmac](https://www.mcmaster.ca/genai-atmac)
- [McMaster Library - library.mcmaster.ca](https://www.library.mcmaster.ca)
- [Writing and Academic Skills - u.mcmaster.ca/writing](https://www.mcmaster.ca/writing) through the [Student Success Centre - studentsuccess.mcmaster.ca](https://www.studentsuccess.mcmaster.ca)
- [Student Wellness Centre - wellness.mcmaster.ca](https://www.wellness.mcmaster.ca)
- [Student Accessibility Services - sas.mcmaster.ca](https://www.sas.mcmaster.ca)



Appendix D: Considerations for Undergraduate Course Management Policy

ACADEMIC INTEGRITY

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity. **It is your responsibility to understand what constitutes academic dishonesty.**

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university. For information on the various types of academic dishonesty please refer to the [Academic Integrity Policy](https://secretariat.mcmaster.ca/university-policies-procedures-guidelines/), located at <https://secretariat.mcmaster.ca/university-policies-procedures-guidelines/>

The following illustrates only three forms of academic dishonesty:

plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained.

improper collaboration in group work.

copying or using unauthorized aids in tests and examinations

Using AI-generated content in academic work without the explicit permission of the instructor.

- **When generative AI is permitted, failing to properly cite or acknowledge the use of generative AI according to the guidelines provided by the instructor or normally used within the discipline.**

AUTHENTICITY / PLAGIARISM DETECTION

Some courses may use a web-based service (Turnitin.com) to reveal authenticity and ownership of student submitted work. For courses using such software, students will be expected to submit their work electronically either directly to Turnitin.com or via an online learning platform (e.g. Avenue to Learn, etc.) using plagiarism detection (a service supported by Turnitin.com) so it can be checked for academic dishonesty.

Students who do not wish their work to be submitted through the plagiarism detection software must inform the Instructor before the assignment is due. No penalty will be assigned to a student who does not submit work to the plagiarism detection software. **All submitted work is subject to normal verification that standards of academic integrity have been upheld** (e.g., on-line search, other software, etc.). For more details about McMaster's use of Turnitin.com please go to www.mcmaster.ca/academicintegrity.

COURSES WITH AN ON-LINE ELEMENT

Some courses may use on-line elements (e.g. e-mail, Avenue to Learn, LearnLink, web pages, capa, Moodle, ThinkingCap, etc.). Students should be aware that, when they access the electronic components of a course using these elements, private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in a course that uses on-line elements will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure please discuss this with the course instructor.

ONLINE PROCTORING

Some courses may use online proctoring software for tests and exams. This software may require students to turn on their video camera, present identification, monitor and record their computer activities, and/or lock/restrict their browser or other applications/software during tests or exams. This software may be required to be installed before the test/exam begins.

Appendix E: Instructor Guidebook – Introduction

[To view the full Guidebook visit this link](#)

Generative artificial intelligence (generative AI) is changing how we teach and how we learn. What we want our students to learn - the core knowledge, skills and values of our disciplines - guide how we craft our curriculum and shape our pedagogical approaches. As educators we have long adapted what and how students learn to changing technology, changes in our disciplinary knowledge, and changes to the context of the University. We care about our students and about what and how they learn.

The capabilities of generative AI to produce coherent, logical and reflective text - as well as images, code, audio and video - invite new, and sudden, change to teaching and learning here at McMaster and around the world. How we respond to this change - if we respond - is a personal question, and an institutional one.

While many institutions and organizations are offering guidebooks, webinars and resources for adapting teaching methods and materials to address this rapid shift, the truth is we simply don't yet know the scale of change required. Will you want to adapt a single assessment? Will we need to rethink the core learning outcomes for a program? Will we need to reconsider the purpose of a post-secondary degree?

Media reports traverse the spectrum of panacea to catastrophe; conversations with colleagues and students here at McMaster mirror this breadth. Our individual reactions are shaped by our disciplinary backgrounds, our experience with generative AI and our teaching philosophies.

To say that any one guidebook - like this - can prepare you to teach amid the changes brought and coming by generative AI is foolish. We write this guidebook knowing some of its content will be obsolete in months. We wanted examples - so many examples - that we just do not have yet to offer (please: send us your examples!). We wanted to provide clear, simple and actionable advice for how to adjust your courses and your teaching methods, but ran up against the reality of idiosyncratic courses with unique assessments that each require slightly different guidance.

And so we offer this guidebook recognizing its limits. It aims to ground you in what generative AI is and what it might mean for student learning and for your teaching here at McMaster. It explores some of the ethical questions you may already be grappling with and invites you to share those we haven't yet considered. It offers specific advice for redesigning assessments and for how you might explore the use of generative AI in your teaching. And it tries wherever possible to be clear about what we don't yet know, but are trying to answer.

As authors we are educational developers, educators, researchers and students. We write this for you as colleagues and hope you will share with us your reactions, questions and suggestions. This guidebook will be updated - it will have to be updated - and we want to hear from you where we need to do more. You can reach us at mi@mcmaster.ca or mi.mcmaster.ca/aboutus