



Generative AI Guide for Instructors

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Generative AI in Teaching and Learning: Information for Instructors

What is Generative AI?

Generative Artificial Intelligence (AI) is a form of AI that uses algorithms to identify patterns and structures within existing data to generate, in response to a prompt or question, new and original data. A few of the current and popular examples of generative AI tools include:

- ChatGPT, Google Bard, Microsoft Bing Chat, Jasper.ai, Claude, ChatSonic, and Perplexity. These are based in the field of Natural Language Processing and use an understanding of the structure, grammar, and meaning of words to “understand and comprehend” language. These Natural Language Processing tools generate human-like language in response to questions or prompts.
- DALL-E, Imagen, Dream ,Craiyon, Midjourney, and others use Language and Image-based Processing algorithms to generate images based on text-based prompts.
- MuseNet, MusicLM, etc, generate music from text and other inputs.

New AI applications are emerging rapidly which can create original text, images, music, mathematical computations, computer code, etc, with increasing capability and sophistication. Generative AI technologies have become disruptive in teaching and learning, especially in terms of assessment and evaluation. **That said, a general prohibition on the use of AI technologies in university teaching and learning is not recommended as their use in some fields and employment sectors is already widespread, and students (and instructors) may need to learn how and when to use them appropriately and ethically.**

Can students use Generative AI?

It depends on you and your course. Currently, the University does not restrict the use of AI tools such as ChatGPT for teaching and learning. However, individual instructors may choose to prohibit or restrict the use of these tools for the courses they are teaching.

If you choose to allow AI technologies in all or some part of your course...

Then you should clearly identify (at a minimum, on your syllabus) how students are allowed to use them as part of their learning, and also explain how students should acknowledge their use. Specifically, instructors should communicate to students the format for how students are expected to cite or reference the use of AI technologies in their work. There is no specific citation format standard to recommend at this time as this field is rapidly evolving, but instructors are encouraged to check with relevant style authorities such as the APA (American Psychological Association), Chicago Manual of Style, IEEE (Institute of Electrical and Electronic Engineers), etc, as citation styles are likely to change as new information about AI technologies becomes available.

If you choose *not* to allow AI technologies in all or some part of your course...

Then you should clearly identify (at a minimum, on your syllabus) that this is the case. It is advised that instructors don't simply ban specific generative AI applications such as ChatGPT because the underlying AI algorithms have been integrated into many different applications, often marketed as writing tools. This includes software tools such as Jasper, WriteSonic, Rytr, and others. Generative AI tools will also soon be integrated into web browsers, Microsoft Office applications, and search engines. Creating a list of banned applications that cover all generative AI-based applications is an almost impossible task, and putting the responsibility on the student is problematic as it's very hard to tell what technology these actually use. Therefore, instructors are advised to use general phrases such as *"Submitting or presenting course work created by or modified by Artificial Intelligence as your own is a form of plagiarism and constitutes academic misconduct"*.

Whether or not you choose to allow students to use generative AI in your course...

It is important that instructors remind students that Nipissing University's policy on Academic Integrity defines plagiarism as "submitting or presenting work in a course as if it were the student's own work done expressly for that particular course when, in fact, it is not." A student who uses AI technology to complete coursework for evaluation, without acknowledging its use, will have committed academic misconduct as defined under the Academic Integrity Policy (<https://academiccalendar.nipissingu.ca/Catalog/ViewCatalog.aspx?pageid=viewcatalog&catalogid=10&chapterid=754&topicgroupid=3691&loadusercredits=False>).

Finally, please know that the advice and guidance presented in this document pertains to the use of AI in teaching and learning only. The use of generative AI in research has its own important considerations that are beyond the scope of this document. Please reach out to the Office of the School of Graduate Studies and Research if you have questions.

Is it possible to detect whether a student has used Generative AI?

Not accurately or reliably. While there are software applications that purport to detect work created by generative AI, robust plagiarism detection does not currently exist. Further, existing "AI Detection" applications are problematic as they have been shown to produce "false positive" identifications of plagiarized work (i.e. reporting that a piece of original work created by a student was significantly generated by AI, when in fact it was not).

Importantly, assignments and work completed by a student represents the student's intellectual property, and as such instructors should not submit it to any AI tool or third-party software system unless it is approved by the University. In general, instructors should keep their own work and that of their students confidential, particularly as most generative AI services claim rights to use and publish the information contributed to them. The Nipissing University Policy on Intellectual Property can be found here: <https://www.nipissingu.ca/sites/default/files/2018-05/NURES2011.02%20IPRenwIFinal13.pdf>

Therefore, the use of generative AI “detectors” is not recommended. Currently, the only approved plagiarism-detecting software for use by Nipissing University Instructors is SafeAssign, available within Blackboard. However, at this time, SafeAssign does not attempt to check for text created by generative AI.

What can Instructors do to discourage unfair use of Generative AI by students?

AI cheating is already ubiquitous and it is only going to get more so. Instructors are highly encouraged to check *similar* (don't upload your actual material!) previous exam/assignment questions into a generative AI application like ChatGPT to understand what type of responses are likely to be provided. For example, although generative AI is capable of creating content that plausibly appears to have been generated by a human, the output is sometimes meaningless or inaccurate. That said, human input/correction (e.g. using better or follow up prompts in ChatGPT) can help correct some of the obvious shortcomings and thus students will quickly become savvy at “prompt engineering”. And, while current generative AI tools are “pre-trained” and only periodically “re-trained”, they do not yet have the ability to “live” search the internet for current or newly published information (though it is expected these tools will develop that ability in the near future).

Strategies that instructors can use to make it more difficult for students to use generative AI tools unfairly include:


- Create exam/assignment questions that take an example from a recent paper, lab assignment, case study, data set, etc that has been newly published and/or has been specifically used in the course. This could mean some tweaks to assignments, but not a radical overhaul.
- Consider ways that a response could be provided besides text; e.g. draw or label a diagram, create a flow chart.
- Ask for rationalized opinions instead of factual recall.
- Use interactive short oral assessments/presentations.
- Return to in-person invigilated exams. This may be an effective solution if such an assessment method is scalable for your course and does not present an accessibility barrier to students.

Can Instructors use Generative AI to assess or grade student work?

No. Instructors should not submit any portion of a student's work to a generative AI tool. As mentioned above, assignments and work completed by a student represents the student's intellectual property, and as such instructors should not submit it to any third-party software system, including Generative AI tools, unless it has been approved by the University. There are currently no AI or software tools approved by the University to assess or grade student work.

Are there tips for instructors who are interested in incorporating Generative AI in their teaching?

Generative AI is quickly becoming a popular and ubiquitous tool. Instructors are encouraged to try it out, if only to understand how it might be used by students. Among the many uses, generative AI is becoming proficient at:

- Creating an outline for a paper, or bullet points and graphics for slides.
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- Writing longer coherent prose in multiple languages.
- Providing explanations or ideas for a literature review with mostly accurate citations.
- Summarizing longer articles, text, or a corpus of texts.
- Suggesting a response to a question, such as on a short answer or multiple-choice test, or for a discussion board posting.
- Translating text more accurately.
- Creating computer code in multiple languages.
- Assisting users with formulas inside applications such as Excel.

Instructors should be aware of the following issues, however, if they choose to use generative AI in their teaching:

- Text and content created by generative AI may be incorrect and reproduce the underlying biases in the source material it was trained on. Instructors and students must critically review the output of these tools.
- Be aware that AI tools sometimes go 'down' or offline, so it is important to plan ahead and take screenshots of responses, in case it is not available during synchronous class time.
- Be aware that most AI tools claim rights to any content you upload to them, and therefore you should not upload confidential, sensitive/secure, or private information. Additionally, the terms of use for generative AI tools may change (frequently) without notice.
- Be aware that subscription-version of specific AI tools exist (providing different and/or better output), which may not be affordable for some students. The Nipissing University Policy on Digital Learning Resources and Field Trips limits the use of digital learning resources provided by third-party vendors to no more than \$100 (for a single term three-credit course) and for use in assessments that constitute 10% or less of the final grade in the course (<https://www.nipissingu.ca/sites/default/files/2022-03/Policy%20Pertaining%20to%20Digital%20Learning%20Resources%20and%20Field%20Trips-08.18.2020.pdf>) Thus, instructors must provide a no-fee alternative for students if either of these conditions (cost or grade value) are not satisfied.

Where can I find more information about Generative AI?

Instructors are encouraged to consult with other instructors and Teaching Hub staff on ways to incorporate generative AI into your teaching and/or how to restructure your assessments.

Instructors may also find more information below:

[ChatGPT and Generative AI in the Classroom](#). University of Toronto.

[Engaging with AI in your education and assessment](#). University College London.

[A First Response to Assessment and ChatGPT in your Courses](#). University of Calgary.

[Curated links about artificial intelligence and education relevant for USYD](#)

[AI Text Generators: Sources to Stimulate Discussion Among Teachers](#)





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