

# Guidelines for Using Generative Artificial Intelligence at Colorado School of Mines

*Updated: July 26th, 2023*

Generative Artificial Intelligence (genAI) tools, including large language models like ChatGPT and text-to-image tools like Midjourney, are driving an ongoing conversation about their academic uses. The Office of the Provost encourages the entire University community to explore the uses and impacts of GenAI technologies, whether through critical discussions or creative applications.

GenAI tools represent an addition to the learning process that can be deployed in a number of innovative ways to advance learning outcomes. Faculty are invited to make thoughtful use of genAI tools in their teaching. Used properly, genAI tools can enhance the design of lessons, assignments, and assessments. AI and digital literacies are fundamental skills that students will need in their respective fields and as public citizens and consumers for the rest of their lives. There are many productive ways in which they might use them as students, consistent with stated course policies and outcomes.

While the intent of this document is not to prescribe universal policies of when to allow or disallow generative AI, the text below provides some guidelines for the use of genAI in connection with academic work at the University.

## TEACHing Responsible Use of GenAI

As genAI tools develop, it will be important for students and faculty to continue to build their relationships with each other and with technology. Faculty are encouraged to use a proactive, holistic approach in using genAI that disincentivizes cheating and unethical use of genAI by employing the “**TEACH**” acronym: Building **TRUST** and community with students, interrogating the **ETHICS** of genAI, ensuring equitable **ACCESS** to genAI, explicitly **COMMUNICATING** expectations and relevance of course tasks, and (re)designing assignments to center the **HUMAN** in learning by tapping into student motivation, iteration, agency, lived experience, and creativity.

- **TRUST:** Students and faculty are encouraged to work together to determine how genAI will be used transparently in their coursework, and should learn from each other on how both students and instructors are using genAI in and out of the classroom.
- **ETHICS:** GenAI tools are being developed at an incredible pace. Though promising, genAI tools may be inaccurate, inefficient, or biased. GenAI outputs may come from questionable sources: a network of unknown and known genAI tools, sources that limit or remove human credit, sources that limit or remove pay to humans, etc. It is critical to interrogate both genAI inputs and outputs so as to comply with ethical and legal standards.

- **ACCESS:** Mines is committed to supporting an [accessible digital environment](#) for all members of our community. Faculty should *proactively* investigate how their incorporation of genAI tools might unintentionally build barriers to student learning. When bringing genAI tools into the classroom, faculty should provide equitable access and ensure that they are offering [accessible](#) avenues for diverse learners. Financial considerations should be made as not all genAI models are free, and the most updated versions of genAI tools usually come at a cost. Additionally, instructors should build a shared literacy around selected genAI tools by assessing and/or teaching students *how* to use a tool before significant use is expected.
  - Software and services, including genAI websites and apps, should be submitted to the [IT software review process](#) prior to their use in courses. Working with IT and other campus stakeholders will help ensure accessibility and protect the privacy and security of the Mines community and resources.
  - [Disability Support Services](#) (DSS) works collaboratively with students, faculty, and staff to minimize barriers and support an accessible campus community. If a student with a disability encounters a barrier in the classroom, DSS works one-on-one with students to determine accommodations and facilitate access to programs and services.
- **COMMUNICATION:** Faculty are expected to state explicitly and affirmatively their expectations regarding student use of genAI tools. Instructors should specify in writing the permitted and prohibited uses of genAI tools in their courses, and should seek to clarify any expectations if they differ from one assessment to another. For additional support, see this [faculty guide for clarifying resource use](#) on individual assignments.
- **HUMAN:** All Mines community members play a role in adding *heart* to genAI use. Humans will always have unique lived experience and agency to make their own decisions on how to use, implement, and apply genAI tools in the classroom. It is recommended to center student iteration and growth, and to help students develop critical and metacognitive thinking skills to identify where genAI complements, supplants, or fails to replace human contributions. Faculty and students are expected to be creative in their ethical use of genAI tools in ways that center human experience and evaluation.

*For additional strategies for TEACHing with genAI, please consult this [resource on Effective Teaching & Generative AI](#) provided by the Trefny Center.*

Guidance is provided below for faculty to consider adding a statement to their syllabus to aid in the **communication** about genAI tools in their courses. These guidelines have been adapted from George Washington University by a group of Mines faculty, students, and staff. There are three suggested paths for faculty to consider.

Instructors might **1)** generally permit the use of genAI tools; **2)** generally forbid their use; or **3)** permit their use for certain purposes on certain assignments, but not others. If an instructor wishes to permit certain uses of genAI tools, such uses must be set forth explicitly in the course

syllabus and/or assignment instructions. Below is some model language for the three permission options:

## 1. General Permission

Generative Artificial Intelligence (genAI) tools such as ChatGPT are important resources in many fields and industries. Because these tools will be used in professional and personal contexts, we believe it is valuable for you to engage critically with these tools and explore their use in generating content submitted for evaluation in this course, including *[papers; take-home examinations; specified other assignments]*. You remain responsible for all content you submit for evaluation.

You may use genAI tools to help generate ideas and brainstorm. However, you should note that the material generated by these tools may be inaccurate, incomplete, biased, or otherwise problematic. We encourage you to consider how genAI complements, supplants, or fails to replace your contributions and abilities.

If you include content (e.g., ideas, text, code, images) that was generated, in whole or in part, by genAI tools (including, but not limited to, ChatGPT and other large language models) in work submitted for evaluation in this course, [you must document and credit your source](#). Failure to properly cite sources, including AI tools for generating content, would be considered Academic Misconduct in violation of [Mines Academic Integrity/Misconduct Policy](#).

*Additional language regarding the potential pitfalls of genAI, strategies for citation, and methods for centering the human dimension of learning can be found in [this resource](#) provided by the [Trefny Center](#).*

## 2. General Prohibition

By submitting work for evaluation in this course, you represent it as your own intellectual product. Submitting content for evaluation (e.g., ideas, text, code, images) that was generated, in whole or in part, by Generative Artificial Intelligence tools (including, but not limited to, ChatGPT and other large language models) would be considered Academic Misconduct in violation of [Mines Academic Integrity/Misconduct Policy](#).

*Additional language regarding ethical and unethical use of genAI can be found in [this resource](#) provided by the [Trefny Center](#).*

## 3. Selective Permission

By submitting work for evaluation in this course, you represent it as your own intellectual product. Submitting content for evaluation (e.g., ideas, text, code, images) that was generated, in whole or in part, by Generative Artificial Intelligence tools (including, but not limited to, ChatGPT and other large language models) would be considered Academic Misconduct in violation of [Mines Academic Integrity/Misconduct Policy](#) unless granted permission to do so. We will explain to you the specific uses of genAI tools that are permitted or prohibited in this course, including on what specific assignments use of genAI tools is permitted.

Faculty might consider using the [Faculty Guide For Clarifying Uses](#) tool when specifying permitted uses of external resources, including genAI.

## Default GenAI Guidelines

In the **absence of explicit directions** in writing to the contrary from instructors (instructors: see above for several examples of alternative course policies), the following provisions provide default guidance for the use of genAI under the [Academic Integrity/Misconduct Policy](#).

1. Students must represent any work (e.g., ideas, text, code, images) **submitted for evaluation** as the student's own intellectual product, created in accordance with established course and university policies. Unless instructors provide explicit permission or instruction to the contrary, students may not submit content for evaluation that was generated, in whole or in part, by genAI tools. Using genAI tools when unauthorized would be considered a potential violation of [Mines' policy on academic integrity](#).

Illustrative, but not exhaustive, examples of prohibited conduct include:

- A student types a prompt into a genAI tool and copies all or part of the generated content (e.g., text, code, images, solutions) into their answer on an assessment, essay, test, or other assignment submitted for evaluation (whether in-class or out-of-class).
  - A student provides a genAI tool with all or part of the prompt for an out-of-class assignment (e.g., essay or coding assignment) and paraphrases or otherwise adapts all or part of the generated content into their response without proper attribution of the genAI tool.
2. Students are permitted and encouraged to explore the use of genAI tools to generate (and critically examine) content that is **not submitted** to an instructor for evaluation. Unless instructors provide explicit direction to the contrary, students may use genAI tools for learning, studying, proofreading, and brainstorming.

Illustrative, but not exhaustive, examples of permitted conduct include:

- A student uses genAI tools to study for exams, quizzes, and other assessments by providing prompts to the genAI and reviewing the output.
- A student uses genAI tools to explore the capabilities and potential uses of genAI in an area of their interest.
- A student copies the text of a writing assignment into a genAI to ask for proofreading, while making sure to adhere to established university policies.

## Academic Integrity Concerns

Mines community members have a responsibility for establishing, maintaining, and fostering an understanding and appreciation for academic integrity. For all their promise, genAI tools misused could interfere with learning outcomes and impair the development of students' skills in and outside of the classroom, as well as harm the substance of degrees awarded at Mines.

An instructor who suspects an academic integrity violation based on genAI tools should follow the Mines [Academic Integrity/Misconduct Policy](#), following [guidance from the Office of Community Standards](#). This website is designed to provide both students and faculty policy and procedure access to best understand rights and responsibilities of all involved parties when academic misconduct is suspected. The Office of Community Standards staff can also be points of contact for questions regarding policy implementation as it relates to genAI tools.

At times, faculty may be interested in using AI-detection resources provided by Mines (e.g. Turnitin) to assess academic integrity in student work. These tools may not be available for faculty to rely on institutionally, and should not be the only tool used to make decisions on academic integrity. The [Office of Community Standards staff can provide additional considerations](#) to support faculty in making decisions which honor the rights and responsibilities of faculty and students in the academic integrity/misconduct process.

Each academic department is encouraged to prepare for the increased use of genAI tools within their departments in some of the following ways: to discuss academic integrity expectations within each department, to (re)design assignments to focus on process over output, to create clear expectations of genAI use on specific course tasks, and to develop ways to build trust between students and faculty. All of these examples are proactive ways to reduce academic misconduct in coursework. The [Office of Community Standards](#) and the [Trefny Center](#) have worked together to provide a [resource to help instructors proactively disincentivize academic misconduct](#).

## Designing Assignments

The continued development of ChatGPT and genAI offers us an opportunity to revisit course assignments and assessments to ensure that they spark curiosity, foster intrinsic motivation, and promote high-level critical and ethical thinking as described in the **TEACHing** with genAI section above. We encourage instructors to design assignments that center the learning *process* as much as (if not more than) *output* through evaluative critique, self-reflection, and opportunities for revision. Here are a few ideas for exercises and prompts that explicitly encourage students to critically engage with genAI:

- **Ask students to describe how they utilized genAI for any given assignment and reflect on their process**—what they learned, the challenges and frustrations they faced, what they did to overcome those challenges, their takeaways from the experience, etc.
- **Ask students to practice formulating effective prompts.**

- **Ask students to critically evaluate AI-generated outputs** with respect to accuracy, persuasiveness, bias, equity, quality, and so forth.
- **Ask students to investigate, fact-check, criticize, or edit AI-generated content.**
- **Ask students to practice metacognition and reflect on where genAI complements, supplants, or fails to replace their own contributions.** This can be done by asking students to compare their own work with AI-generated work and to identify their own strengths, tendencies, and perspectives.

In addition to designing assignments that ask students to critically engage with genAI, there are a number of design strategies instructors can use to disincentivize cheating, center the human in assignments, build trust with students, and foster intrinsic motivation:

- **Set clear expectations (in writing) and communicate the relevance of any given assignment or activity.**
- **Offer opportunities for low-stakes, collaborative practice.** Give students a chance to identify mistakes, make corrections and revisions, discuss strategies with their peers, and re-present their thinking in low-stakes contexts.
- **Incorporate unpenalized opportunities for students to revise and resubmit their work.** Consider grading policies that reward student perseverance and growth.
- **Encourage multimodal communication and creativity** (voice memos, podcasts, videos, brochures, infographics, websites, classroom presentations, etc).
- **Ask students to connect course content, classroom conversations, and their own lived experience.** Not only will this create tasks that are more difficult for genAI, but it can help foster intrinsic motivation through personal connections with course content.
- **Ask students to set personal learning goals and reflect on their progress throughout the semester.** Cultivating a “growth mindset” will help students to see the value of their learning process and take ownership over their work.

The Trefny Center has provided useful [guidance for instructors to implement effective teaching practices with genAI](#). The Office of the Provost encourages instructors to consult this resource.

## Final Thoughts

We encourage the campus community to adopt an open-minded and future-oriented approach to working with genAI tools. Our [Mines@150](#) call-to-action reminds us that we are surrounded by dynamic and disruptive change that we will navigate together as a community. To do so, we should work against complacency—believing that the status quo will be successful in the future—and orient toward relevance. Furthermore, to stay competitive as an institution, we need to acknowledge the changing needs that shape education.

The Office of the Provost encourages instructors to confer with the [Trefny Center](#) if they have questions about best practices for course design, pedagogy, assessment, and with the [Office of](#)

[Community Standards](#) for questions about academic integrity. The [Arthur Lakes Library](#) maintains a [list of citation practices](#) for genAI tools that you can use in your course.

These guidelines, which will necessarily evolve as genAI continues to evolve, emerged out of conversations that brought together faculty, staff, and student voices in the summer of 2023 on the Colorado School of Mines campus. Principles that guided this drafting process included being future-oriented, reducing harm, focusing on student learning, avoiding punitive culture, and providing a holistic approach that supports the core values and mission of the university. If you have suggestions, questions, or insights to add, please share them [using this form](#).