



Using GAI to improve the design and delivery of your courses

The designs of our courses and assignments have direct impact on student engagement and learning. In an ideal course, learning outcomes are clearly stated using student-centered language. The pathway to mastery of those outcomes is transparent to students, as are the means of assessing student achievement of these outcomes. Content and learning activities are provided within the class to support achievement of the outcomes and to provide feedback to students on how they are doing.

Constructing such a course takes a lot of work. More appropriately, constructing such a course used to take a lot of work. Partnering with GAI, an instructor can improve course, activity, and assignment designs, opening options for more personalized learning, and greater student valuation of the learning process. Here are some ideas of how you can use GAI to elevate your work as an instructor, saving time on some of the tasks that instructors find onerous.

1. Course design:

- **Customized learning paths:** GAI can help design courses that adapt to individual students' learning styles and progress, creating a more personalized learning experience. GAI can draft assignments addressing the same learning outcomes for students at multiple levels of proficiency, allowing better scaffolding and support of the learning process. Combined with learning pathways in Canvas, you can provide tailored support for students regardless of their initial proficiency level, freeing advanced students from unnecessary rehash work to reach greater heights, while providing appropriate support for struggling students.
- **Interactive content:** Use GAI to generate interactive and immersive learning content such as simulations, chatbots for conceptual understanding, and more. The interactive nature of chatbots engages students more than re-reading the text and thumbing through flashcards.
- **Revamping learning goals or supporting content:** GAI can assist in creating and updating the learning goals of your course based on the latest trends and research in a specific field of study. It can help you to find new types of content which may engage diverse learners and improve offerings to adapt your course to Universal Design for Learning principles.
- **Plan to incorporate GAI activities in your course:** Use GAI to generate options for how you might integrate GAI in existing activities/assignments, or to help draft new activities/assignments using GAI.

2. Facilitation

- **Real-time monitoring:** GAI can help faculty track student engagement in real-time, identifying who may be struggling and need additional support.
- **GAI tutors:** Implement GAI-driven tutoring systems for students to access personalized help 24/7.



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- **Discussion facilitation:** GAI could be used to manage and stimulate online class discussions, ensuring students are engaging with the material and each other.
3. **Assessment**
- **Rubric drafting:** Good grading rubrics are valuable to students in delineating expectations for assignments and to faculty in reducing time required for grading and commenting time. However, they are time-consuming to build. GAI can be used to draft a rubric for any assignment based on criteria you specify.
 - **Automated grading:** Some GAI can be used for automated grading of multiple-choice and fill-in-the-blank type questions, saving the instructor time. Some tools are able to apply rubrics to essays as a first-pass at grading. Be careful that you are using tools that provide FERPA protection.
 - **Plagiarism detection:** GAI tools can help detect plagiarism in student submissions, helping them to maintain academic integrity.
 - **Predictive analysis:** GAI can analyze past student data to predict outcomes of assessments, enabling proactive strategy development for improved student performance.
4. **Student Feedback**
- **Personalized feedback:** GAI tools that provide immediate feedback to students, allowing them to adjust their strategies and improve faster.
 - **Sentiment analysis:** GAI can perform sentiment analysis on student feedback data, helping provide a better understanding of student emotions and overall class sentiment towards the course.

In all these applications, it's important to remember that GAI is a tool to augment the skills and expertise of the faculty, not to replace them. The human touch and judgement in education are irreplaceable and vital for students' learning and growth.

Adapted from Teaching with Artificial Intelligence, Presented by the Biggio Center for the Enhancement of Teaching & Learning at Auburn University [Module 5 Elevate Student Use of AI](#).