

Dear faculty colleagues,

Since December 2022, ChatGPT and other artificial intelligence (AI) tools have been growing rapidly. This email is meant to provide faculty with a frame of reference for how to think about AI in relation to their teaching, and how to set students' expectations. We will use a "Frequently Asked Questions" format for convenience.

How does ChatGPT work?

ChatGPT, Google Bard, Bing Chat, and other AI chatbots are built on large language models (LLMs). Basically, these tools have scraped billions or trillions of pages of information (articles, books, or parts of the Internet) and have been trained to build statistically probable responses to prompts. at a sentence level (next logical sentence given the one it just created) and at the word level (next logical word given the rest of the sentence so far). Thus, ChatGPT is very good at providing a seemingly logical answer to any question. But it is not "thinking" as it gives each answer; it is providing a likely combination of words of sentences based on those used in its training. A good analogy is a parrot, which can mimic words but has no clue what it's actually saying. However, unlike the parrot who will only say what it has heard before, the system can outright invent facts, names, quotes, and book/journal/article titles...and present them in a confident tone as it does so. You cannot differentiate accurate or inaccurate information from the tone of the output.

Are UCF students using ChatGPT?

Overwhelmingly, the answer is yes. In the history of the Internet and smartphone apps, ChatGPT raced to 100 million users faster than anything else...by far. Early indications are that 80% or more college students have tried ChatGPT at least once, and close to half of them use it regularly, including on classroom assignments.

So, are all my students expert users of ChatGPT?

Likely, this is not the case. While almost all students have dabbled in ChatGPT at least a little bit, their experience with the software will vary widely. Even among those who have tried it, a portion will know to avoid using it inappropriately in class assignments. Therefore, it's best not to assume the worst of students. At the same time, it's also not safe to assign them advanced ChatGPT-related work as if all students have already mastered the basics because not all of them are experts. If you're assigning them to create AI output, it's better to "assume nothing" and provide assignment directions for a broad spectrum of student experiences.

How do I detect student use of ChatGPT if they try to cheat?

There are numerous free AI detectors on the Internet if you're willing to paste text, and there is also a tool built into UCF's Turnitin tool inside Webcourses. It provides an AI score that will look like the originality score that plagiarism detectors provide. However, there is no database of AI-generated content against which it is comparing texts. Therefore, the numerical output of Turnitin's AI detector should be entirely ignored. In fact, the entire tool is problematic. These detectors generate false positives and false negatives. For example, a student using Grammarly will often return a false positive. And a student may edit their AI-generated response to mask the AI-use. There have been numerous documented cases about human-created text being flagged as 100% AI, as well as the reverse—cases of AI-created text marked as 0% AI. Since neither a score of 0% nor a score of 100% is trustworthy, there are no useful "cutoff" points to consider as evidence that text is AI-generated.

Faculty should, however, consider their instincts about the work submitted. Does the submission include a wildly and incongruously wrong fact, especially one that should be common knowledge? Is the work "voiceless" or lacking personality, or perhaps written with a tone more like a 50-year-old compliance

lawyer than an undergraduate? Are many of the submitted papers in this class very similar to each other in specific evidence (if not tone)? Most of all, do you have writing samples collected earlier that shows each student's writing style and acuity? Be aware, however, that even years of experience do not make you perfect at detecting AI-generated text, either. Some students really do write in a way that mirrors current AI output. Be open to the idea of student exceptionalism and consider a plan that provides students with a chance to prove themselves.

How can I explain my expectations for use or non-use of ChatGPT to my students?

Students try to find faculty expectations about use or non-use of AI-tools in their syllabi. Therefore, it's important that you describe what you mean by AI use or non-use and that your outline any variance in your expectations. For instance, Is it acceptable for some activities or some assignments but not others? FCTL has sample syllabus language available at https://fctl.ucf.edu/technology/artificial-intelligence/, and the Writing Across the Curriculum program has a recorded workshop that can help you tailor this language to writing-intensive contexts (Email wac@ucf.edu to receive the video recording).

What does the Student Conduct process look like for unauthorized use of ChatGPT?

It's the same process as any reported academic misconduct; however, faculty should be aware that Student Conduct and Academic Integrity will not move forward on cases against students based solely on reports from AI detectors, as these detectors are not reliable and do not constitute proof. What is necessary is documentation from you that outlines how you concluded that a student use AI to assist them in completing an assignment when it was not authorized. This could include samples of previous work by the student, excerpts from the assignment that do not make sense, or phantom citations included within the student's work.

An admission of guilt by the student changes the conversation. Students will sometimes admit guilt if faculty take a facts-based approach by simply informing the student of the suspicions and the reasoning, and ask the student

how they would account for those reasons. In such a circumstance, some students will recognize they've been identified and confess. Others, however, might never confess--and the options to accuse such a student are quite limited. For this reason, faculty might want to re-consider the nature of their assignments (see below).

One final thought: faculty should recognize that students using ChatGPT to brainstorm ideas (but not exact words and sentences they intend to steal) are simply employing the tools available to them in a way that does not violate UCF's academic integrity policy. We expect students to use Web searches to generate ideas; ChatGPT merely represents an evolutionary step forward in the same process. In fact, it's likely that using AI for brainstorming will become a permanent fixture in higher education and future workplaces, so attempting to fight it would be like trying to prevent the use of calculators when students are at home working through math problems.

How do I prevent student use of ChatGPT in the first place?
When it comes to preventing ChatGPT use during online, asynchronous tests, your best bet is to use the Respondus Lockdown Browser (which prevents the switching of tabs) and Monitor (which provides recorded proctoring). This won't prevent students from accessing separate tech devices, but at least you'll have a chance of detecting that. And because the test question is on one device (where the test is) and ChatGPT is on another device, they can't just paste the question from the test to ChatGPT.

When it comes to preventing ChatGPT use in student writing and essays, the best solution is to craft highly customized writing prompts that make heavy use of in-class discussions (as opposed to readings). You want to make the sort of assignment that even a fellow PhD in the same discipline wouldn't be able to write effectively if they had not attended class sessions all semester long.

There are other ideas for preventing ChatGPT misuse on the Faculty Center's webpage: https://fctl.ucf.edu/technology/artificial-intelligence/

What else can I do to mitigate the disruptive effects of ChatGPT on my assignments?

Write-at-home essay assignments, which are surely the majority of essay assignments, represent a tempting target for students to cheat, and ChatGPT makes it simple. These assignments are often big and take many hours, factors which increase the temptation to cheat. One idea is to break the assignment into many smaller parts due over time. That way, the procrastination doesn't have time to build up.

With tests, consider replacing multiple-choice and T/F questions (which are easy to paste into ChatGPT) with matching-style questions, which are not comprehensible to the software when pasted because of the formatting. You can also stymie any attempt to cheat on a test with ChatGPT when your questions refer to diagrams or visual figures, which likewise cannot be pasted into ChatGPT.

But in general, it may be time to re-think the kinds of assignments and tests we give to students, especially in fully online classes. The software is only going to get better, and we will need to find creative ways in the coming years to re-think the entire assessment strategy. We need to ask ourselves WHY we are assigning tests and essays. What skills or knowledge are we trying to assess? Once we have that list, we can create ideas for different ways to assess those things--ones that would be less easy for an AI to create.

Is it wishful thinking to try to ignore or avoid AI? Is AI inevitable?
We know that AI is here to stay. This is not a passing fad. Once calculators became inexpensive and ubiquitous, K-12 teachers and college professors had to find ways to adapt their teaching and their homework practice to the new reality, and this situation is no different. In fact, it's patently obvious that AI will not only remain, but become better over time (perhaps quite rapidly, if this first year is any indication), which implies the AI revolution will be much broader than students cheating on tests and essays. Many theorists believe this is a Promethean moment in our development as a species, where not just one thing changes, but everything changes--somewhat akin to the Industrial Revolution, or the discovery of electricity.

As such, it behooves each of us to train our students for their future careers, which almost certain WILL include AI. To give our students the best chances in

the future workplaces, we need to be certain they are as "AI Fluent" as we can make them. This will require switching from a mentality of avoiding/detecting AI, to a mentality of helping students use/create with AI. One key baseline expectation is that we acculturate students to always adding value to AI output. It's not enough for them to become experts at prompt engineering—though that will be necessary, too. They must learn that to survive in future workplaces, they will need to always demonstrate that they contributed significantly to the software's output, and in so doing justify that their skill set makes them invaluable as an employee.

Thus, we should begin thinking about assignments that not only encourage AI use, but actually require it. A general rule of thumb is to ask students to generate a specific type of AI output, then do something with it: revise it, augment it, critique it, etc. Encourage students not only to add value to the AI output, but to be able to recognize that doing so is a foundational skill they must always prioritize. We should also encourage students to use AI for brainstorming, as this type of assistance will surely become even more advanced, refined, and ubiquitous in the years to come.

The Faculty Center website has many more ideas for assignments in the age of AI: https://fctl.ucf.edu/technology/artificial-intelligence/

What should I consider if I plan to use ChatGPT in my courses?

If you are integrating such tools into your courses, recognize that some students may not be comfortable giving their personal information (such as phone numbers, etc.) to the companies that own these tools. You may be able to mitigate this concern by creating a class account that students can use or using the tool only for in-class activities where you are signed into an account you create.

Additionally, some students may not want their ideas or their writing entered into a chatbot, especially without their knowledge, because they cannot control what the LLM does with input data. It's important to advise your students on the differences between prompting the chatbot with their own text versus entering someone else's texts (including that of their classmates) into such tools. These present very different uses and considerations.

Faculty should also remind students that when they are prompting a chatbot, they should be careful—just as they would in other online settings—not to inadvertently disclose someone else's personal information or a client's proprietary data. If you're using AI chatbots in your class, this is an important opportunity to discuss appropriate and inappropriate uses of information and appropriate data handling.

How can I convince students to use AI only in the ways I prescribe?
Your most valuable tool in this effort is transparency. Students are most likely to turn to cheating when they don't sense that the assignment has enough value for them to expend time and effort. If you explain WHY this assignment exists and what benefits to their future careers it could bring, they are more likely to approach the assignment in the spirit you intended.

It can also help to remind students before large assignments that you are attempting to train their minds for their future careers, and any attempt to shortcut that training (such as using AI to write an essay) is fundamentally cheating their future selves. Acknowledge that it may sound like a cliché, but emphasize that students really are cheating themselves if they take shortcuts. Workplaces are not going to want employees who just know how to use AI. They are going to want employees who know how to use artificial intelligence AND add value to the AI output with their human experience, knowledge, and skills.

Where can I go for questions or more assistance?
Several UCF programs and centers are here to support you:

- The Faculty Center for Teaching & Learning (FCTL) stands ready to answer faculty questions about ChatGPT and other AI. Faculty are invited to drop by 8am-5pm (CB1-207), email (fctl@ucf.edu), or call (407-823-3544) for help. We can also let you test ChatGPT4 in our space without the need for you to create your own login.
- The Center for Distributed Learning (CDL) is eager to support faculty teaching in online modalities. For fully-online courses, faculty are encouraged to work with their assigned instructional designer in CDL

(407-823-4910; cdl@ucf.edu).

- The Writing Across the Curriculum (WAC) program, housed in the Center for Writing Excellence (TCH109), offers workshops, consultations, and research support for use and non-use of AI in writing assignments and writing-intensive courses. WAC Director, Dr. Laurie A. Pinkert can be reached at (407-823-1057; wac@ucf.edu).
- The Center for Ethics (C4E) will also offer AI-focused topics in its Be Better Club and other programming that may be useful to faculty and students. For more information on C4E events visit https://ethicscenter.research.ucf.edu/.
- Student Conduct and Academic Integrity can be contacted for questions about student disciplinary options (407-823-4638; scai@ucf.edu).

UCF students are also being sent an email with similar messages, especially about the need to check with their professors before using AI for coursework.

This message was created as a collaboration between FCTL, CDL, WAC, the Center for Ethics, and Student Conduct and Academic Integrity, as well as individual faculty and staff in various units that have taken an interest in AI.